California Department of Education
Assessment Development and Administration Division

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Spring 2013 Administration

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Acronyms and Initialisms Used in the *CST Technical Report*

ADA	Americans with Disabilities Act
AERA	American Educational Research Association
API	Academic Performance Index
ARP	Assessment Review Panel
ASL	American Sign Language
AYP	adequate yearly progress
CAHSEE	California High School Exit Examination
CAPA	California Alternate Performance Assessment
CCR	*California Code of Regulations*
CDE	California Department of Education
CDS	county/district/school
CELDT	California English Language Development Test
CI	confidence interval
CMA	California Modified Assessment
CR	constructed response
CRL	California Reading List
CSEMs	conditional standard errors of measurement
CSTs	California Standards Tests
CSU	California State University
DFA	*Directions for Administration*
DIF	differential item functioning
DOK	depth of knowledge
DPLT	designated primary language test
DQS	Data Quality Services
d-study	decision study
EAP	Early Assessment Program
EC	*Education Code*
EL	English learner
ELA	English–language arts
EM	expectation maximization
EOC	end-of-course
ePen™	Electronic Performance Evaluation Network
ESEA	Elementary and Secondary Education Act
ETS	Educational Testing Service
FIA	final item analysis
g-study	generalizability study
GENASYS	Generalized Analysis System
HumRRO	Human Resource Research Organization
ICC	item characteristic curves intraclass correlation coefficient
IEP	individualized education program
I-FEP	initially fluent English proficient
IRT	item response theory
IT	Information Technology
LEA	local educational agency
MC	multiple choice
MCE	Manually Coded English
MH DIF	Mantel-Haenszel DIF
NCME	National Council on Measurement in Education
NPS	nonpublic, nonsectarian school
NRT	norm-referenced test
NSLP	National School Lunch Program
OIB	ordered item booklet
OTI	Office of Testing Integrity
p-value	item proportion correct
PSAA	Public School Accountability Act
Pt-Bis	point-biserial correlations
QC	quality control
QTR	Quick-turnaround Reporting
RACF	Random Access Control Facility
R-FEP	reclassified fluent English proficient
RTQs	released test questions
SBE	State Board of Education
SD	standard deviation
SEM	standard error of measurement
SFTP	secure file transfer protocol
SGID	School and Grade Identification sheet
SKM	score key management
SPAR	Statewide Pupil Assessment Review
STAR	Standardized Testing and Reporting
STAR TAC	STAR Technical Assistance Center
STS	Standards-based Tests in Spanish
TIF	test information function
WRMSD	weighted root-mean-square difference

Chapter 1: Introduction

Background

In 1997 and 1998, the California State Board of Education (SBE) adopted content standards in four major content areas: English–language arts (ELA), mathematics, history–social science, and science. These standards are designed to provide state-level input into instruction curricula and serve as a foundation for the state's school accountability programs.

In order to measure and evaluate student achievement of the content standards, the state instituted the Standardized Testing and Reporting (STAR) Program. This Program, administered annually, was authorized in 1997 by state law (Senate Bill 376).

During its 2013 administration, the STAR Program had four components:

- California Standards Tests (CSTs), produced for California public schools to assess the California content standards for ELA, mathematics, history–social science, and science in grades two through eleven
- California Modified Assessment (CMA), an assessment of students' achievement of California's content standards for ELA, mathematics, and science, developed for students with an individualized education program (IEP) who meet the CMA eligibility criteria approved by the SBE
- California Alternate Performance Assessment (CAPA), produced for students with an IEP and who have significant cognitive disabilities and are not able to take the CSTs with accommodations and/or modifications or the CMA with accommodations
- Standards-based Tests in Spanish (STS), an assessment of students' achievement of California's content standards for Spanish-speaking English learners that is administered as the STAR Program's designated primary language test (DPLT)

Test Purpose

A total of 38 CSTs form the cornerstone of the STAR Program. The CSTs, given in English, are designed to show how well students in grades two through eleven are performing with respect to California's content standards. These standards describe what students should know and be able to do at each grade level in selected content areas.

CSTs carry the most weight in school and district Academic Performance Index (API) calculations. In addition, the CSTs for ELA and mathematics (grades two through eight) are used in determining Adequate Yearly Progress (AYP), which is used to meet the requirement of the federal Elementary and Secondary Education Act (ESEA) that all students score at the proficient level or above by 2014.

Test Content

CSTs are administered in four content areas: ELA, mathematics, history–social science, and science. Students in grades two through eleven are tested in ELA and mathematics, with end-of-course (EOC) tests in mathematics offered to students in grades seven and above. Students in grades four and seven also take a writing test (essay) administered in association with the CST for ELA. In addition, students in grades five, eight, and ten take a grade-level science test, and students in grades eight and eleven are tested in grade-level history–social science. Students in grades nine through eleven may also take the EOC CST for World

History and an EOC science test. The end-of-course CSTs are designed to address the content standards for courses available at the secondary level. Students in grade seven who are enrolled in an Algebra I course take the CST for Algebra I instead of the grade-level mathematics test.

While most CSTs are designed to assess content standards for a particular grade or course, a few CSTs address selected content standards for multiple grades or courses for a single subject; these include the CST for General Mathematics, the CST for Summative High School Mathematics, the CST for History–Social Science (Grade 8), the CST for Science (Grade 5), and the CST for Life Science (Grade 10).

In 2013, the CSTs included the following tests:

▪ English–Language Arts (Grades 2–11) ▪ Mathematics (Grades 2–7) ▪ General Mathematics (Grades 8 and 9) ▪ Algebra I (Grades 7–11) ▪ Geometry (Grades 8–11) ▪ Algebra II (Grades 8–11) ▪ Summative High School Mathematics (Grades 9–11) ▪ Integrated Mathematics 1 (Grades 8–11) ▪ Integrated Mathematics 2 (Grades 8–11) ▪ Integrated Mathematics 3 (Grades 8–11) ▪ History–Social Science (Grade 8) ▪ U.S. History (Grade 11) ▪ World History (Grades 9–11)	▪ Science (Grades 5 and 8) ▪ Life Science (Grade 10) ▪ Biology (Grades 9–11) ▪ Chemistry (Grades 9–11) ▪ Earth Science (Grades 9–11) ▪ Physics (Grades 9–11) ▪ Integrated/Coordinated Science 1 (Grades 9–11) ▪ Integrated/Coordinated Science 2 (Grades 9–11) ▪ Integrated/Coordinated Science 3 (Grades 9–11) ▪ Integrated/Coordinated Science 4 (Grades 9–11)

Intended Population

Each grade-level CST was administered to approximately 426,000 to 467,000 test-takers in 2013. Volumes for the EOC CSTs varied by content. There were more than 400,000 examinees for Algebra I (approximately 684,000), Biology (approximately 553,000), Geometry (approximately 406,000), and World History (approximately 469,000). For all other tests, there were fewer.

All students enrolled in grades two through eleven in California public schools on the day testing begins are required to take the CSTs, the CMA (available for eligible students in grades three through eleven in ELA, grades three through seven in mathematics, EOC Algebra I and Geometry, and grades five, eight, and ten in science), or the CAPA. This requirement includes English learners regardless of the length of time they have been in U.S. schools or their fluency in English, as well as students with disabilities who receive special education services. For students with cognitive disabilities, the decision to administer the CSTs, the CMA, or the CAPA is made by their IEP team.

Parents may submit a written request to have their child exempted from taking any or all parts of the tests within the STAR Program. For the ELA tests in grades four and seven, parents can submit a written request to have their child exempted from taking the essay

associated with the ELA test. Only students whose parents submit a written request may be exempted from taking the tests (*Education Code [EC]* Section 60615).

Intended Use and Purpose of Test Scores

The results for tests within the STAR Program are used for three primary purposes, described as follows (excerpted from the *EC* Section 60602 Web page at http://www.leginfo.ca.gov/cgi-bin/displaycode?section=edc&group=60001-61000&file=60600-60603) (outside source):

"60602. (a) (1) First and foremost, provide information on the academic status and progress of individual pupils to those pupils, their parents, and their teachers. This information should be designed to assist in the improvement of teaching and learning in California public classrooms. The Legislature recognizes that, in addition to statewide assessments that will occur as specified in this chapter, school districts will conduct additional ongoing pupil diagnostic assessment and provide information regarding pupil performance based on those assessments on a regular basis to parents or guardians and schools. The Legislature further recognizes that local diagnostic assessment is a primary mechanism through which academic strengths and weaknesses are identified."

"60602. (a) (4) Provide information to pupils, parents or guardians, teachers, schools, and school districts on a timely basis so that the information can be used to further the development of the pupil and to improve the educational program."

"60602. (c) It is the intent of the Legislature that parents, classroom teachers, other educators, governing board members of school districts, and the public be involved, in an active and ongoing basis, in the design and implementation of the statewide pupil assessment program and the development of assessment instruments."

"60602. (d) It is the intent of the Legislature, insofar as is practically feasible and following the completion of annual testing, that the content, test structure, and test items in the assessments that are part of the Standardized Testing and Reporting Program become open and transparent to teachers, parents, and pupils, to assist all the stakeholders in working together to demonstrate improvement in pupil academic achievement. A planned change in annual test content, format, or design, should be made available to educators and the public well before the beginning of the school year in which the change will be implemented."

In addition, STAR Program assessments are used to provide data for school, district, and state purposes and to meet federal accountability purposes.

Testing Window

The CSTs are administered within a 25-day window, which begins 12 instructional days before and ends 12 instructional days after the day on which 85 percent of the instructional year is completed. School districts may use all or any part of the 25 days for testing but are encouraged to schedule testing over no more than a 10- to 15-day period (California *Code of Regulations [CCR], Title 5,* Education, Division 1, Chapter 2, Subchapter 3.75, Article 2, § 855; in the California Department of Education [CDE] Web document linked at http://www.cde.ca.gov/ta/tg/sr/admin.asp).

Significant STAR Developments in 2013

Forms Reuse

Test forms from previous STAR administrations from different years were reused during the 2013 administration to facilitate quick-turnaround reporting (QTR). Some of the items in the reused forms were replaced due to security breaches on social media Web sites. There was no new item development for the 2013 forms, so these forms did not contain new field-test items.

Pre-equating and the Implementation of Quick-turnaround Reporting

Because test forms were pre-equated, the raw-score-to-scale-score conversion tables were developed before tests were administered and the writing scores were not included with the multiple-choice scores for students in grades four and seven, so individual student results were available within approximately two weeks of processing the school district's scorable testing materials. A new Web application, called the Quick-turnaround Reporting module, was added to the STAR Management System; this module permitted districts to securely download a file containing these results.

Changes to the ELA Reporting Clusters and Score Calculation in Grades Four and Seven

"Writing Applications" is no longer a reporting cluster. The writing task now yields a separate writing response score that is not included in the CST for ELA results for students in grades four and seven. Scale scores and performance levels reported on STAR Student Reports, other individual reports, aggregate reports, as well as results tables in this technical report, include data from multiple-choice tests only.

Change to the Writing Scores

Writing scores for the 2013 administration of the CST for Writing in grades four and seven are not doubled. Scores assigned are 0, 1, 2, 3, and 4.

Number of Available Test Versions

The number of versions for all tests was reduced to three. (For the integrated EOC tests, the number of versions was already at one.)

Limitations of the Assessment

Score Interpretation

A school district may use CST results to help make decisions about student placement, promotion, retention, or other considerations related to student achievement. However, it is important to remember that a single test can provide only limited information. Other relevant information should be considered as well. It is advisable for parents to evaluate their child's strengths and weaknesses in the relevant topics by reviewing local assessments, classroom tests, student grades, classroom work, and teacher recommendations in addition to the child's CST results (CDE, 2013). It is important to note that student scores in a content area contain measurement error and could vary somewhat if students were retested.

Out-of-Level Testing

Each CST is designed to measure the content corresponding to a specific grade or course and is appropriate for students in the specific grade or course. Testing below a student's grade is not allowed for the CSTs or any test in the STAR Program; all students are required to take the test for the grade in which they are enrolled. School districts are advised to

review all IEPs to ensure that any provision for testing below a student's grade level has been removed.

Score Comparison

When comparing scale score results for the CSTs, the reviewer is limited to comparing results only within the same content area and grade. For example, it is appropriate to compare scores obtained by students and/or schools on the 2013 grade three mathematics test; it would not be appropriate to compare scores obtained on the grade three mathematics test with those obtained on the grade four mathematics test. The reviewer may compare results for the same content area and grade, within a school, between schools, or between a school and its district, its county, or the state within the same year or to previous years. Comparisons between scores obtained in different grades or content areas should be avoided.

Groups and Organizations Involved with the STAR Program

State Board of Education

The SBE is the state education agency that sets education policy for kindergarten through grade twelve in the areas of standards, instructional materials, assessment, and accountability. The SBE adopts textbooks for kindergarten through grade eight, adopts regulations to implement legislation, and has the authority to grant waivers of the *EC*.

The SBE is responsible for assuring the compliance with programs that meet the requirement of the federal ESEA and the state's Public School Accountability Act (PSAA) and for reporting results in terms of the AYP and API, which measure the academic performance and growth of schools on a variety of academic measures. In order to provide information on student progress in public schools, as essential for those programs, the SBE supervises the administration and progress of the STAR Program.

California Department of Education

The CDE oversees California's public school system, which is responsible for the education of more than 6,200,000 children and young adults in more than 9,800 schools. California aims to provide a world-class education for all students, from early childhood to adulthood. The Department of Education serves California by innovating and collaborating with educators, schools, parents, and community partners which together, as a team, prepares students to live, work, and thrive in a highly connected world.

Contractors

Educational Testing Service

The CDE and the SBE contract with ETS to develop and administer the STAR Program. As the prime contractor, ETS has overall responsibility for working with the CDE to implement and maintain an effective assessment system and to coordinate the work of ETS and its subcontractor Pearson. Activities directly conducted by ETS include the following:

- Overall management of the program activities;
- Development of all test items;
- Construction and production of test booklets and related test materials;
- Support and training provided to counties, school districts, and independently testing charter schools;
- Implementation and maintenance of the STAR Management System for orders of materials and pre-identification services; and

- Completion of all psychometric activities.

Pearson

ETS also monitors and manages the work of Pearson, subcontractor to ETS for the STAR Program. Activities conducted by Pearson include the following:

- Production of all scannable test materials;
- Packaging, distribution, and collection of testing materials to school districts and independently testing charter schools;
- Scanning and scoring of all responses, including performance scoring of the writing responses; and
- Production of all score reports and data files of test results.

Overview of the Technical Report

This technical report addresses the characteristics of the CSTs administered in spring 2013. The technical report contains nine additional chapters as follows:

- Chapter 2 presents a conceptual overview of processes involved in a testing cycle for a CST. This includes test construction, test administration, generation of test scores, and dissemination of score reports. Information about the distributions of scores aggregated by subgroups based on demographics and the use of special services is included, as are the references to various chapters that detail the processes briefly discussed in this chapter.
- Chapter 3 describes the procedures followed during the development of valid CST items before the 2013 administration—in 2013, the test forms from previous STAR administrations from different years were reused and there was no new item development; the chapter explains the process of field-testing new items and the review of items by contractors and content experts.
- Chapter 4 details the content and psychometric criteria that guided the construction of the CSTs reused in 2013.
- Chapter 5 presents the processes involved in the actual administration of the 2013 CSTs with an emphasis on efforts made to ensure standardization of the tests. It also includes a detailed section that describes the procedures that were followed by ETS to ensure test security.
- Chapter 6 describes the standard-setting process previously conducted for newly introduced CSTs.
- Chapter 7 details the types of scores and score reports that are produced at the end of each administration of the CSTs and includes a discussion of quick-turnaround reporting.
- Chapter 8 summarizes the results of the test- and item-level analyses performed during the spring 2013 administration of the tests. These include the classical item analyses, the reliability analyses that include assessments of test reliability and the consistency and accuracy of the CST performance-level classifications, and the procedures designed to ensure the validity of CST score uses and interpretations. Also discussed in this chapter are the item response theory (IRT) with CST conversion tables, and the considerations and processes involved in pre-equating.

- Chapter 9 highlights the importance of controlling and maintaining the quality of the CSTs.
- Chapter 10 presents historical comparisons of various item- and test-level results for the past three years and for the base year of each test, which vary according to test.

Each chapter contains summary tables in the body of the text. However, extended appendixes that give more detailed information are provided at the end of the relevant chapters.

References

California *Code of Regulations, Title 5,* Education, Division 1, Chapter 2, Subchapter 3.75, Article 2, § 855.

California Department of Education. (2013). *STAR Program information packet for school district and school staff* (p. 15). Sacramento, CA. Downloaded from http://www.cde.ca.gov/ta/tg/sr/resources.asp

California Department of Education, EdSource, & the Fiscal Crisis Management Assistance Team. (2013). *Fiscal, demographic, and performance data on California's K–12 schools*. Sacramento, CA: Ed-Data. Downloaded from http://www.ed-data.k12.ca.us/App_Resx/EdDataClassic/fsTwoPanel.aspx?#!bottom=/_layouts/EdDataClassic/profile.asp?Tab=1&level=04&reportNumber=16

Chapter 2: An Overview of CST Processes

This chapter provides an overview of the processes involved in a typical test development and administration cycle for a CST. Also described are the specifications maintained by ETS to implement each of those processes. Starting with the 2013 administration, test forms from previous STAR administrations from different years were reused, and pre-equating was implemented to facilitate Quick-turnaround Reporting (QTR). The changes in test development and administration processes are noted in addition to the processes that were used to develop the 2013 forms prior to their first use.

The chapter is organized to provide a brief description of each process followed by a summary of the associated specifications. More details about the specifications and the analyses associated with each process are described in other chapters that are referenced in the sections that follow.

Item Development

Item Formats

All CSTs contain four-option multiple-choice items. The CSTs for ELA in grades four and seven have an associated constructed response component, the CST for Writing, which contains one writing task. Starting with the 2013 administration, the score for the writing task is not included in the ELA results.

Item Specifications

The CST items were developed to measure California content standards adopted by the state in 1997 and 1998 and designed to conform to principles of item writing defined by ETS (ETS, 2002). ETS maintained and updates an item specifications document, otherwise known as “item writer guidelines,” for each CST and used an item utilization plan to guide the development of the items for each content area. Item writing emphasis was determined in consultation with the CDE.

The item specifications describe the characteristics of the items that should be written to measure each content standard; items of the same type should consistently measure the content standards in the same way. To achieve this, the item specifications provided detailed information to item writers who developed items for the CSTs.

The items selected for each CST undergo an extensive item review process that is designed to provide the best standards-based tests possible. Details about the item specifications, the item review process, and the item utilization plan are presented in Chapter 3, starting on page 181.

Item Banking

Before newly developed items were placed in the item bank, ETS prepared them for review by content experts and various external review organizations such as the Assessment Review Panels (ARPs), described in Chapter 3 starting on page 185, and the Statewide Pupil Assessment Review (SPAR) panel, described in Chapter 3 starting on page 187.

Once the ARP review was complete, the items were placed in the item bank along with the associated information obtained at the review sessions. Items that were accepted by the content experts were updated to a “field-test ready” status. ETS then delivered the items to the CDE by means of a delivery of the California electronic item bank. Items were subsequently field-tested to obtain information about item performance and item statistics that could be used to assemble operational forms. The CDE then reviewed the item data

and made decisions about which items could be used operationally (see page 188 for more information about the CDE's data review). Any additional updates to item content and statistics were based on data collected from the operational use of the items. However, only the latest content of the item is retained in the bank at any time, along with the administration data from every administration that has included the item.

Further details on item banking are presented on page 188 in Chapter 3.

Item Refresh Rate

Prior to form reuse in the 2013 administration, the item utilization plan assumed that each year 35 percent of items on an operational form were refreshed (replaced); these items remained in the item bank for future use.

Test Assembly

Test Length

The number of operational items in each CST varies by content area and grade. There are 65 operational items on the CSTs for ELA in grades two and three and 75 operational items in grades four through eleven. The CST grade-level and end-of-course mathematics tests are composed of 65 operational items and the CST grade-level and end-of-course science tests are composed of 60 operational items each. The CST for History–Social Science (Grade 8) consists of 75 operational items while the CST for U.S. History administered in grade eleven and the end-of-course CST for World History consist of 60 operational items. The considerations used in deciding the test length are described on page 191 in Chapter 4.

Each CST also includes six field-test items in addition to the operational items. Although there was no new item development for the 2013 administration, the field-test items were included as part of the intact reused forms. The total number of items, including operational and field-test items, in each CST form and the estimated time to complete a test form are presented in Appendix 2.A on page 24.

Test Blueprints

ETS selects all CST items to conform to the SBE-approved California content standards and test blueprints. The test blueprints for the CSTs, adopted in 2002 by the SBE, can be found on the CDE STAR CST Blueprints Web page at http://www.cde.ca.gov/ta/tg/sr/blueprints.asp.

Although the test blueprints call for the number of items at the individual standard level, scores for the CST items are grouped into subcontent areas referred to as "reporting clusters." For each CST reporting cluster, the percentage of questions correctly answered is reported on a student's score report. A description of the CST reporting clusters and the standards that comprise each cluster are provided in Appendix 2.B, which starts on page 26.

Content Rules and Item Selection

Test forms from previous STAR administrations from different years were reused during the 2013 administration to facilitate QTR. (See Table 8.4 on page 374 for administration years.) Prior to the 2013 administration, test developers followed a number of rules when developing a new test form for a given grade and content area. First and foremost, they selected items that met the blueprint for that grade and content area. Using an electronic item bank, assessment specialists began by identifying a number of linking items. These were items that had appeared in previous operational test administrations and were then

used to equate subsequent (new) test forms. After the linking items were approved, assessment specialists populated the rest of the test form.

Linking items were selected to proportionally represent the full blueprint. Each CST form was a collection of test items designed to reflect a reliable, fair, and valid measure of student learning within well-defined course content.

Another consideration was the difficulty of each item. Test developers strived to ensure that there were some easy and some hard items and that there were a number of items in the middle range of difficulty. The detailed rules are presented in Chapter 4, which begins on page 191.

Replacement Items

During the 2012 STAR administration, certain test items were exposed on social media Web sites. Although there was no evidence that these exposures had any measurable effect on 2012 test results, the most cautious approach called for replacing these items for the test forms in the 2013 administration.

Before replacing items, ETS considered whether the form with an exposed item could be exchanged with a form from a different previous STAR administration that contained no exposures. If there were no appropriate forms available, ETS sought to replace exposed items with previously used or field-tested items that best met the psychometric criteria and statistical targets described in the next sections. As CSTs would be pre-equated, ETS assessment development staff also considered minimizing the position difference between the replacement items and the exposed items in order to reduce the context effect.

Psychometric Criteria

The staff assesses the projected test characteristics during the preliminary review of the assembled forms. The statistical targets used to develop the 2013 forms and the projected characteristics of the assembled forms are presented starting from page 193 in Chapter 4.

The items in test forms are organized and sequenced differently according to the requirements of the content area. Further details on the arrangement of items during test assembly are also described on page 195 in Chapter 4.

All the forms in the 2013 CST administration were used in prior operational STAR administrations. See Table 8.4 on page 374 for the list of the administration in which each CST was originally administered. See Table 8.6 on page 382 for the list of CSTs with replacement items due to social media exposure, the number of items replaced, and the source of the replacement items. See page 192 in Chapter 4 for a description of the item replacement process.

Test Administration

It is of utmost priority to administer the CSTs in an appropriate, consistent, secure, confidential, and standardized manner.

Test Security and Confidentiality

All tests within the STAR Program are secure documents. For the CST administration, every person having access to test materials maintains the security and confidentiality of the tests. ETS's Code of Ethics requires that all test information, including tangible materials (such as test booklets, test questions, test results), confidential files, processes, and activities are kept secure. To ensure security for all tests that ETS develops or handles, ETS maintains

an Office of Testing Integrity (OTI). A detailed description of the OTI and its mission is presented in Chapter 5 on page 238.

In the pursuit of enforcing secure practices, ETS and the OTI strive to safeguard the various processes involved in a test development and administration cycle. Those processes are listed below. The practices related to each of the following processes are discussed in detail in Chapter 5, starting on page 238.

- Test development
- Item and data review
- Item banking
- Transfer of forms and items to the CDE
- Security of electronic files using a firewall
- Printing and publishing
- Test administration
- Test delivery
- Processing and scoring
- Data management
- Transfer of scores via secure data exchange
- Statistical analysis
- Reporting and posting results
- Student confidentiality
- Student test results

Procedures to Maintain Standardization

The CST processes are designed so that the tests are administered and scored in a standardized manner. ETS takes all necessary measures to ensure the standardization of the CSTs, as described in this section.

Test Administrators

The CSTs are administered in conjunction with the other tests that comprise the STAR Program. ETS employs personnel who facilitate various processes involved in the standardization of an administration cycle.

Staff at school districts who are central to the processes include district STAR coordinators, test site coordinators, test examiners, proctors, and scribes. The responsibilities of each of the staff members are included in the *STAR District and Test Site Coordinator Manual* (CDE, 2013); see page 243 in Chapter 5 for more information.

Test Directions

A series of instructions compiled in detailed manuals is provided to the test administrators. Such documents include, but are not limited to, the following:

***Directions for Administration* (*DFA*s)—**Manuals used by test examiners to administer the CSTs to students to be followed exactly so that all students have an equal opportunity to demonstrate their academic achievement (See page 245 in Chapter 5 for more information.)

District and Test Site Coordinator Manual—Test administration procedures for district STAR coordinators and test site coordinators (See page 245 in Chapter 5 for more information.)

STAR Management System manuals—Instructions for the Web-based modules that allow district STAR coordinators to set up test administrations, order materials, and submit and correct student Pre-ID data; every module has its own user manual with detailed instructions on how to use the STAR Management System (See page 245 in Chapter 5 for more information.)

Test Variations, Accommodations, and Modifications

All public school students participate in the STAR Program, including students with disabilities and English learners. Most students with IEPs and most English learners take the CSTs under standard conditions. However, some students with IEPs and some English learners may need assistance when taking the CSTs. This assistance takes the form of test variations, accommodations, or modifications. All students in these categories may have test administration directions simplified or clarified.

All eligible students may have test variations if these variations are regularly used in the classroom. Each student also must be allowed to use the accommodations and modifications that are specified in his or her IEP or Section 504 plan. These accommodations and/or modifications must match the one(s) used for classroom work throughout the year.

The purpose of test variations, accommodations, and modifications for the CSTs is to enable the students to take the assessments, not to give them an advantage over other students or to artificially inflate their scores. Accommodations change the way the test is given but do not change what is tested. Modifications fundamentally change what is being tested and may interfere with the construct being measured. Scores for students tested with modifications are counted as far below basic for API calculations and not proficient for AYP calculations. Test administration variations and accommodations do not result in changes to students' scores for API or AYP calculations.

Test variations, accommodations, and modifications for the statewide assessments, including the STAR Program, are defined as follows:

Category 1: Test Variations—Eligible students may have test variations if regularly used in the classroom. For example, students may take a test in a group smaller than the regular testing group or take the test individually. They also may use special lighting, adaptive furniture, or magnifying equipment.

Category 2: Accommodations—Eligible students are permitted to take the CSTs with accommodations specified in their IEP or Section 504 plan for use on the CSTs or for use during classroom instruction and assessment. Examples of accommodations are large-print or braille versions of the CSTs or providing more than one day for a test designed for a single sitting.

Category 3: Modifications—Eligible students are permitted to take the CSTs with modifications specified in the student's IEP or Section 504 plan for use on the CSTs or for use during classroom instruction and assessment. Examples of modifications include reading the test aloud to a student taking the ELA test or allowing the use of a calculator by a student to perform computations on the mathematics test.

Appendix 2.C on page 36 presents the 2013 Matrix of Test Variations, Accommodations, and Modifications for Administration of California Statewide Assessments. The matrix provides a complete list of the variations, accommodations, and modifications that were allowed for the CSTs in 2013.

Special Services Summaries

The percentage of students using various testing variations, accommodations, and modifications during the 2013 administration of the CSTs is presented in Appendix 2.D, which starts on page 39. The data are organized into three sections within each table. The first section presents the percentages of students using each accommodation or modification in the total testing population. The next section presents the results for students in special education and for those not in special education. The final section presents the results for various categories based on the following levels of English-language proficiency:

- **English only (EO)—**A student for whom there is a report of English as the primary language (i.e., language first learned, most frequently used at home, or most frequently spoken by the parents or adults in the home) on the "Home Language Survey"
- **Initially fluent English proficient (I-FEP)—**A student whose primary language is a language other than English who initially met the school district criteria for determining proficiency in English
- **English learner (EL)—**A student who first learned or has a home language other than English who was determined to lack sufficient fluency in English on the basis of state oral language (K–12) and literacy (3–12) assessments to succeed in the school's regular instructional program (For students tested for initial classification prior to May 2001, this determination is made on the basis of the state-approved instrument the district was using. For students tested after May 2001, use the California English Language Development [CELDT] results.)
- **Reclassified fluent English proficient (R-FEP)—**A student whose primary language is a language other than English who was reclassified from English learner to fluent-English proficient

The information within each section is presented for the relevant grades. Most variations, accommodations, and modifications are common across CSTs, although the CSTs for grades four and seven ELA also include variations, accommodations, and modifications related to the writing tasks. Additional modifications are included for CSTs for mathematics that involved the use of calculators, arithmetic tables, and manipulatives.

Scores

The CST total test raw scores equal the sum of examinees' scores on the operational multiple-choice test items. In grades four and seven, students also receive a separate score for the writing task; the score was separated from the total ELA score in 2013 to allow for early ELA student results to be reported via Quick-turnaround Reporting (QTR). The writing score is reported on a scale with possible scores of 0, 1, 2, 3, and 4. Details about CST writing scores and scoring rubrics are described starting on page 257 in Chapter 7.

Total test raw scores on each CST are converted to three-digit scale scores using the pre-equating process described starting on page 15. CST results are reported through the use of these scale scores; the scores range from 150 to 600 for each test. Also reported are performance levels obtained by categorizing the scale score into one of the following levels: far below basic, below basic, basic, proficient, or advanced. Scale scores of 300 and 350

correspond to the cut scores for the basic and proficient performance levels, respectively. The state's target is for all students to score at the proficient or advanced level.

In addition to scale scores for the total content-area test, performance on the associated reporting clusters is reported. The subscore or reporting cluster score is obtained by summing an examinee's scores on the items in each reporting cluster. That information is reported in terms of a percent-correct score.

Detailed descriptions of CST scores are found in Chapter 7, which starts on page 255.

Aggregation Procedures

In order to provide meaningful results to the stakeholders, CST scores for a given grade and content area are aggregated at the school, independently testing charter school, district, county, and state levels. The aggregated scores are generated for both individual students and demographic subgroups. The following sections describe the summary results of individual and demographic subgroup CST scores aggregated at the state level.

Please note that aggregation is performed on valid scores only, which are cases where examinees met all of the following criteria:

1. Met attemptedness criteria.
2. Did not have a parental exemption.
3. Did not miss any part of the test due to illness or medical emergency.
4. Did not take a modified test.
5. Identified, in the case of end-of-course mathematics and science tests, the particular test taken.
6. Did not test out of level (grade inappropriate).

Individual Scores

Table 7.1 and Table 7.2 starting on page 261 in Chapter 7 offer summary statistics for individual scores aggregated at the state level, describing overall student performance on each CST. Included in the tables are the means and standard deviations of student scores expressed in terms of both raw scores and scale scores; the raw score means and standard deviations expressed as percentages of the total raw score points in each test; and the percentages of students in each performance level.

Statistics summarizing CST student performance by content area and grade are provided in Table 7.B.1 through Table 7.B.6 starting on page 275 in Appendix 7.B.

Demographic Subgroup Scores

In Table 7.C.1 through Table 7.C.38 starting on page 279, students are grouped by demographic characteristics, including gender, ethnicity, English-language fluency, use of special education services, and economic status. The tables show the numbers of students with valid scores in each group, scale score means and standard deviations, and percent in a performance level, as well as percent correct for each reporting cluster for each demographic group. Table 7.3 on page 263 provides definitions for the demographic groups included in the tables.

Equating

Post-Equating

Prior to the 2013 administration, the CSTs were equated to a reference form using a common-item nonequivalent groups data collection design and methods based on item

response theory (IRT) (Hambleton & Swaminathan, 1985). The “base” or “reference” calibrations for the CSTs were established by calibrating samples of item response data from a specific administration, through which item parameter estimates for the items in the reused forms were placed on the reference scale using a set of linking items selected from the previous year. Doing so established a scale to which subsequent item calibrations could be linked.

The procedure used for post-equating the CSTs involves three steps: item calibration, item parameter scaling, and true score equating. Each of those steps, as described below, was applied to all CSTs except the four CSTs for Integrated/Coordinated Science. Special scaling procedures were employed for these CSTs that are described later in this section.

Pre-Equating

During the 2013 administration, because all the test forms were used in previous STAR operational administrations, pre-equating was conducted prior to administration of the tests. Based on the sample invariant property of item response theory (IRT), all the item parameter estimates were placed on the reference scale in their previous administrations through the post-equating procedure described previously. Item parameters derived in such a manner can be used to create raw-score-to-scale-score conversion tables prior to test administration.

During the 2013 administration, for all CSTs using reuse forms without any edits or replacement to items, the conversion tables from previous administrations when the forms were originally used are directly applied to the current administration. Otherwise, in the cases where replacement or edited items are used, conversion tables are generated using the true-score equating method described below. The item parameters used for true-score equating are post-equating item parameters (from the reused forms) for the unchanged items and the post-equating parameters from the most recent administration for the replacement or edited items.

Table 8.4 on page 374 shows the years the forms were introduced for each test. Table 8.6 on page 382 shows which tests have items that were swapped out because of exposure on social media Web sites.

Calibration

To obtain item calibrations during the initial administration of each form, a proprietary version of the PARSCALE program was used. The estimation process was constrained by setting a common discrimination value for all items equal to 1.0 / 1.7 (or 0.588) and by setting the lower asymptote for all multiple-choice items to zero. The resulting estimation was equivalent to the Rasch model for multiple-choice items and the Rasch partial credit model for polytomously scored items, which was used to obtain calibrations for the writing prompt in the CSTs for ELA administered in grades four and seven. This approach was in line with previous CST equating and scaling procedures achieved using the WINSTEPS program (Linacre, 2000). For the purpose of equating, only the operational items were calibrated for each test.

The PARSCALE calibrations were run in two stages following procedures used with other ETS testing programs. In the first stage, estimation imposed normal constraints on the updated prior-ability distribution. The estimates resulting from this first stage were used as starting values for a second PARSCALE run, in which the subject prior distribution was updated after each expectation maximization (EM) cycle with no constraints. For both stages, the metric of the scale was controlled by the constant discrimination parameters.

Scaling

Prior to the 2013 administration, calibrations of the items were linked to the previously obtained reference scale estimates using linking items and the Stocking and Lord (1983) procedure. In the case of the one-parameter model calibrations, this procedure was equivalent to setting the mean of the new item parameter estimates for the linking set equal to the mean of the previously scaled estimates. As noted earlier, the linking set was a collection of items in a current test form that also appeared in the previous year's form and was scaled at that time.

The linking process was carried out iteratively by inspecting differences between the transformed new and old (reference) estimates for the linking items and removing items for which the item difficulty estimates changed significantly. Items with large weighted root-mean-square differences (WRMSDs) between item characteristic curves (ICCs) based on the old and new difficulty estimates were removed from the linking set. The differences were calculated using the following formula:

$$WRMSD = \sqrt{\sum_{j=1}^{n_g} w_j \left[P_n\left(\theta_j\right) - P_r\left(\theta_j\right) \right]^2} \tag{2.1}$$

where,

abilities are grouped into intervals of 0.005 ranging from –3.0 to 3.0,

n_g is the number of intervals/groups,

θ_j is the mean of the ability estimates that fall in interval *j*,

w_j is a weight equal to the proportion of estimated abilities from the transformed new form in interval *j*,

$P_n(\theta_j)$ is the probability of correct response for the transformed new form item at ability θ_j, and

$P_r(\theta_j)$ is the probability of correct response for the old (reference) form item at ability θ_j.

Based on established procedures, any linking items for which the WRMSD was greater than 0.125 were eliminated from the linking set. This criterion has produced reasonable results over time in similar equating work done with other testing programs at ETS.

True-score Equating

Once the new item calibrations for each test are placed on the base scale after scaling, IRT true-score equating procedures are used to transform the new form number-correct scores (raw scores) to their respective reference form number-correct scale. These converted raw scores can then be transformed to scale scores through table lookup and linear interpolation. In 2013 administration, the same true-score equating process was conducted to develop the conversion tables for test forms with replacement or edited items.

The true-score equating procedure is based on the relationship between raw scores and ability (theta). For the CSTs consisting entirely of *n* multiple-choice items, this is the well-known relationship defined in Lord (1980; equations 4–5):

$$\xi\left(\theta\right) = \sum_{i=1}^{n} P_i\left(\theta\right), \tag{2.2}$$

where,

$P_i(\theta)$ is the probability of a correct response to item *i* at ability θ, and

$\xi(\theta)$ is the corresponding true score.

From 2013, the writing task for ELA in grade four and seven is reported separately and not included in the calculation of scale scores, so the true-score equating procedure for tests consisting entirely of multiple-choice items is sufficient. However, for the administrations prior to 2013 when "Writing Applications" was a reporting cluster of ELA scale score in grades four and seven, ξ(θ) was based on a sum of multiple-choice and constructed response essay items; the relationship could be defined as:

$$\xi(\theta) = \sum_{i=1}^{nmc} P_i(\theta) + \sum_{j=1}^{ncr} \sum_{x=1}^{m} s_{xj} P_{xj}(\theta), \tag{2.3}$$

where,

nmc is the number of multiple-choice items in the test,

ncr is the number of constructed response items in the test,

m is the number of score categories for each constructed response item,

s_{xj} is the value for score category x for the constructed response item *j*, and

$P_{xj}(\theta)$ is the probability that an examinee with ability θ obtains score s_x on the constructed response item *j*.

For each integer score ξ_n on the new form, the true-score equating procedure is used to first solve for the corresponding ability estimate using equation 2.2. The procedure uses this ability estimate to find the corresponding number-correct true score ξ_b on the reference form. Finally, each score ξ_b is transformed to the appropriate CST scale score scale using the reference form CST raw-score-to-scale-score conversion tables and linear interpolation. Complete raw-to-scale-score conversion tables for the 2013 CSTs are presented in Table 8.D.13 through Table 8.D.24 in Appendix 8.D, starting on page 536. The raw scores and corresponding transformed scale scores are listed in those tables.

For all of the CSTs, regardless of when the form was administered, scale scores were adjusted at both ends of the scale so that the minimum reported scale score was 150 and the maximum reported scale score was 600. Raw scores of zero and perfect raw scores were assigned scale scores of 150 and 600, respectively.

The scale-score ranges defining the various performance levels are presented in Table 2.1.

Table 2.1 Scale-Score Ranges for Performance Levels

Content Area	CST *	Far Below Basic	Below Basic	Basic	Proficient	Advanced
English–Language Arts	**2**	150 – 261	262 – 299	300 – 349	350 – 401	402 – 600
	3	150 – 258	259 – 299	300 – 349	350 – 401	402 – 600
	4	150 – 268	269 – 299	300 – 349	350 – 392	393 – 600
	5	150 – 270	271 – 299	300 – 349	350 – 394	395 – 600
	6	150 – 267	268 – 299	300 – 349	350 – 393	394 – 600
	7	150 – 262	263 – 299	300 – 349	350 – 400	401 – 600
	8	150 – 265	266 – 299	300 – 349	350 – 394	395 – 600
	9	150 – 264	265 – 299	300 – 349	350 – 396	397 – 600
	10	150 – 262	263 – 299	300 – 349	350 – 391	392 – 600
	11	150 – 258	259 – 299	300 – 349	350 – 395	396 – 600

Content Area	CST *	Far Below Basic	Below Basic	Basic	Proficient	Advanced
History–Social Science	8	150 – 270	271 – 299	300 – 349	350 – 395	396 – 600
	World History	150 – 274	275 – 299	300 – 349	350 – 399	400 – 600
	11	150 – 269	270 – 299	300 – 349	350 – 400	401 – 600
Mathematics	2	150 – 235	236 – 299	300 – 349	350 – 413	414 – 600
	3	150 – 235	236 – 299	300 – 349	350 – 413	414 – 600
	4	150 – 244	245 – 299	300 – 349	350 – 400	401 – 600
	5	150 – 247	248 – 299	300 – 349	350 – 429	430 – 600
	6	150 – 252	253 – 299	300 – 349	350 – 414	415 – 600
	7	150 – 256	257 – 299	300 – 349	350 – 413	414 – 600
	General Mathematics	150 – 256	257 – 299	300 – 349	350 – 413	414 – 600
	Algebra I	150 – 252	253 – 299	300 – 349	350 – 427	428 – 600
	Geometry	150 – 246	247 – 299	300 – 349	350 – 417	418 – 600
	Algebra II	150 – 256	257 – 299	300 – 349	350 – 415	416 – 600
	Summ. H.S. Mathematics	150 – 234	235 – 299	300 – 349	350 – 419	420 – 600
	Integrated Math 1	150 – 248	249 – 299	300 – 349	350 – 424	425 – 600
	Integrated Math 2	150 – 257	258 – 299	300 – 349	350 – 417	418 – 600
	Integrated Math 3	150 – 251	252 – 299	300 – 349	350 – 427	428 – 600
Science	5	150 – 267	268 – 299	300 – 349	350 – 409	410 – 600
	8	150 – 252	253 – 299	300 – 349	350 – 402	403 – 600
	10 Life Science	150 – 268	269 – 299	300 – 349	350 – 398	399 – 600
	Biology	150 – 275	276 – 299	300 – 349	350 – 393	394 – 600
	Chemistry	150 – 275	276 – 299	300 – 349	350 – 393	394 – 600
	Earth Sciences	150 – 276	277 – 299	300 – 349	350 – 392	393 – 600
	Physics	150 – 275	276 – 299	300 – 349	350 – 392	393 – 600
	Int/Coord Science 1	150 – 276	277 – 299	300 – 349	350 – 389	390 – 600
	Int/Coord Science 2	150 – 277	278 – 299	300 – 349	350 – 390	391 – 600
	Int/Coord Science 3	150 – 275	276 – 299	300 – 349	350 – 390	391 – 600
	Int/Coord Science 4	150 – 275	276 – 299	300 – 349	350 – 396	397 – 600

* Numbers indicate grade-level tests.

The next section describes characteristics of the samples used to establish the 2002 reference scales as well as the equating samples used to equate the CSTs in subsequent years.

Equating Samples

To establish the 2002 reference scales, ETS staff used data based on samples of students selected from the 2002 administration for each CST content area. In drawing these samples, it was necessary to account for the small portion of the complete testing data available at the time of equating. To simulate the situation in which only schools that test early are used in an equating, the complete CST data were sorted according to the test administration date shown in the student records. Only students who tested before a selected cutoff date were chosen.

For all CSTs except end-of-course mathematics, 10,000 test-takers were randomly sampled from all available records. For the end-of-course mathematics CSTs, samples were limited to students in particular grades as was done in past equatings prior to 2002 (see Table 2.2). Because fewer than 10,000 students were administered the CSTs assessing Integrated Mathematics, all available records from the grade associated with each of these tests were used.

Table 2.2 Sample Selected to Establish Reference Form

Content Area	Sample	Content Area	Sample
General Mathematics	Grades 8 and 9	Integrated Mathematics 2	Grade 9
Algebra I	Grade 8	Algebra II	Grade 10
Integrated Mathematics 1	Grade 8	Integrated Mathematics 3	Grade 10
Geometry	Grade 9	Summative High School Mathematics	Grade 11

As of 2003, equating samples were selected from available student records in a data file obtained near the end of May. As anticipated, these data comprised only 5 to 10 percent of the total STAR testing data that were available once testing was completed. It was necessary to use these partial student samples for equating to meet score reporting deadlines. Only test-takers with valid results on the CSTs are included in the equating samples.

For the CSTs for Integrated Mathematics, it was necessary to use the data for all students with valid scores, regardless of their grade levels, in order to obtain sufficient sample sizes for equating.

For the other end-of-course mathematics tests, grade-specific equating samples were used from 2003 to 2007. The grade-specific equating samples were based on the population of test-takers in the target grade for which the course is recommended by the SBE. While end-of-course assessments address content standards for specific courses that are offered to students at a variety of grade levels, it is the SBE's recommendation that students begin Algebra I in grade eight, continue with Geometry in grade nine, Algebra II in grade ten, and complete the CST for Summative High School Mathematics in grade eleven. Starting in 2008, each end-of-course mathematics test was equated using a sample drawn from the total population of students who took the test.

Due to the implementation of the pre-equating, no equating sample is necessary for the 2013 administration.

Pre-Equating the Braille Versions of the CSTs

In some cases, it is not possible to translate all of the operational items contained in a CST into braille. This situation requires that a new conversion table be developed for the resulting shortened test. To obtain this table, the shortened test is equated to the full-length operational test being used using the IRT equating methods described previously. This process ensures that the scaled cut scores established for the full-length test are used to classify students who take the shorter test.

Table 2.3 shows the CSTs with braille versions that were equated using a shortened test in 2013 as well as the number of items that were removed from scoring because they could not be translated into braille.

Table 2.3 Shortened CST Braille Tests and the Number of Operational Items Removed

Content Area	Grade	# Items	Content Area	Grade	# Items
Biology	EOC	1	Integrated/Coordinated Science 2	EOC	1
Earth Science	EOC	1	Integrated/Coordinated Science 1	EOC	1

Scaling the CSTs for Integrated/Coordinated Science

The CSTs for Integrated/Coordinated Science underwent major content revisions in 2003; as a result, it was not possible to equate them back to the 2002 CSTs. Therefore, the reference year for these tests is 2003.

For the post-equating prior to 2013, special procedures had been used to scale the Integrated/Coordinated Science tests. This is due, in part, to the small numbers of students available at the time of the scaling. The special procedures were also needed because these integrated tests were constructed by taking intact blocks of items from the four content-based "parent" science CSTs—Earth Science, Biology, Chemistry, and Physics—and it was determined that the performance necessary to reach each performance-level category should be based on the cut scores of the four content-based science CSTs.

The following procedures were used for the Integrated/Coordinated Science tests to obtain composite performance level cut scores:

1. Each parent CST (Biology, Chemistry, Earth Science, and Physics) is equated to a reference form. Additional equatings are then carried out in which each subset of items in each integrated test is equated to the respective full-length parent test. This results in 16 additional equatings.
2. For each equating, the equated number-correct (unrounded) is recorded on the subset of items that corresponds to each of the four performance-level cut points on the full content-specific parent test.
3. For each integrated test, these number-correct equivalents are added together across the content areas and are truncated to determine the total number-correct scores that represent the "composite" cut scores between performance levels.

As an illustration, Table 2.4 shows the number-correct scores defining each of the performance-level cut points on the 60-item, content-specific science CSTs. As shown in the table, the minimum number-correct score needed to achieve a below-basic classification in Biology is 20; the minimum number-correct score needed to achieve a basic classification is 26; and so forth.

Table 2.4 Performance-level Cut Points for Science End-of-Course CSTs

Performance Levels	Biology	Chemistry	Earth Science	Physics
Below Basic	19	21	20	19
Basic	25	28	26	25
Proficient	39	42	40	39
Advanced	49	51	50	49
Items in CST	60	60	60	60

Assume that subsets of the 60 items from the four science tests are used in the CST for Integrated/Coordinated Science 1. For each of these subsets of items, fractional equated number-correct scores are determined as shown in Table 2.5. For example, 12 Biology items are included on the CST for Integrated/Coordinated Science 1. On the basis of these items, the minimum number-correct score needed to achieve a below-basic classification is 4 (4.0443 rounded to an integer). In the last column of the table, the unrounded cut points for the four subsets of items are summed and truncated to an integer to identify the cut score for the test as a whole.

Table 2.5 Computation of Performance-level Cut Points for the CST for Integrated/Coordinated Science 1

Performance Level	Biology	Chemistry	Earth Science	Physics	Total Test Cut Score
Below Basic	4.0443	6.2287	6.9523	3.8332	21
Basic	5.5517	8.0547	8.8642	5.0792	27
Proficient	8.3036	11.5582	13.2503	8.0796	41
Advanced	10.086	13.7649	16.0136	10.3403	50
N items	12	16	19	13	60

For each CST for Integrated/Coordinated Science, the performance level cuts subsequently are translated to scale scores. For the basic and proficient performance levels, scale scores of 300 and 350 define these cuts. For the below basic and advanced performance levels, scale scores at levels similar to those used for the other science CSTs are assigned on the basis of scaling functions. Specifically, the thetas associated with the number correct on the four content-specific science tests are weighted by the proportional contribution of their respective subset of items to the total score to form a composite theta associated with each raw score on the integrated/coordinated science test. Scaling constants, which were determined through assigning scale scores of 300 and 350 to theta points associated with basic and proficient performance level raw scores cuts, were applied to all the thetas in the raw score to theta conversion table to obtain the scale score values. The source tables with thetas and unrounded scale scores are provided in Table 8.D.33 through Table 8.D.35, which start on page 556.

For each Integrated/Coordinated Science test using reuse forms without any edits or replacement of items during the 2013 administration, similar to other CSTs, the conversion tables from previous administrations when the forms were originally used are directly applied to the current administration. Otherwise, in the cases where replacement or edited items are used, conversion tables are generated using the true-score equating method and the special procedure for the Integrated/Coordinated Science test described in this section. The item parameters used are post-equating item parameters (from the reused forms) for the unchanged items and the post-equating item parameters from the most recent administration for the replacement or edited items.

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Appendix 2.A—CST Items and Estimated Time Chart

California Standards Tests	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Grade 7		Grade 8		Grade 9		Grade 10		Grade 11	
	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time
English–Language Arts		**150**		**150**		**170**		**170**		**170**		**170**		**170**		**170**		**170**		**185**
Part 1	71	50	71	50	81	85	81	85	81	85	81	85	81	85	81	85	81	85	96[2]	85
Part 2		50		50		85		85		85		85		85		85		85		100[2]
Part 3–grades 2 & 3 only		50		50	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Writing	–	–	–	–	1	75[1]	–	–	–	–	1	75[1]	–	–	–	–	–	–	–	–
Mathematics		**150**		**150**		**150**		**150**		**150**		**150**[3]		**180**		**180**		**180**		**195**
Part 1	71	50	71	50	71	75	71	75	71	75	71[3]	75	71	90	71	90	71	90	86[2]	90
Part 2		50		50		75		75		75		75		90		90		90		105[2]
Part 3–grades 2 & 3 only		50		50	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
History–Social Science Grade-level	–	–	–	–	–	–	–	–	–	–	–	–	81	**130**		–	–	–	66	**110**
Part 1														65						55
Part 2														65						55
History–Social Science End-of-course[4]	–	–	–	–	–	–	–	–	–	–	–	–	–	–	66	**110**	66	**110**	66	**110**
Part 1																55		55		55
Part 2																55		55		55

California Standards Tests	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Grade 7		Grade 8		Grade 9		Grade 10		Grade 11	
	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time	Total No. of Items	Time
Science—Grade level		–		–		–		**140**		–		–		**120**		–		**120**		–
Part 1	–		–		–		66	70	–		–		66	60	–		66	60	–	
Part 2								70						60				60		
Science—End-of-course[5]		–		–		–		–		–		–		–		**120**		**120**		**120**
Part 1	–		–		–		–		–		–		–		66	60	66	60	66	60
Part 2																60		60		60

1 The writing tests in grades four and seven are given on a separate date from the multiple-choice tests. Writing test times are not included in the estimated time for English–Language Arts multiple-choice tests.

2 The estimated time for part 2 of the CSTs for English–language arts and mathematics in grade eleven includes time for students to participate in the Early Assessment Program (EAP), a joint program of the CDE, the California State University, and the California Community Colleges. To participate in the EAP for English, students must take the CST for English–Language Arts, the EAP multiple-choice questions for English, and the EAP writing test. The time shown in the chart does not include time for the EAP writing test, which will be administered on a separate date. To participate in the EAP for mathematics, students must take the CST for Algebra II or Summative High School Mathematics and the EAP multiple-choice questions for mathematics.

3 Students in grade seven will take either the CST for Mathematics (Grade 7) or the CST for Algebra I. Item numbers and times are for the CST for Mathematics (Grade 7). Items and estimated times for the CST for Algebra I are listed under grades eight through eleven mathematics.

4 World History is designated as an end-of-course test. This CST may be administered to eligible students in grades nine, ten, and eleven.

5 End-of-course science tests include Biology, Chemistry, Earth Science, Physics, and Integrated/Coordinated Science 1–4.

Appendix 2.B—Reporting Clusters

English–Language Arts

English–Language Arts Standards Test (Grade Two)

Reading	
Word Analysis and Vocabulary Development	22 items
Reading Comprehension	15 items
Literary Response and Analysis	6 items
Writing	
Written Conventions	14 items
Writing Strategies	8 items

English–Language Arts Standards Test (Grade Three)

Reading	
Word Analysis and Vocabulary Development	20 items
Reading Comprehension	15 items
Literary Response and Analysis	8 items
Writing	
Written Conventions	13 items
Writing Strategies	9 items

English–Language Arts Standards Test (Grade Four)

Reading	
Word Analysis and Vocabulary Development	18 items
Reading Comprehension	15 items
Literary Response and Analysis	9 items
Writing	
Written Conventions	18 items
Writing Strategies	15 items

English–Language Arts Writing Standards Test (Grade Four)

Writing Response Score	1 (4 points)

English–Language Arts Standards Test (Grade Five)

Reading	
Word Analysis and Vocabulary Development	14 items
Reading Comprehension	16 items
Literary Response and Analysis	12 items
Writing	
Written Conventions	17 items
Writing Strategies	16 items

English–Language Arts Standards Test (Grade Six)

Reading	
Word Analysis and Vocabulary Development	13 items
Reading Comprehension	17 items
Literary Response and Analysis	12 items

Writing	
Written Conventions	16 items
Writing Strategies	17 items
English–Language Arts Standards Test (Grade Seven)	
Reading	
Word Analysis and Vocabulary Development	11 items
Reading Comprehension	18 items
Literary Response and Analysis	13 items
Writing	
Written Conventions	16 items
Writing Strategies	17 items
English–Language Arts Writing Standards Test (Grade Seven)	
Writing Response Score	1 (4 points)
English–Language Arts Standards Test (Grade Eight)	
Reading	
Word Analysis and Vocabulary Development	9 items
Reading Comprehension	18 items
Literary Response and Analysis	15 items
Writing	
Written Conventions	16 items
Writing Strategies	17 items
English–Language Arts Standards Test (Grade Nine)	
Reading	
Word Analysis and Vocabulary Development	8 items
Reading Comprehension	18 items
Literary Response and Analysis	16 items
Writing	
Written Conventions	13 items
Writing Strategies	20 items
English–Language Arts Standards Test (Grade Ten)	
Reading	
Word Analysis and Vocabulary Development	8 items
Reading Comprehension	18 items
Literary Response and Analysis	16 items
Writing	
Written Conventions	13 items
Writing Strategies	20 items
English–Language Arts Standards Test (Grade Eleven)	
Reading	
Word Analysis and Vocabulary Development	8 items
Reading Comprehension	19 items
Literary Response and Analysis	17 items

Writing	
Written Conventions	9 items
Writing Strategies	22 items

History–Social Science

History–Social Science Standards Test for Grade Eight

World History and Geography: Ancient Civilizations (Grade Six Standards)	16 items
World History and Geography: Medieval and Early Modern Times (Grade Seven Standards)	
Late Antiquity and the Middle Ages	14 items
Renaissance/Reformation	10 items
United States History and Geography: Growth and Conflict (Grade Eight Standards)	
U.S. Constitution and the Early Republic	22 items
Civil War and Its Aftermath	13 items

United States History–Social Science Standards Test

Foundations of American Political and Social Thought	
Standards: 1 and 3	10 items
Industrialization and the U.S. Role as a World Power	
Standards: 2 and 4	13 items
United States Between the World Wars	
Standards: 5 and 6	12 items
World War II and Foreign Affairs	
Standards: 7 and 9	12 items
Post-World War II Domestic Issues	
Standards: 8, 10, and 11	13 items

World History–Social Science Standards Test

Development of Modern Political Thought	
Standards: 1 and 2	13 items
Industrial Expansion and Imperialism	
Standards: 3 and 4	10 items
Causes and Effects of the First World War	
Standards: 5 and 6	14 items
Causes and Effects of the Second World War	
Standards: 7 and 8	13 items
International Developments in the Post-World War II Era	
Standards: 9 and 10	10 items

Mathematics

Mathematics Standards Test (Grade Two)	
Number Sense	
Place value, addition, and subtraction	15 items
Multiplication, division, and fractions	23 items
Algebra and Functions	6 items
Measurement and Geometry	14 items
Statistics, Data Analysis, and Probability	7 items
Mathematics Standards Test (Grade Three)	
Number Sense	
Place value, fractions, and decimals	16 items
Addition, subtraction, multiplication, and division	16 items
Algebra and Functions	12 items
Measurement and Geometry	16 items
Statistics, Data Analysis, and Probability	5 items
Mathematics Standards Test (Grade Four)	
Number Sense	
Decimals, fractions, and negative numbers	17 items
Operations and factoring	14 items
Algebra and Functions	18 items
Measurement and Geometry	12 items
Statistics, Data Analysis, and Probability	4 items
Mathematics Standards Test (Grade Five)	
Number Sense	
Estimation, percents, and factoring	12 items
Operations with fractions and decimals	17 items
Algebra and Functions	17 items
Measurement and Geometry	15 items
Statistics, Data Analysis, and Probability	4 items
Mathematics Standards Test (Grade Six)	
Number Sense	
Ratios, proportions, percentages, and negative fractions	15 items
Operations and problem solving with fractions	10 items

Algebra and Functions	19 items
Measurement and Geometry	10 items
Statistics, Data Analysis, and Probability	11 items
Mathematics Standards Test (Grade Seven)	
Number Sense	
Rational numbers	14 items
Exponents, powers, and roots	8 items
Algebra and Functions	
Quantitative relationships and evaluating expressions	10 items
Multistep problems, graphing, and functions	15 items
Measurement and Geometry	13 items
Statistics, Data Analysis, and Probability	5 items
General Mathematics Standards Test	
Number Sense	
Rational numbers	14 items
Exponents, powers, and roots	10 items
Algebra and Functions	
Quantitative relationships and evaluating expressions	11 items
Multistep problems, graphing, and functions	10 items
Measurement and Geometry	11 items
Statistics, Data Analysis, and Probability	9 items
Algebra I Standards Test	
Number Properties, Operations, and Linear Equations	
Standards: 1.0–5.0, 24.0–25.0	17 items
Graphing and Systems of Linear Equations	
Standards: 6.0–9.0	14 items
Quadratics and Polynomials	
Standards: 10.0, 11.0, 14.0, and 19.0–23.0	21 items
Functions and Rational Expressions	
Standards: 12.0, 13.0, and 15.0–18.0	13 items
Geometry Standards Test	
Logic and Geometric Proofs	
Standards: 1.0–7.0	23 items
Volume and Area Formulas	
Standards: 8.0–11.0	11 items
Angle Relationships, Constructions, and Lines	
Standards: 12.0–17.0	16 items
Trigonometry	
Standards: 18.0–22.0	15 items

Algebra II Standards Test	
Polynomials and Rational Expressions	
Standards: 1.0–4.0 and 7.0	19 items
Quadratics, Conics, and Complex Numbers	
Standards: 5.0, 6.0, 8.0–10.0, 16.0, and 17.0	16 items
Exponents and Logarithms	
Standards: 11.0–15.0	16 items
Series, Combinatorics, and Probability and Statistics	
Algebra II Standards: 18.0–25.0 Probability and Statistics Standards: 1.0, 2.0, and 7.0	14 items
Summative High School Mathematics Standards Test	
Algebra I	18 items
Geometry	19 items
Algebra II	23 items
Probability and Statistics	5 items
High School Mathematics Standards Test (Integrated Mathematics 1)	
Algebra I	
Number properties, operations, and linear equations	15 items
Graphing	9 items
Quadratics and polynomials	14 items
Functions and rational expressions	7 items
Geometry	20 items
High School Mathematics Standards Test (Integrated Mathematics 2)	
Algebra I	20 items
Geometry	
Logic and geometric proofs	22 items
Angle relationships, constructions, and lines	8 items
Trigonometry	10 items
Algebra II/Probability and Statistics	5 items
High School Mathematics Standards Test (Integrated Mathematics 3)	
Geometry	5 items
Algebra II	
Polynomials and rational expressions	19 items
Quadratics, conics, and complex numbers	16 items
Exponents and logarithms	16 items
Series, combinatorics, and probability and statistics	9 items

Science

Science Standards Test (Grade Five)

Physical Science	
Grade Five, Standards: 5PS1.a–i	11 items
Grade Four, Standards: 4PS1.a–g and 4IE6.a–f	8 items
Life Science	
Grade Five, Standards: 5LS2.a–g and 5IE6.a–i	13 items
Grade Four, Standards: 4LS2.a–c and 4LS3.a–d	9 items
Earth Science	
Grade Five, Standards: 5ES3.a–e, 5ES4.a–e, and 5ES5.a–c	11 items
Grade Four, Standards: 4ES4.a–b, 4ES5.a–c, and 4IE6.a–f	8 items

Science Standards Test (Grade Eight)

Motion	
Standards: 8PC1.a–f	8 items
Forces, Density, and Buoyancy	
Standards: 8PC2.a–g, 8PC8.a–d	13 items
Structure of Matter and Periodic Table	
Standards: 8PC3.a–f, 8PC7.a–c	16 items
Earth in the Solar System	
Standards: 8PC4.a–e	7 items
Reactions and the Chemistry of Living Systems	
Standards: 8PC5.a–e, 8PC6.a–c	10 items
Investigation and Experimentation	
Standards: 8PCIE9.a–g	6 items

Life Science Standards Test (Grade Ten)

Cell Biology	
Standards: 7SL1.c–e, 8PC6.b–c, and BI1.a.c.f	10 items
Genetics	
Standards: 7LS2.a, 7LS2.c–e, BI2.b, BI2.d–f, BI3.a, and BI5.a	12 items
Physiology	
Standards: 7LS5.a, 7LS5.c, 7LS6.j, BI9.a–b, and BI10.b–d	10 items
Ecology	
Standards: 6LS5.b–c, 6LS5.e, and BI6.a–f	11 items
Evolution	
Standards: 7LS3.a–c, BI7.a–d, BI8.a–b, and BI8.e	11 items
Investigation and Experimentation	
Standards: 6LSIE7.c, 6LSIE7.e, 7LSIE7.c, 8PCIE9.b–c, BIIE1.c, BIIE1.f, BIIE1.i–j	6 items

Biology Standards Test

Cell Biology	
Standards: BI1.a–h	9 items
Genetics	
Standards: BI2.a–g, BI3.a–b, BI4.a–e, BI5.a–c	18 items

Ecology and Evolution	
Ecology, Standards: BI6.a–f Evolution, Standards: BI7a–d and BI8a–e	16 items
Physiology	
Standards: BI9.a–e, BI10.a–e	11 items
Investigation and Experimentation	
Standards: BIIE1.a–n	6 items
Chemistry Standards Test	
Atomic and Molecular Structure	
Atomic and Molecular Structure, Standards: CH1.a–e Nuclear Processes, Standards: CH11.a–e	8 items
Chemical Bonds, Biochemistry	
Chemical Bonds, Standards: CH2.a–e Organic and Biochemistry, Standards: CH10.a–c	9 items
Kinetics, Thermodynamics	
Gases and Their Properties, Standards: CH4.a–f Chemical Thermodynamics, Standards: CH7.a–d Solutions, Standards: CH6.a–d	14 items
Chemical Reactions	
Acids and Bases, Standards: CH5.a–d Reaction Rates, Standards: CH8.a–c Chemical Equilibrium, Standards: CH9.a–b	13 items
Conservation of Matter and Stoichiometry	
Standards: CH3.a–e	10 items
Investigation and Experimentation	
Standards: CHIE1.a–n	6 items
Earth Science Standards Test	
Astronomy and Cosmology	
Earth's Place in the Universe, Standards: ES1.a–f, ES2.a–d	12 items
Solid Earth	
Dynamic Earth Processes, Standards: ES3.a–e California Geology, Standards: ES9.a–c	14 items
The Earth's Energy	
Energy in the Earth System, Standards: ES4.a–c, ES5.a–e, ES6.a–c Structure and Composition of the Atmosphere, Standards: ES8.a–c Biogeochemical Cycles, Standards: ES7.a–c	28 items
Investigation and Experimentation	
Standards: ESIE1.a–n	6 items
Physics Standards Test	
Motion and Forces	
Standards: PH1.a–g	12 items
Conservation of Energy and Momentum	
Standards: PH2.a–g	12 items

Heat and Thermodynamics	
Standards: PH3.a–e	9 items
Waves	
Standards: PH4.a–f	10 items
Electric and Magnetic Phenomena	
Standards: PH5.a–i	11 items
Investigation and Experimentation	
Standards: PHIE1.a–n	6 items

Science Standards Test (Integrated/Coordinated Science 1)

Biology/Life Sciences	
Ecology, Standards: BI6.a–f Evolution, Standards: BI8.a–b and BI8.e	10 items
Chemistry	
Atomic and Molecular Structure, Standards: CH1.a–e Chemical Bonds, Standards: CH2.a–c Acids and Bases, Standards: CH5.a, c Chemical Thermodynamics, Standards: CH7.b–c	15 items
Earth Sciences	
Dynamic Earth Processes, Standards: ES3.a–e Biogeochemical Cycles, Standards: ES7.a–c California Geology, Standards: ES9.b–c	17 items
Physics	
Waves, Standards: PH4.a–b, PH4.d–f Electric and Magnetic Phenomena, Standards: PH5 d–e, PH5.h–i	12 items
Investigation and Experimentation	
Standards: PHIE1.a–n	6 items

Science Standards Test (Integrated/Coordinated Science 2)

Biology/Life Sciences	
Cell Biology, Standards: BI1.a, BI1.c–e, BI1.h Genetics Standards: BI2.a–c, BI2.e–g, BI3.a–b, BI4.a–b	15 items
Chemistry	
Conservation of Matter and Stoichiometry, Standard: CH3.a Solutions, Standards: CH6.a–c Organic and Biochemistry, Standards: CH10.a–c	6 items
Earth Sciences	
Earth's Place in the Universe, Standards: ES1.a.c.f Energy in the Earth System, Standards: ES4.b, ES5.a–c, ES5.e, ES6.a–c	15 items
Physics	
Motions and Forces, Standards: PH1.a–f Conservation of Energy and Momentum, Standards: PH2.a–d	18 items
Investigation and Experimentation	
Standards: IE1.a–n	6 items

Science Standards Test (Integrated/Coordinated Science 3)

Biology/Life Sciences	
Cell Biology, Standards: BI1.b.f.g Genetics, Standards: BI2.d, BI4.c–e, BI5.c Evolution, Standards: BI7.a–d, BI8.c–d	16 items
Chemistry	
Conservation of Matter and Stoichiometry, Standards: CH3.b–e Gases and Their Properties, Standards: CH4.a–f Solutions, Standard: CH6.d Reaction Rates, Standards: CH8.a–c Chemical Equilibrium, Standards: CH9.a–b	23 items
Earth Sciences	
Energy in the Earth System, Standard: ES4.c Structure and Composition of the Atmosphere, Standards: ES8.a–c	7 items
Physics	
Motions and Forces, Standard: PH1.g Conservation of Energy and Momentum, Standards: PH2.e–g Electric and Magnetic Phenomena, Standards: PH5.f–g	8 items
Investigation and Experimentation	
Standards: IE1.a–n	6 items

Science Standards Test (Integrated/Coordinated Science 4)

Biology/Life Sciences	
Genetics, Standards: BI5.a–b Physiology, Standards: BI9.a–e, BI10.a–e	13 items
Chemistry	
Chemical Bonds, Standards: CH2.d–e Acids and Bases, Standards: CH5.b.d Chemical Thermodynamics, Standards: CH7.a.d Nuclear Processes, Standards: CH11.a–e	10 items
Earth Sciences	
Earth's Place in the Universe, Standards: ES1.b, ES1.d–e, ES2.a–d Energy in the Earth System, Standards: ES4.a, ES5.d California Geology, Standard: ES9.a	15 items
Physics	
Heat and Thermodynamics, Standards: PH3.a–e Waves, Standard: PH4.c Electric and Magnetic Phenomena, Standards: PH5.a–c	16 items
Investigation and Experimentation	
Standards: IE1.a–n	6 items

Appendix 2.C—2013 Test Variations, Accommodations, and Modifications

Table 2.C.1 Matrix of Test Variations, Accommodations, and Modifications

1: Test Variation, 2: Accommodation, 3: Modification	
Test administration directions that are simplified or clarified (does not apply to test questions)	ALL
Student marks in test booklet (other than responses) including highlighting	ALL For grades 2 and 3 marks must be removed to avoid scanning interference or transcribed.
Test students in a small group setting	ALL
Extra time on a test within a testing day	ALL
Test individual student separately, provided that a test examiner directly supervises the student	1
Visual magnifying equipment	1
Audio amplification equipment	1
Noise buffers (e.g., individual carrel or study enclosure)	1
Special lighting or acoustics; special or adaptive furniture	1
Colored overlay, mask, or other means to maintain visual attention	1
Manually Coded English (MCE) or American Sign Language (ASL) to present directions for administration (does not apply to test questions)	1
Student marks responses in test booklet and responses are transferred to a scorable answer document by an employee of the school, district, or nonpublic school	2
Multiple-choice question responses dictated orally, or in MCE to a scribe, audio recorder, or speech-to-text converter for selected-response items	2
Word processing software with spell and grammar check tools turned off for the essay responses (writing portion of the test)	2
Essay responses dictated orally or in MCE to a scribe, audio recorder, or speech-to-text converter and the student provides all spelling and language conventions	2
Assistive device that does not interfere with the independent work of the student on the multiple-choice and/or essay responses (writing portion of the test)	2
Braille transcriptions provided by the test contractor	2
Large-print versions or test items enlarged (not duplicated) to a font size larger than that used on large print versions	2
Test over more than one day for a test or test part to be administered in a single sitting	2
Supervised breaks within a section of the test	2
Administration of the test at the most beneficial time of day to the student	2
Test administered at home or in hospital by a test examiner	2

1: Test Variation, 2: Accommodation, 3: Modification	
MCE or ASL to present test questions and answer options	2 Math, Science, History–Social Science
	3 ELA
	2 Writing Task
Test questions and answer options read aloud to student	2 Math, Science, History–Social Science
	3 ELA
	2 Writing Task
Calculator on the mathematics tests	3
Calculator on the science tests	3
Arithmetic table or formulas (not provided) on the mathematics tests	3
Dictionary	3
Arithmetic table or formulas (not provided) on the science tests	3
Math manipulatives on the mathematics tests	3
Math manipulatives on the science tests	3
Word processing software with spell and grammar check tools enabled on the essay responses writing portion of test	3
Essay responses dictated orally, in MCE, or in ASL to a scribe, audio recorder, or speech-to-text converter (scribe provides spelling, grammar, and language conventions)	3
Assistive device that interferes with the independent work of the student on the multiple-choice and/or essay responses	3
Unlisted Accommodation or Modification	Check with CDE prior to use

All = All students may be provided these test variations.

(1): Test Variation = Students may have these testing variations if regularly used in the classroom.

(2): Accommodation = Eligible students shall be permitted to take the examination/test with accommodations if specified in the eligible student's IEP or Section 504 plan for use on the examination, standardized testing, or for use during classroom instruction and assessment.

(3): Modification = For the STAR Program, eligible students shall be permitted to take the tests with modifications if specified in the eligible student's IEP or Section 504 plan.

Table 2.C.2 Matrix of Test Variations for English Learners

Test Variations	
Hear the test directions printed in the test administration manual translated into the student's primary language. Ask clarifying questions about the test directions in the student's primary language.	Variation Allowed
Additional supervised breaks within a testing day *or* following each section (STAR) within a test part provided that the test section is completed within a testing day. A test section is identified by a "STOP" at the end of it.	Variation Allowed
English learners (ELs) may have the opportunity to be tested separately with other ELs provided that the student is directly supervised by an employee of the school who has signed the test security affidavit and the student has been provided such a flexible setting as part of his/her regular instruction or assessment.	Variation Allowed
Access to translation glossaries/word lists (English-to-primary language). Glossaries/Word lists shall not include definitions or formulas.	Variation Allowed Math, Science, History–Social Science
	Not Allowed ELA

Appendix 2.D—Special Services Summary Tables

Notes:

1. To improve clarity of tables presented in this section, the columns with total number of students using each service are labeled with the particular grade or test name for which the services were utilized. For example, the column with a heading of "Grade 2" in Table 2.D.1 presents the number of students using various special services on the CST for ELA in grade two. The column with the heading of "Pct. of Total" in the same table represents the percent of students using a service out of the total number of test-takers.
2. The total number of test-takers is the total of students listed under "*Any* Accom., Mod., or EL Variation" and those listed under "*No* Accom., Mod., or EL Variation."
3. The sum of the numbers of students across subgroups may not match exactly to the total testing population, due to the fact that only valid primary disability codes were chosen to identify those subgroups.

Table 2.D.1 Special Services Summary for ELA, Grades Two and Three

Special Services Summary for ELA, Grades Two and Three				
All Tested	**Grade 2**	**Pct. of Total**	**Grade 3**	**Pct. of Total**
B: Marked responses in test booklet	495	0.11%	289	0.07%
C: Dictated responses to a scribe	115	0.02%	65	0.01%
F: Used noninterfering assistive device	86	0.02%	30	0.01%
G: Used braille version of test	19	0.00%	17	0.00%
H: Used large-print version of test	186	0.04%	157	0.04%
J: Tested during more than one day	1,383	0.30%	672	0.15%
K: Had supervised breaks	5,414	1.17%	2,828	0.65%
L: Most beneficial time of day	2,423	0.53%	1,129	0.26%
M: Administered at home or in a hospital	46	0.01%	52	0.01%
N: Used a dictionary	5	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	45	0.01%	22	0.01%
V: Used interfering assistive device	5	0.00%	0	0.00%
W: Used an unlisted modification	56	0.01%	30	0.01%
X: Used an unlisted accommodation	1,242	0.27%	751	0.17%
Y: Leave blank	371	0.08%	226	0.05%
Z: Examiner read test questions aloud	1,757	0.38%	744	0.17%
Accom. or Mod. is in Section 504 plan	325	0.07%	374	0.09%
Accom. or Mod. is in IEP	7,867	1.70%	4,164	0.95%
English Learner Test Variation A	389	0.08%	203	0.05%
English Learner Test Variation B	62	0.01%	50	0.01%
English Learner Test Variation C	219	0.05%	190	0.04%
Any Accom., Mod., or EL Variation	9,175	1.99%	5,114	1.17%
No Accom., Mod., or EL Variation	452,287	98.01%	432,402	98.83%
Students Not in Special Education	**Grade 2**	**Pct. of Total**	**Grade 3**	**Pct. of Total**
B: Marked responses in test booklet	81	0.02%	43	0.01%
C: Dictated responses to a scribe	28	0.01%	24	0.01%
F: Used noninterfering assistive device	13	0.00%	3	0.00%
G: Used braille version of test	2	0.00%	0	0.00%
H: Used large-print version of test	27	0.01%	34	0.01%
J: Tested during more than one day	173	0.04%	87	0.02%
K: Had supervised breaks	877	0.21%	459	0.11%
L: Most beneficial time of day	345	0.08%	140	0.03%

Special Services Summary for ELA, Grades Two and Three				
M: Administered at home or in a hospital	24	0.01%	33	0.01%
N: Used a dictionary	3	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	2	0.00%	1	0.00%
V: Used interfering assistive device	3	0.00%	0	0.00%
W: Used an unlisted modification	19	0.00%	5	0.00%
X: Used an unlisted accommodation	243	0.06%	166	0.04%
Y: Leave blank	96	0.02%	46	0.01%
Z: Examiner read test questions aloud	226	0.05%	97	0.02%
Accom. or Mod. is in Section 504 plan	300	0.07%	351	0.09%
Accom. or Mod. is in IEP	1,068	0.25%	443	0.11%
English Learner Test Variation A	352	0.08%	192	0.05%
English Learner Test Variation B	32	0.01%	42	0.01%
English Learner Test Variation C	179	0.04%	170	0.04%
Any Accom., Mod., or EL Variation	2,004	0.47%	1,231	0.30%
No Accom., Mod., or EL Variation	422,449	99.53%	411,153	99.70%
Students in Special Education	**Grade 2**	**Pct. of Total**	**Grade 3**	**Pct. of Total**
B: Marked responses in test booklet	411	1.11%	244	0.97%
C: Dictated responses to a scribe	87	0.24%	40	0.16%
F: Used noninterfering assistive device	73	0.20%	27	0.11%
G: Used braille version of test	17	0.05%	17	0.07%
H: Used large-print version of test	154	0.42%	120	0.48%
J: Tested during more than one day	1,206	3.26%	583	2.32%
K: Had supervised breaks	4,526	12.24%	2,360	9.41%
L: Most beneficial time of day	2,071	5.60%	987	3.93%
M: Administered at home or in a hospital	21	0.06%	19	0.08%
N: Used a dictionary	2	0.01%	0	0.00%
O: Examiner presented using MCE or ASL	43	0.12%	21	0.08%
V: Used interfering assistive device	2	0.01%	0	0.00%
W: Used an unlisted modification	37	0.10%	25	0.10%
X: Used an unlisted accommodation	997	2.70%	583	2.32%
Y: Leave blank	275	0.74%	179	0.71%
Z: Examiner read test questions aloud	1,528	4.13%	646	2.58%
Accom. or Mod. is in Section 504 plan	25	0.07%	23	0.09%
Accom. or Mod. is in IEP	6,781	18.34%	3,706	14.77%
English Learner Test Variation A	36	0.10%	11	0.04%
English Learner Test Variation B	30	0.08%	8	0.03%
English Learner Test Variation C	40	0.11%	20	0.08%
Any Accom., Mod., or EL Variation	7,153	19.35%	3,868	15.42%
No Accom., Mod., or EL Variation	29,813	80.65%	21,217	84.58%
English-Only Students	**Grade 2**	**Pct. of Total**	**Grade 3**	**Pct. of Total**
B: Marked responses in test booklet	312	0.12%	219	0.09%
C: Dictated responses to a scribe	75	0.03%	50	0.02%
F: Used noninterfering assistive device	57	0.02%	21	0.01%
G: Used braille version of test	5	0.00%	10	0.00%

Special Services Summary for ELA, Grades Two and Three				
H: Used large-print version of test	119	0.05%	108	0.04%
J: Tested during more than one day	831	0.31%	464	0.19%
K: Had supervised breaks	3,292	1.24%	1,909	0.77%
L: Most beneficial time of day	1,493	0.56%	753	0.30%
M: Administered at home or in a hospital	30	0.01%	37	0.01%
N: Used a dictionary	2	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	29	0.01%	15	0.01%
V: Used interfering assistive device	1	0.00%	0	0.00%
W: Used an unlisted modification	39	0.01%	14	0.01%
X: Used an unlisted accommodation	743	0.28%	524	0.21%
Y: Leave blank	274	0.10%	165	0.07%
Z: Examiner read test questions aloud	1,073	0.41%	502	0.20%
Accom. or Mod. is in Section 504 plan	247	0.09%	296	0.12%
Accom. or Mod. is in IEP	4,788	1.81%	2,799	1.13%
English Learner Test Variation A	12	0.00%	3	0.00%
English Learner Test Variation B	7	0.00%	1	0.00%
English Learner Test Variation C	6	0.00%	6	0.00%
Any Accom., Mod., or EL Variation	5,304	2.01%	3,229	1.30%
No Accom., Mod., or EL Variation	259,127	97.99%	245,294	98.70%
Initially Fluent English Proficient (I-FEP) Students	**Grade 2**	**Pct. of Total**	**Grade 3**	**Pct. of Total**
B: Marked responses in test booklet	2	0.01%	5	0.03%
C: Dictated responses to a scribe	0	0.00%	4	0.02%
F: Used noninterfering assistive device	0	0.00%	2	0.01%
G: Used braille version of test	1	0.01%	0	0.00%
H: Used large-print version of test	1	0.01%	7	0.04%
J: Tested during more than one day	8	0.05%	8	0.04%
K: Had supervised breaks	50	0.29%	44	0.23%
L: Most beneficial time of day	20	0.12%	21	0.11%
M: Administered at home or in a hospital	0	0.00%	1	0.01%
N: Used a dictionary	0	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	2	0.01%	0	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	0	0.00%	0	0.00%
X: Used an unlisted accommodation	11	0.06%	8	0.04%
Y: Leave blank	1	0.01%	6	0.03%
Z: Examiner read test questions aloud	13	0.08%	9	0.05%
Accom. or Mod. is in Section 504 plan	1	0.01%	9	0.05%
Accom. or Mod. is in IEP	63	0.37%	65	0.34%
English Learner Test Variation A	3	0.02%	2	0.01%
English Learner Test Variation B	0	0.00%	0	0.00%
English Learner Test Variation C	0	0.00%	1	0.01%
Any Accom., Mod., or EL Variation	70	0.41%	81	0.42%
No Accom., Mod., or EL Variation	17,028	99.59%	19,121	99.58%

Special Services Summary for ELA, Grades Two and Three				
English Learner (EL) Students	**Grade 2**	**Pct. of Total**	**Grade 3**	**Pct. of Total**
B: Marked responses in test booklet	171	0.10%	55	0.04%
C: Dictated responses to a scribe	40	0.02%	9	0.01%
F: Used noninterfering assistive device	28	0.02%	6	0.00%
G: Used braille version of test	11	0.01%	2	0.00%
H: Used large-print version of test	55	0.03%	36	0.03%
J: Tested during more than one day	540	0.31%	187	0.14%
K: Had supervised breaks	2,030	1.18%	827	0.60%
L: Most beneficial time of day	897	0.52%	329	0.24%
M: Administered at home or in a hospital	16	0.01%	13	0.01%
N: Used a dictionary	3	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	14	0.01%	7	0.01%
V: Used interfering assistive device	4	0.00%	0	0.00%
W: Used an unlisted modification	17	0.01%	16	0.01%
X: Used an unlisted accommodation	485	0.28%	205	0.15%
Y: Leave blank	94	0.05%	49	0.04%
Z: Examiner read test questions aloud	659	0.38%	226	0.16%
Accom. or Mod. is in Section 504 plan	74	0.04%	59	0.04%
Accom. or Mod. is in IEP	2,959	1.72%	1,225	0.89%
English Learner Test Variation A	374	0.22%	187	0.14%
English Learner Test Variation B	55	0.03%	48	0.04%
English Learner Test Variation C	213	0.12%	182	0.13%
Any Accom., Mod., or EL Variation	3,737	2.17%	1,704	1.24%
No Accom., Mod., or EL Variation	168,797	97.83%	135,378	98.76%
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 2**	**Pct. of Total**	**Grade 3**	**Pct. of Total**
B: Marked responses in test booklet	3	0.04%	4	0.01%
C: Dictated responses to a scribe	0	0.00%	0	0.00%
F: Used noninterfering assistive device	0	0.00%	1	0.00%
G: Used braille version of test	0	0.00%	4	0.01%
H: Used large-print version of test	1	0.01%	2	0.01%
J: Tested during more than one day	0	0.00%	8	0.02%
K: Had supervised breaks	23	0.34%	37	0.12%
L: Most beneficial time of day	4	0.06%	21	0.07%
M: Administered at home or in a hospital	0	0.00%	1	0.00%
N: Used a dictionary	0	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	0	0.00%	0	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	0	0.00%	0	0.00%
X: Used an unlisted accommodation	1	0.01%	13	0.04%
Y: Leave blank	2	0.03%	4	0.01%
Z: Examiner read test questions aloud	6	0.09%	2	0.01%
Accom. or Mod. is in Section 504 plan	3	0.04%	8	0.02%
Accom. or Mod. is in IEP	23	0.34%	53	0.16%

Special Services Summary for ELA, Grades Two and Three				
English Learner Test Variation A	0	0.00%	10	0.03%
English Learner Test Variation B	0	0.00%	0	0.00%
English Learner Test Variation C	0	0.00%	0	0.00%
Any Accom., Mod., or EL Variation	27	0.40%	74	0.23%
No Accom., Mod., or EL Variation	6,680	99.60%	32,058	99.77%

Table 2.D.2 Special Services Summary for ELA, Grade Four

Special Services Summary for ELA, Grade Four		
All Tested	**Grade 4**	**Pct. of Total**
B: Marked responses in test booklet	536	0.13%
C: Dictated responses to a scribe	45	0.01%
D: Used word processing with tools off	215	0.05%
E: Dictated essay with conventions	60	0.01%
F: Used noninterfering assistive device	49	0.01%
G: Used braille version of test	22	0.01%
H: Used large-print version of test	165	0.04%
J: Tested during more than one day	576	0.13%
K: Had supervised breaks	2,889	0.68%
L: Most beneficial time of day	976	0.23%
M: Administered at home or in a hospital	30	0.01%
N: Used a dictionary	7	0.00%
O: Examiner presented using MCE or ASL	28	0.01%
T: Used word processing with tools on	17	0.00%
U: Dictated essay without conventions	16	0.00%
V: Used interfering assistive device	2	0.00%
W: Used an unlisted modification	45	0.01%
X: Used an unlisted accommodation	843	0.20%
Y: Leave blank	316	0.07%
Z: Examiner read test questions aloud	1,406	0.33%
Accom. or Mod. is in Section 504 plan	726	0.17%
Accom. or Mod. is in IEP	4,398	1.03%
English Learner Test Variation A	430	0.10%
English Learner Test Variation B	92	0.02%
English Learner Test Variation C	306	0.07%
Any Accom., Mod., or EL Variation	5,942	1.39%
No Accom., Mod., or EL Variation	421,238	98.61%
Students Not in Special Education	**Grade 4**	**Pct. of Total**
B: Marked responses in test booklet	130	0.03%
C: Dictated responses to a scribe	20	0.00%
D: Used word processing with tools off	65	0.02%
E: Dictated essay with conventions	24	0.01%
F: Used noninterfering assistive device	10	0.00%
G: Used braille version of test	2	0.00%
H: Used large-print version of test	53	0.01%
J: Tested during more than one day	92	0.02%
K: Had supervised breaks	554	0.14%
L: Most beneficial time of day	171	0.04%
M: Administered at home or in a hospital	14	0.00%
N: Used a dictionary	0	0.00%
O: Examiner presented using MCE or ASL	1	0.00%

Special Services Summary for ELA, Grade Four		
T: Used word processing with tools on	5	0.00%
U: Dictated essay without conventions	6	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	18	0.00%
X: Used an unlisted accommodation	216	0.05%
Y: Leave blank	69	0.02%
Z: Examiner read test questions aloud	191	0.05%
Accom. or Mod. is in Section 504 plan	667	0.16%
Accom. or Mod. is in IEP	450	0.11%
English Learner Test Variation A	416	0.10%
English Learner Test Variation B	76	0.02%
English Learner Test Variation C	283	0.07%
Any Accom., Mod., or EL Variation	1,875	0.46%
No Accom., Mod., or EL Variation	403,029	99.54%
Students in Special Education	**Grade 4**	**Pct. of Total**
B: Marked responses in test booklet	402	1.95%
C: Dictated responses to a scribe	23	0.11%
D: Used word processing with tools off	149	0.72%
E: Dictated essay with conventions	35	0.17%
F: Used noninterfering assistive device	39	0.19%
G: Used braille version of test	20	0.10%
H: Used large-print version of test	112	0.54%
J: Tested during more than one day	481	2.34%
K: Had supervised breaks	2,321	11.27%
L: Most beneficial time of day	801	3.89%
M: Administered at home or in a hospital	16	0.08%
N: Used a dictionary	7	0.03%
O: Examiner presented using MCE or ASL	27	0.13%
T: Used word processing with tools on	12	0.06%
U: Dictated essay without conventions	10	0.05%
V: Used interfering assistive device	2	0.01%
W: Used an unlisted modification	26	0.13%
X: Used an unlisted accommodation	625	3.03%
Y: Leave blank	246	1.19%
Z: Examiner read test questions aloud	1,210	5.87%
Accom. or Mod. is in Section 504 plan	54	0.26%
Accom. or Mod. is in IEP	3,930	19.08%
English Learner Test Variation A	13	0.06%
English Learner Test Variation B	16	0.08%
English Learner Test Variation C	20	0.10%
Any Accom., Mod., or EL Variation	4,041	19.62%
No Accom., Mod., or EL Variation	16,558	80.38%

Special Services Summary for ELA, Grade Four		
English-Only Students	**Grade 4**	**Pct. of Total**
B: Marked responses in test booklet	441	0.18%
C: Dictated responses to a scribe	35	0.01%
D: Used word processing with tools off	190	0.08%
E: Dictated essay with conventions	49	0.02%
F: Used noninterfering assistive device	35	0.01%
G: Used braille version of test	16	0.01%
H: Used large-print version of test	114	0.05%
J: Tested during more than one day	423	0.18%
K: Had supervised breaks	2,107	0.87%
L: Most beneficial time of day	707	0.29%
M: Administered at home or in a hospital	21	0.01%
N: Used a dictionary	5	0.00%
O: Examiner presented using MCE or ASL	22	0.01%
T: Used word processing with tools on	17	0.01%
U: Dictated essay without conventions	11	0.00%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	38	0.02%
X: Used an unlisted accommodation	622	0.26%
Y: Leave blank	223	0.09%
Z: Examiner read test questions aloud	995	0.41%
Accom. or Mod. is in Section 504 plan	576	0.24%
Accom. or Mod. is in IEP	3,160	1.31%
English Learner Test Variation A	11	0.00%
English Learner Test Variation B	3	0.00%
English Learner Test Variation C	5	0.00%
Any Accom., Mod., or EL Variation	3,833	1.59%
No Accom., Mod., or EL Variation	237,445	98.41%
Initially Fluent English Proficient (I-FEP) Students	**Grade 4**	**Pct. of Total**
B: Marked responses in test booklet	6	0.03%
C: Dictated responses to a scribe	2	0.01%
D: Used word processing with tools off	2	0.01%
E: Dictated essay with conventions	0	0.00%
F: Used noninterfering assistive device	3	0.01%
G: Used braille version of test	1	0.00%
H: Used large-print version of test	5	0.02%
J: Tested during more than one day	10	0.05%
K: Had supervised breaks	48	0.23%
L: Most beneficial time of day	14	0.07%
M: Administered at home or in a hospital	3	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented using MCE or ASL	1	0.00%
T: Used word processing with tools on	0	0.00%
U: Dictated essay without conventions	0	0.00%

Special Services Summary for ELA, Grade Four		
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	13	0.06%
Y: Leave blank	5	0.02%
Z: Examiner read test questions aloud	25	0.12%
Accom. or Mod. is in Section 504 plan	18	0.09%
Accom. or Mod. is in IEP	68	0.33%
English Learner Test Variation A	1	0.00%
English Learner Test Variation B	1	0.00%
English Learner Test Variation C	2	0.01%
Any Accom., Mod., or EL Variation	92	0.45%
No Accom., Mod., or EL Variation	20,363	99.55%
English Learner (EL) Students	**Grade 4**	**Pct. of Total**
B: Marked responses in test booklet	72	0.07%
C: Dictated responses to a scribe	6	0.01%
D: Used word processing with tools off	15	0.01%
E: Dictated essay with conventions	7	0.01%
F: Used noninterfering assistive device	9	0.01%
G: Used braille version of test	3	0.00%
H: Used large-print version of test	30	0.03%
J: Tested during more than one day	129	0.12%
K: Had supervised breaks	672	0.63%
L: Most beneficial time of day	237	0.22%
M: Administered at home or in a hospital	6	0.01%
N: Used a dictionary	2	0.00%
O: Examiner presented using MCE or ASL	5	0.00%
T: Used word processing with tools on	0	0.00%
U: Dictated essay without conventions	4	0.00%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	6	0.01%
X: Used an unlisted accommodation	195	0.18%
Y: Leave blank	81	0.08%
Z: Examiner read test questions aloud	373	0.35%
Accom. or Mod. is in Section 504 plan	105	0.10%
Accom. or Mod. is in IEP	1,079	1.01%
English Learner Test Variation A	403	0.38%
English Learner Test Variation B	88	0.08%
English Learner Test Variation C	292	0.27%
Any Accom., Mod., or EL Variation	1,872	1.75%
No Accom., Mod., or EL Variation	105,231	98.25%

Special Services Summary for ELA, Grade Four		
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 4**	**Pct. of Total**
B: Marked responses in test booklet	15	0.03%
C: Dictated responses to a scribe	2	0.00%
D: Used word processing with tools off	8	0.01%
E: Dictated essay with conventions	4	0.01%
F: Used noninterfering assistive device	1	0.00%
G: Used braille version of test	2	0.00%
H: Used large-print version of test	16	0.03%
J: Tested during more than one day	11	0.02%
K: Had supervised breaks	57	0.10%
L: Most beneficial time of day	14	0.02%
M: Administered at home or in a hospital	0	0.00%
N: Used a dictionary	0	0.00%
O: Examiner presented using MCE or ASL	0	0.00%
T: Used word processing with tools on	0	0.00%
U: Dictated essay without conventions	1	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	0	0.00%
X: Used an unlisted accommodation	13	0.02%
Y: Leave blank	7	0.01%
Z: Examiner read test questions aloud	10	0.02%
Accom. or Mod. is in Section 504 plan	27	0.05%
Accom. or Mod. is in IEP	83	0.14%
English Learner Test Variation A	13	0.02%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	7	0.01%
Any Accom., Mod., or EL Variation	134	0.23%
No Accom., Mod., or EL Variation	57,650	99.77%

Table 2.D.3 Special Services Summary for ELA, Grades Five and Six

Special Services Summary for ELA, Grades Five and Six				
All Tested	**Grade 5**	**Pct. of Total**	**Grade 6**	**Pct. of Total**
B: Marked responses in test booklet	473	0.11%	362	0.08%
C: Dictated responses to a scribe	33	0.01%	32	0.01%
F: Used noninterfering assistive device	30	0.01%	16	0.00%
G: Used braille version of test	17	0.00%	19	0.00%
H: Used large-print version of test	135	0.03%	130	0.03%
J: Tested during more than one day	671	0.16%	457	0.11%
K: Had supervised breaks	2,577	0.61%	1,986	0.47%
L: Most beneficial time of day	866	0.21%	655	0.15%
M: Administered at home or in a hospital	48	0.01%	59	0.01%
N: Used a dictionary	7	0.00%	7	0.00%
O: Examiner presented using MCE or ASL	7	0.00%	11	0.00%
V: Used interfering assistive device	4	0.00%	2	0.00%
W: Used an unlisted modification	26	0.01%	28	0.01%
X: Used an unlisted accommodation	628	0.15%	587	0.14%
Y: Leave blank	204	0.05%	277	0.07%
Z: Examiner read test questions aloud	398	0.09%	349	0.08%
Accom. or Mod. is in Section 504 plan	441	0.10%	323	0.08%
Accom. or Mod. is in IEP	3,616	0.86%	3,117	0.73%
English Learner Test Variation A	197	0.05%	334	0.08%
English Learner Test Variation B	62	0.01%	68	0.02%
English Learner Test Variation C	157	0.04%	291	0.07%
Any Accom., Mod., or EL Variation	4,566	1.08%	4,124	0.97%
No Accom., Mod., or EL Variation	416,831	98.92%	421,922	99.03%
Students Not in Special Education	**Grade 5**	**Pct. of Total**	**Grade 6**	**Pct. of Total**
B: Marked responses in test booklet	116	0.03%	79	0.02%
C: Dictated responses to a scribe	12	0.00%	9	0.00%
F: Used noninterfering assistive device	7	0.00%	1	0.00%
G: Used braille version of test	2	0.00%	2	0.00%
H: Used large-print version of test	45	0.01%	27	0.01%
J: Tested during more than one day	75	0.02%	46	0.01%
K: Had supervised breaks	360	0.09%	230	0.06%
L: Most beneficial time of day	131	0.03%	81	0.02%
M: Administered at home or in a hospital	30	0.01%	46	0.01%
N: Used a dictionary	1	0.00%	1	0.00%
O: Examiner presented using MCE or ASL	2	0.00%	2	0.00%
V: Used interfering assistive device	1	0.00%	0	0.00%
W: Used an unlisted modification	13	0.00%	10	0.00%
X: Used an unlisted accommodation	110	0.03%	93	0.02%
Y: Leave blank	50	0.01%	37	0.01%
Z: Examiner read test questions aloud	64	0.02%	39	0.01%
Accom. or Mod. is in Section 504 plan	417	0.10%	308	0.08%
Accom. or Mod. is in IEP	285	0.07%	180	0.04%

Special Services Summary for ELA, Grades Five and Six				
English Learner Test Variation A	192	0.05%	318	0.08%
English Learner Test Variation B	54	0.01%	54	0.01%
English Learner Test Variation C	149	0.04%	282	0.07%
Any Accom., Mod., or EL Variation	1,111	0.28%	1,078	0.27%
No Accom., Mod., or EL Variation	398,588	99.72%	404,128	99.73%
Students in Special Education	**Grade 5**	**Pct. of Total**	**Grade 6**	**Pct. of Total**
B: Marked responses in test booklet	355	1.77%	280	1.46%
C: Dictated responses to a scribe	21	0.10%	22	0.11%
F: Used noninterfering assistive device	23	0.11%	15	0.08%
G: Used braille version of test	15	0.07%	17	0.09%
H: Used large-print version of test	90	0.45%	103	0.54%
J: Tested during more than one day	594	2.96%	410	2.13%
K: Had supervised breaks	2,199	10.98%	1,749	9.09%
L: Most beneficial time of day	729	3.64%	572	2.97%
M: Administered at home or in a hospital	18	0.09%	13	0.07%
N: Used a dictionary	6	0.03%	6	0.03%
O: Examiner presented using MCE or ASL	5	0.02%	9	0.05%
V: Used interfering assistive device	3	0.01%	2	0.01%
W: Used an unlisted modification	13	0.06%	18	0.09%
X: Used an unlisted accommodation	513	2.56%	492	2.56%
Y: Leave blank	154	0.77%	239	1.24%
Z: Examiner read test questions aloud	330	1.65%	308	1.60%
Accom. or Mod. is in Section 504 plan	20	0.10%	14	0.07%
Accom. or Mod. is in IEP	3,310	16.52%	2,924	15.20%
English Learner Test Variation A	4	0.02%	10	0.05%
English Learner Test Variation B	8	0.04%	13	0.07%
English Learner Test Variation C	8	0.04%	7	0.04%
Any Accom., Mod., or EL Variation	3,425	17.09%	3,026	15.73%
No Accom., Mod., or EL Variation	16,611	82.91%	16,213	84.27%
English-Only Students	**Grade 5**	**Pct. of Total**	**Grade 6**	**Pct. of Total**
B: Marked responses in test booklet	371	0.16%	284	0.12%
C: Dictated responses to a scribe	25	0.01%	22	0.01%
F: Used noninterfering assistive device	13	0.01%	8	0.00%
G: Used braille version of test	4	0.00%	12	0.01%
H: Used large-print version of test	88	0.04%	88	0.04%
J: Tested during more than one day	478	0.20%	308	0.13%
K: Had supervised breaks	1,868	0.79%	1,435	0.60%
L: Most beneficial time of day	618	0.26%	476	0.20%
M: Administered at home or in a hospital	40	0.02%	49	0.02%
N: Used a dictionary	6	0.00%	6	0.00%
O: Examiner presented using MCE or ASL	4	0.00%	11	0.00%

Special Services Summary for ELA, Grades Five and Six				
V: Used interfering assistive device	4	0.00%	2	0.00%
W: Used an unlisted modification	21	0.01%	19	0.01%
X: Used an unlisted accommodation	465	0.20%	417	0.18%
Y: Leave blank	146	0.06%	213	0.09%
Z: Examiner read test questions aloud	264	0.11%	224	0.09%
Accom. or Mod. is in Section 504 plan	329	0.14%	255	0.11%
Accom. or Mod. is in IEP	2,584	1.10%	2,235	0.94%
English Learner Test Variation A	3	0.00%	22	0.01%
English Learner Test Variation B	1	0.00%	3	0.00%
English Learner Test Variation C	3	0.00%	8	0.00%
Any Accom., Mod., or EL Variation	3,046	1.29%	2,608	1.10%
No Accom., Mod., or EL Variation	232,766	98.71%	234,719	98.90%
Initially Fluent English Proficient (I-FEP) Students	**Grade 5**	**Pct. of Total**	**Grade 6**	**Pct. of Total**
B: Marked responses in test booklet	10	0.05%	8	0.04%
C: Dictated responses to a scribe	0	0.00%	2	0.01%
F: Used noninterfering assistive device	1	0.01%	0	0.00%
G: Used braille version of test	2	0.01%	1	0.01%
H: Used large-print version of test	6	0.03%	1	0.01%
J: Tested during more than one day	9	0.05%	8	0.04%
K: Had supervised breaks	39	0.20%	32	0.16%
L: Most beneficial time of day	12	0.06%	7	0.04%
M: Administered at home or in a hospital	1	0.01%	0	0.00%
N: Used a dictionary	0	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	0	0.00%	0	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	0	0.00%	1	0.01%
X: Used an unlisted accommodation	12	0.06%	12	0.06%
Y: Leave blank	2	0.01%	2	0.01%
Z: Examiner read test questions aloud	6	0.03%	7	0.04%
Accom. or Mod. is in Section 504 plan	16	0.08%	9	0.05%
Accom. or Mod. is in IEP	53	0.27%	46	0.23%
English Learner Test Variation A	1	0.01%	0	0.00%
English Learner Test Variation B	0	0.00%	0	0.00%
English Learner Test Variation C	1	0.01%	4	0.02%
Any Accom., Mod., or EL Variation	74	0.37%	60	0.30%
No Accom., Mod., or EL Variation	19,726	99.63%	19,882	99.70%
English Learner (EL) Students	**Grade 5**	**Pct. of Total**	**Grade 6**	**Pct. of Total**
B: Marked responses in test booklet	61	0.07%	43	0.06%
C: Dictated responses to a scribe	7	0.01%	5	0.01%
F: Used noninterfering assistive device	13	0.01%	6	0.01%
G: Used braille version of test	5	0.01%	3	0.00%
H: Used large-print version of test	32	0.04%	22	0.03%
J: Tested during more than one day	161	0.19%	112	0.16%
K: Had supervised breaks	593	0.68%	406	0.59%

Special Services Summary for ELA, Grades Five and Six				
L: Most beneficial time of day	198	0.23%	133	0.19%
M: Administered at home or in a hospital	4	0.00%	5	0.01%
N: Used a dictionary	1	0.00%	1	0.00%
O: Examiner presented using MCE or ASL	2	0.00%	0	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	3	0.00%	8	0.01%
X: Used an unlisted accommodation	134	0.15%	128	0.19%
Y: Leave blank	48	0.06%	48	0.07%
Z: Examiner read test questions aloud	117	0.13%	103	0.15%
Accom. or Mod. is in Section 504 plan	73	0.08%	36	0.05%
Accom. or Mod. is in IEP	851	0.98%	650	0.94%
English Learner Test Variation A	180	0.21%	310	0.45%
English Learner Test Variation B	60	0.07%	64	0.09%
English Learner Test Variation C	150	0.17%	274	0.40%
Any Accom., Mod., or EL Variation	1,268	1.46%	1,233	1.79%
No Accom., Mod., or EL Variation	85,532	98.54%	67,784	98.21%
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 5**	**Pct. of Total**	**Grade 6**	**Pct. of Total**
B: Marked responses in test booklet	30	0.04%	24	0.02%
C: Dictated responses to a scribe	1	0.00%	3	0.00%
F: Used noninterfering assistive device	3	0.00%	2	0.00%
G: Used braille version of test	6	0.01%	3	0.00%
H: Used large-print version of test	9	0.01%	18	0.02%
J: Tested during more than one day	22	0.03%	29	0.03%
K: Had supervised breaks	73	0.09%	109	0.11%
L: Most beneficial time of day	36	0.05%	39	0.04%
M: Administered at home or in a hospital	3	0.00%	4	0.00%
N: Used a dictionary	0	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	1	0.00%	0	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	2	0.00%	0	0.00%
X: Used an unlisted accommodation	14	0.02%	26	0.03%
Y: Leave blank	6	0.01%	14	0.01%
Z: Examiner read test questions aloud	10	0.01%	14	0.01%
Accom. or Mod. is in Section 504 plan	22	0.03%	21	0.02%
Accom. or Mod. is in IEP	120	0.15%	177	0.18%
English Learner Test Variation A	13	0.02%	1	0.00%
English Learner Test Variation B	1	0.00%	1	0.00%
English Learner Test Variation C	3	0.00%	1	0.00%
Any Accom., Mod., or EL Variation	169	0.22%	205	0.21%
No Accom., Mod., or EL Variation	78,338	99.78%	99,038	99.79%

Table 2.D.4 Special Services Summary for ELA, Grade Seven

Special Services Summary for ELA, Grade Seven		
All Tested	**Grade 7**	**Pct. of Total**
B: Marked responses in test booklet	297	0.07%
C: Dictated responses to a scribe	31	0.01%
D: Used word processing with tools off	465	0.11%
E: Dictated essay with conventions	47	0.01%
F: Used noninterfering assistive device	35	0.01%
G: Used braille version of test	17	0.00%
H: Used large-print version of test	167	0.04%
J: Tested during more than one day	378	0.09%
K: Had supervised breaks	1,911	0.44%
L: Most beneficial time of day	572	0.13%
M: Administered at home or in a hospital	91	0.02%
N: Used a dictionary	10	0.00%
O: Examiner presented using MCE or ASL	27	0.01%
T: Used word processing with tools on	24	0.01%
U: Dictated essay without conventions	20	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	43	0.01%
X: Used an unlisted accommodation	785	0.18%
Y: Leave blank	367	0.08%
Z: Examiner read test questions aloud	976	0.23%
Accom. or Mod. is in Section 504 plan	512	0.12%
Accom. or Mod. is in IEP	3,754	0.87%
English Learner Test Variation A	982	0.23%
English Learner Test Variation B	64	0.01%
English Learner Test Variation C	814	0.19%
Any Accom., Mod., or EL Variation	5,754	1.33%
No Accom., Mod., or EL Variation	427,862	98.67%
Students Not in Special Education	**Grade 7**	**Pct. of Total**
B: Marked responses in test booklet	54	0.01%
C: Dictated responses to a scribe	7	0.00%
D: Used word processing with tools off	156	0.04%
E: Dictated essay with conventions	20	0.00%
F: Used noninterfering assistive device	6	0.00%
G: Used braille version of test	1	0.00%
H: Used large-print version of test	35	0.01%
J: Tested during more than one day	36	0.01%
K: Had supervised breaks	226	0.05%
L: Most beneficial time of day	63	0.02%
M: Administered at home or in a hospital	65	0.02%
N: Used a dictionary	1	0.00%
O: Examiner presented using MCE or ASL	1	0.00%
T: Used word processing with tools on	9	0.00%

Special Services Summary for ELA, Grade Seven		
U: Dictated essay without conventions	4	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	4	0.00%
X: Used an unlisted accommodation	133	0.03%
Y: Leave blank	104	0.03%
Z: Examiner read test questions aloud	80	0.02%
Accom. or Mod. is in Section 504 plan	472	0.11%
Accom. or Mod. is in IEP	258	0.06%
English Learner Test Variation A	966	0.23%
English Learner Test Variation B	59	0.01%
English Learner Test Variation C	789	0.19%
Any Accom., Mod., or EL Variation	2,156	0.52%
No Accom., Mod., or EL Variation	411,213	99.48%
Students in Special Education	**Grade 7**	**Pct. of Total**
B: Marked responses in test booklet	242	1.29%
C: Dictated responses to a scribe	24	0.13%
D: Used word processing with tools off	309	1.65%
E: Dictated essay with conventions	27	0.14%
F: Used noninterfering assistive device	29	0.15%
G: Used braille version of test	16	0.09%
H: Used large-print version of test	132	0.70%
J: Tested during more than one day	342	1.83%
K: Had supervised breaks	1,671	8.92%
L: Most beneficial time of day	504	2.69%
M: Administered at home or in a hospital	26	0.14%
N: Used a dictionary	9	0.05%
O: Examiner presented using MCE or ASL	26	0.14%
T: Used word processing with tools on	15	0.08%
U: Dictated essay without conventions	16	0.09%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	39	0.21%
X: Used an unlisted accommodation	647	3.45%
Y: Leave blank	261	1.39%
Z: Examiner read test questions aloud	894	4.77%
Accom. or Mod. is in Section 504 plan	36	0.19%
Accom. or Mod. is in IEP	3,478	18.57%
English Learner Test Variation A	7	0.04%
English Learner Test Variation B	4	0.02%
English Learner Test Variation C	16	0.09%
Any Accom., Mod., or EL Variation	3,563	19.02%
No Accom., Mod., or EL Variation	15,171	80.98%

Special Services Summary for ELA, Grade Seven		
English-Only Students	**Grade 7**	**Pct. of Total**
B: Marked responses in test booklet	241	0.10%
C: Dictated responses to a scribe	25	0.01%
D: Used word processing with tools off	401	0.17%
E: Dictated essay with conventions	37	0.02%
F: Used noninterfering assistive device	23	0.01%
G: Used braille version of test	8	0.00%
H: Used large-print version of test	131	0.05%
J: Tested during more than one day	263	0.11%
K: Had supervised breaks	1,396	0.58%
L: Most beneficial time of day	406	0.17%
M: Administered at home or in a hospital	66	0.03%
N: Used a dictionary	9	0.00%
O: Examiner presented using MCE or ASL	24	0.01%
T: Used word processing with tools on	21	0.01%
U: Dictated essay without conventions	13	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	31	0.01%
X: Used an unlisted accommodation	595	0.25%
Y: Leave blank	280	0.12%
Z: Examiner read test questions aloud	609	0.25%
Accom. or Mod. is in Section 504 plan	428	0.18%
Accom. or Mod. is in IEP	2,699	1.12%
English Learner Test Variation A	34	0.01%
English Learner Test Variation B	2	0.00%
English Learner Test Variation C	27	0.01%
Any Accom., Mod., or EL Variation	3,235	1.34%
No Accom., Mod., or EL Variation	238,386	98.66%
Initially Fluent English Proficient (I-FEP) Students	**Grade 7**	**Pct. of Total**
B: Marked responses in test booklet	16	0.05%
C: Dictated responses to a scribe	1	0.00%
D: Used word processing with tools off	17	0.05%
E: Dictated essay with conventions	3	0.01%
F: Used noninterfering assistive device	2	0.01%
G: Used braille version of test	5	0.02%
H: Used large-print version of test	12	0.04%
J: Tested during more than one day	6	0.02%
K: Had supervised breaks	49	0.16%
L: Most beneficial time of day	16	0.05%
M: Administered at home or in a hospital	5	0.02%
N: Used a dictionary	0	0.00%
O: Examiner presented using MCE or ASL	0	0.00%
T: Used word processing with tools on	2	0.01%
U: Dictated essay without conventions	0	0.00%

Special Services Summary for ELA, Grade Seven		
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	2	0.01%
X: Used an unlisted accommodation	24	0.08%
Y: Leave blank	11	0.04%
Z: Examiner read test questions aloud	28	0.09%
Accom. or Mod. is in Section 504 plan	20	0.06%
Accom. or Mod. is in IEP	118	0.38%
English Learner Test Variation A	1	0.00%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	10	0.03%
Any Accom., Mod., or EL Variation	155	0.50%
No Accom., Mod., or EL Variation	30,857	99.50%
English Learner (EL) Students	**Grade 7**	**Pct. of Total**
B: Marked responses in test booklet	19	0.03%
C: Dictated responses to a scribe	1	0.00%
D: Used word processing with tools off	16	0.03%
E: Dictated essay with conventions	2	0.00%
F: Used noninterfering assistive device	4	0.01%
G: Used braille version of test	1	0.00%
H: Used large-print version of test	12	0.02%
J: Tested during more than one day	91	0.15%
K: Had supervised breaks	333	0.55%
L: Most beneficial time of day	101	0.17%
M: Administered at home or in a hospital	9	0.01%
N: Used a dictionary	1	0.00%
O: Examiner presented using MCE or ASL	2	0.00%
T: Used word processing with tools on	0	0.00%
U: Dictated essay without conventions	5	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	10	0.02%
X: Used an unlisted accommodation	100	0.16%
Y: Leave blank	52	0.09%
Z: Examiner read test questions aloud	261	0.43%
Accom. or Mod. is in Section 504 plan	33	0.05%
Accom. or Mod. is in IEP	655	1.08%
English Learner Test Variation A	935	1.54%
English Learner Test Variation B	61	0.10%
English Learner Test Variation C	764	1.26%
Any Accom., Mod., or EL Variation	2,010	3.30%
No Accom., Mod., or EL Variation	58,845	96.70%

Special Services Summary for ELA, Grade Seven		
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 7**	**Pct. of Total**
B: Marked responses in test booklet	21	0.02%
C: Dictated responses to a scribe	4	0.00%
D: Used word processing with tools off	31	0.03%
E: Dictated essay with conventions	5	0.01%
F: Used noninterfering assistive device	6	0.01%
G: Used braille version of test	3	0.00%
H: Used large-print version of test	12	0.01%
J: Tested during more than one day	18	0.02%
K: Had supervised breaks	128	0.13%
L: Most beneficial time of day	47	0.05%
M: Administered at home or in a hospital	8	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented using MCE or ASL	1	0.00%
T: Used word processing with tools on	1	0.00%
U: Dictated essay without conventions	2	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	0	0.00%
X: Used an unlisted accommodation	60	0.06%
Y: Leave blank	24	0.02%
Z: Examiner read test questions aloud	72	0.07%
Accom. or Mod. is in Section 504 plan	30	0.03%
Accom. or Mod. is in IEP	267	0.27%
English Learner Test Variation A	10	0.01%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	7	0.01%
Any Accom., Mod., or EL Variation	328	0.33%
No Accom., Mod., or EL Variation	99,198	99.67%

Table 2.D.5 Special Services Summary for ELA, Grades Eight and Nine

Special Services Summary for ELA, Grades Eight and Nine				
All Tested	**Grade 8**	**Pct. of Total**	**Grade 9**	**Pct. of Total**
B: Marked responses in test booklet	245	0.06%	147	0.03%
C: Dictated responses to a scribe	25	0.01%	26	0.01%
F: Used noninterfering assistive device	11	0.00%	14	0.00%
G: Used braille version of test	21	0.00%	18	0.00%
H: Used large-print version of test	129	0.03%	83	0.02%
J: Tested during more than one day	423	0.10%	167	0.04%
K: Had supervised breaks	1,603	0.37%	1,861	0.41%
L: Most beneficial time of day	569	0.13%	371	0.08%
M: Administered at home or in a hospital	91	0.02%	75	0.02%
N: Used a dictionary	10	0.00%	88	0.02%
O: Examiner presented using MCE or ASL	1	0.00%	14	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	41	0.01%	16	0.00%
X: Used an unlisted accommodation	626	0.15%	428	0.09%
Y: Leave blank	234	0.05%	200	0.04%
Z: Examiner read test questions aloud	253	0.06%	174	0.04%
Accom. or Mod. is in Section 504 plan	276	0.06%	125	0.03%
Accom. or Mod. is in IEP	2,715	0.63%	2,646	0.58%
English Learner Test Variation A	422	0.10%	660	0.14%
English Learner Test Variation B	50	0.01%	196	0.04%
English Learner Test Variation C	322	0.07%	971	0.21%
Any Accom., Mod., or EL Variation	3,750	0.87%	4,110	0.90%
No Accom., Mod., or EL Variation	426,615	99.13%	452,662	99.10%
Students Not in Special Education	**Grade 8**	**Pct. of Total**	**Grade 9**	**Pct. of Total**
B: Marked responses in test booklet	44	0.01%	20	0.00%
C: Dictated responses to a scribe	10	0.00%	10	0.00%
F: Used noninterfering assistive device	1	0.00%	1	0.00%
G: Used braille version of test	2	0.00%	0	0.00%
H: Used large-print version of test	29	0.01%	9	0.00%
J: Tested during more than one day	28	0.01%	9	0.00%
K: Had supervised breaks	139	0.03%	159	0.04%
L: Most beneficial time of day	48	0.01%	34	0.01%
M: Administered at home or in a hospital	62	0.02%	45	0.01%
N: Used a dictionary	1	0.00%	7	0.00%
O: Examiner presented using MCE or ASL	0	0.00%	1	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	9	0.00%	4	0.00%
X: Used an unlisted accommodation	94	0.02%	54	0.01%
Y: Leave blank	61	0.01%	41	0.01%
Z: Examiner read test questions aloud	16	0.00%	16	0.00%
Accom. or Mod. is in Section 504 plan	257	0.06%	112	0.03%
Accom. or Mod. is in IEP	138	0.03%	174	0.04%

Special Services Summary for ELA, Grades Eight and Nine				
English Learner Test Variation A	414	0.10%	655	0.15%
English Learner Test Variation B	39	0.01%	177	0.04%
English Learner Test Variation C	319	0.08%	966	0.22%
Any Accom., Mod., or EL Variation	1,086	0.26%	1,506	0.35%
No Accom., Mod., or EL Variation	410,466	99.74%	433,206	99.65%
Students in Special Education	**Grade 8**	**Pct. of Total**	**Grade 9**	**Pct. of Total**
B: Marked responses in test booklet	200	1.07%	127	0.58%
C: Dictated responses to a scribe	15	0.08%	16	0.07%
F: Used noninterfering assistive device	10	0.05%	13	0.06%
G: Used braille version of test	19	0.10%	18	0.08%
H: Used large-print version of test	100	0.53%	74	0.34%
J: Tested during more than one day	391	2.08%	158	0.72%
K: Had supervised breaks	1,459	7.77%	1,698	7.71%
L: Most beneficial time of day	518	2.76%	336	1.53%
M: Administered at home or in a hospital	29	0.15%	30	0.14%
N: Used a dictionary	9	0.05%	81	0.37%
O: Examiner presented using MCE or ASL	1	0.01%	13	0.06%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	32	0.17%	12	0.05%
X: Used an unlisted accommodation	529	2.82%	373	1.69%
Y: Leave blank	173	0.92%	158	0.72%
Z: Examiner read test questions aloud	236	1.26%	158	0.72%
Accom. or Mod. is in Section 504 plan	19	0.10%	13	0.06%
Accom. or Mod. is in IEP	2,567	13.68%	2,466	11.19%
English Learner Test Variation A	8	0.04%	5	0.02%
English Learner Test Variation B	11	0.06%	19	0.09%
English Learner Test Variation C	3	0.02%	5	0.02%
Any Accom., Mod., or EL Variation	2,654	14.14%	2,598	11.79%
No Accom., Mod., or EL Variation	16,112	85.86%	19,433	88.21%
English-Only Students	**Grade 8**	**Pct. of Total**	**Grade 9**	**Pct. of Total**
B: Marked responses in test booklet	192	0.08%	117	0.05%
C: Dictated responses to a scribe	14	0.01%	25	0.01%
F: Used noninterfering assistive device	7	0.00%	11	0.00%
G: Used braille version of test	9	0.00%	14	0.01%
H: Used large-print version of test	95	0.04%	54	0.02%
J: Tested during more than one day	296	0.12%	124	0.05%
K: Had supervised breaks	1,162	0.48%	1,242	0.48%
L: Most beneficial time of day	397	0.16%	257	0.10%
M: Administered at home or in a hospital	64	0.03%	60	0.02%
N: Used a dictionary	3	0.00%	38	0.01%
O: Examiner presented using MCE or ASL	0	0.00%	9	0.00%

Special Services Summary for ELA, Grades Eight and Nine				
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	31	0.01%	11	0.00%
X: Used an unlisted accommodation	419	0.17%	290	0.11%
Y: Leave blank	173	0.07%	150	0.06%
Z: Examiner read test questions aloud	159	0.07%	118	0.05%
Accom. or Mod. is in Section 504 plan	228	0.09%	111	0.04%
Accom. or Mod. is in IEP	1,893	0.78%	1,770	0.69%
English Learner Test Variation A	14	0.01%	22	0.01%
English Learner Test Variation B	3	0.00%	12	0.00%
English Learner Test Variation C	3	0.00%	32	0.01%
Any Accom., Mod., or EL Variation	2,218	0.92%	2,034	0.79%
No Accom., Mod., or EL Variation	239,670	99.08%	254,049	99.21%
Initially Fluent English Proficient (I-FEP) Students	**Grade 8**	**Pct. of Total**	**Grade 9**	**Pct. of Total**
B: Marked responses in test booklet	11	0.03%	8	0.02%
C: Dictated responses to a scribe	3	0.01%	1	0.00%
F: Used noninterfering assistive device	1	0.00%	0	0.00%
G: Used braille version of test	4	0.01%	0	0.00%
H: Used large-print version of test	9	0.03%	7	0.02%
J: Tested during more than one day	7	0.02%	5	0.01%
K: Had supervised breaks	47	0.14%	51	0.14%
L: Most beneficial time of day	17	0.05%	9	0.02%
M: Administered at home or in a hospital	4	0.01%	1	0.00%
N: Used a dictionary	2	0.01%	3	0.01%
O: Examiner presented using MCE or ASL	0	0.00%	0	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	1	0.00%	1	0.00%
X: Used an unlisted accommodation	21	0.06%	9	0.02%
Y: Leave blank	8	0.02%	4	0.01%
Z: Examiner read test questions aloud	4	0.01%	6	0.02%
Accom. or Mod. is in Section 504 plan	6	0.02%	2	0.01%
Accom. or Mod. is in IEP	88	0.26%	75	0.20%
English Learner Test Variation A	0	0.00%	2	0.01%
English Learner Test Variation B	2	0.01%	1	0.00%
English Learner Test Variation C	3	0.01%	3	0.01%
Any Accom., Mod., or EL Variation	103	0.31%	88	0.23%
No Accom., Mod., or EL Variation	33,562	99.69%	37,687	99.77%
English Learner (EL) Students	**Grade 8**	**Pct. of Total**	**Grade 9**	**Pct. of Total**
B: Marked responses in test booklet	17	0.03%	11	0.02%
C: Dictated responses to a scribe	5	0.01%	0	0.00%
F: Used noninterfering assistive device	1	0.00%	1	0.00%
G: Used braille version of test	5	0.01%	1	0.00%
H: Used large-print version of test	10	0.02%	6	0.01%
J: Tested during more than one day	86	0.17%	25	0.05%
K: Had supervised breaks	239	0.47%	367	0.66%

Special Services Summary for ELA, Grades Eight and Nine				
L: Most beneficial time of day	86	0.17%	71	0.13%
M: Administered at home or in a hospital	13	0.03%	6	0.01%
N: Used a dictionary	4	0.01%	39	0.07%
O: Examiner presented using MCE or ASL	1	0.00%	4	0.01%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	6	0.01%	2	0.00%
X: Used an unlisted accommodation	113	0.22%	94	0.17%
Y: Leave blank	30	0.06%	35	0.06%
Z: Examiner read test questions aloud	69	0.14%	37	0.07%
Accom. or Mod. is in Section 504 plan	22	0.04%	6	0.01%
Accom. or Mod. is in IEP	451	0.88%	527	0.95%
English Learner Test Variation A	401	0.78%	627	1.13%
English Learner Test Variation B	44	0.09%	178	0.32%
English Learner Test Variation C	302	0.59%	930	1.68%
Any Accom., Mod., or EL Variation	1,092	2.14%	1,683	3.05%
No Accom., Mod., or EL Variation	50,012	97.86%	53,563	96.95%
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 8**	**Pct. of Total**	**Grade 9**	**Pct. of Total**
B: Marked responses in test booklet	23	0.02%	11	0.01%
C: Dictated responses to a scribe	1	0.00%	0	0.00%
F: Used noninterfering assistive device	2	0.00%	2	0.00%
G: Used braille version of test	3	0.00%	3	0.00%
H: Used large-print version of test	15	0.01%	16	0.01%
J: Tested during more than one day	27	0.03%	11	0.01%
K: Had supervised breaks	142	0.14%	197	0.18%
L: Most beneficial time of day	65	0.06%	33	0.03%
M: Administered at home or in a hospital	10	0.01%	8	0.01%
N: Used a dictionary	1	0.00%	8	0.01%
O: Examiner presented using MCE or ASL	0	0.00%	1	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	3	0.00%	2	0.00%
X: Used an unlisted accommodation	67	0.06%	34	0.03%
Y: Leave blank	23	0.02%	11	0.01%
Z: Examiner read test questions aloud	20	0.02%	11	0.01%
Accom. or Mod. is in Section 504 plan	18	0.02%	6	0.01%
Accom. or Mod. is in IEP	265	0.26%	266	0.25%
English Learner Test Variation A	0	0.00%	8	0.01%
English Learner Test Variation B	1	0.00%	5	0.00%
English Learner Test Variation C	7	0.01%	3	0.00%
Any Accom., Mod., or EL Variation	304	0.29%	293	0.27%
No Accom., Mod., or EL Variation	102,788	99.71%	106,678	99.73%

Table 2.D.6 Special Services Summary for ELA, Grades Ten and Eleven

Special Services Summary for ELA, Grades Ten and Eleven				
All Tested	**Grade 10**	**Pct. of Total**	**Grade 11**	**Pct. of Total**
B: Marked responses in test booklet	143	0.03%	142	0.03%
C: Dictated responses to a scribe	30	0.01%	20	0.00%
F: Used noninterfering assistive device	18	0.00%	11	0.00%
G: Used braille version of test	21	0.00%	14	0.00%
H: Used large-print version of test	89	0.02%	90	0.02%
J: Tested during more than one day	198	0.04%	201	0.05%
K: Had supervised breaks	2,041	0.46%	1,878	0.43%
L: Most beneficial time of day	363	0.08%	387	0.09%
M: Administered at home or in a hospital	87	0.02%	79	0.02%
N: Used a dictionary	113	0.03%	130	0.03%
O: Examiner presented using MCE or ASL	7	0.00%	10	0.00%
V: Used interfering assistive device	0	0.00%	1	0.00%
W: Used an unlisted modification	18	0.00%	29	0.01%
X: Used an unlisted accommodation	382	0.09%	380	0.09%
Y: Leave blank	163	0.04%	153	0.04%
Z: Examiner read test questions aloud	207	0.05%	223	0.05%
Accom. or Mod. is in Section 504 plan	145	0.03%	124	0.03%
Accom. or Mod. is in IEP	2,789	0.62%	2,593	0.60%
English Learner Test Variation A	479	0.11%	316	0.07%
English Learner Test Variation B	134	0.03%	87	0.02%
English Learner Test Variation C	726	0.16%	593	0.14%
Any Accom., Mod., or EL Variation	3,972	0.89%	3,584	0.82%
No Accom., Mod., or EL Variation	442,655	99.11%	431,638	99.18%
Students Not in Special Education	**Grade 10**	**Pct. of Total**	**Grade 11**	**Pct. of Total**
B: Marked responses in test booklet	15	0.00%	15	0.00%
C: Dictated responses to a scribe	10	0.00%	0	0.00%
F: Used noninterfering assistive device	5	0.00%	1	0.00%
G: Used braille version of test	1	0.00%	0	0.00%
H: Used large-print version of test	11	0.00%	8	0.00%
J: Tested during more than one day	10	0.00%	13	0.00%
K: Had supervised breaks	146	0.03%	129	0.03%
L: Most beneficial time of day	28	0.01%	31	0.01%
M: Administered at home or in a hospital	57	0.01%	48	0.01%
N: Used a dictionary	7	0.00%	6	0.00%
O: Examiner presented using MCE or ASL	0	0.00%	0	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	5	0.00%	3	0.00%
X: Used an unlisted accommodation	51	0.01%	42	0.01%
Y: Leave blank	39	0.01%	31	0.01%
Z: Examiner read test questions aloud	11	0.00%	18	0.00%
Accom. or Mod. is in Section 504 plan	131	0.03%	119	0.03%
Accom. or Mod. is in IEP	156	0.04%	119	0.03%

Special Services Summary for ELA, Grades Ten and Eleven				
English Learner Test Variation A	477	0.11%	314	0.08%
English Learner Test Variation B	120	0.03%	66	0.02%
English Learner Test Variation C	722	0.17%	592	0.14%
Any Accom., Mod., or EL Variation	1,235	0.29%	982	0.24%
No Accom., Mod., or EL Variation	422,766	99.71%	412,188	99.76%
Students in Special Education	**Grade 10**	**Pct. of Total**	**Grade 11**	**Pct. of Total**
B: Marked responses in test booklet	127	0.56%	126	0.57%
C: Dictated responses to a scribe	20	0.09%	20	0.09%
F: Used noninterfering assistive device	13	0.06%	10	0.05%
G: Used braille version of test	20	0.09%	14	0.06%
H: Used large-print version of test	77	0.34%	82	0.37%
J: Tested during more than one day	187	0.83%	188	0.85%
K: Had supervised breaks	1,891	8.37%	1,745	7.92%
L: Most beneficial time of day	335	1.48%	355	1.61%
M: Administered at home or in a hospital	30	0.13%	31	0.14%
N: Used a dictionary	106	0.47%	124	0.56%
O: Examiner presented using MCE or ASL	7	0.03%	10	0.05%
V: Used interfering assistive device	0	0.00%	1	0.00%
W: Used an unlisted modification	13	0.06%	26	0.12%
X: Used an unlisted accommodation	329	1.46%	337	1.53%
Y: Leave blank	123	0.54%	120	0.54%
Z: Examiner read test questions aloud	196	0.87%	205	0.93%
Accom. or Mod. is in Section 504 plan	14	0.06%	3	0.01%
Accom. or Mod. is in IEP	2,624	11.62%	2,469	11.21%
English Learner Test Variation A	2	0.01%	2	0.01%
English Learner Test Variation B	14	0.06%	21	0.10%
English Learner Test Variation C	4	0.02%	1	0.00%
Any Accom., Mod., or EL Variation	2,728	12.08%	2,595	11.78%
No Accom., Mod., or EL Variation	19,862	87.92%	19,425	88.22%
English-Only Students	**Grade 10**	**Pct. of Total**	**Grade 11**	**Pct. of Total**
B: Marked responses in test booklet	116	0.05%	104	0.04%
C: Dictated responses to a scribe	18	0.01%	13	0.01%
F: Used noninterfering assistive device	12	0.00%	9	0.00%
G: Used braille version of test	7	0.00%	6	0.00%
H: Used large-print version of test	55	0.02%	61	0.03%
J: Tested during more than one day	160	0.06%	166	0.07%
K: Had supervised breaks	1,425	0.57%	1,359	0.56%
L: Most beneficial time of day	268	0.11%	291	0.12%
M: Administered at home or in a hospital	60	0.02%	54	0.02%
N: Used a dictionary	56	0.02%	72	0.03%
O: Examiner presented using MCE or ASL	5	0.00%	9	0.00%

Special Services Summary for ELA, Grades Ten and Eleven				
V: Used interfering assistive device	0	0.00%	1	0.00%
W: Used an unlisted modification	15	0.01%	24	0.01%
X: Used an unlisted accommodation	251	0.10%	266	0.11%
Y: Leave blank	117	0.05%	110	0.05%
Z: Examiner read test questions aloud	146	0.06%	149	0.06%
Accom. or Mod. is in Section 504 plan	129	0.05%	104	0.04%
Accom. or Mod. is in IEP	1,899	0.77%	1,835	0.76%
English Learner Test Variation A	4	0.00%	4	0.00%
English Learner Test Variation B	3	0.00%	6	0.00%
English Learner Test Variation C	9	0.00%	6	0.00%
Any Accom., Mod., or EL Variation	2,129	0.86%	2,069	0.85%
No Accom., Mod., or EL Variation	245,844	99.14%	240,345	99.15%
Initially Fluent English Proficient (I-FEP) Students	**Grade 10**	**Pct. of Total**	**Grade 11**	**Pct. of Total**
B: Marked responses in test booklet	7	0.02%	6	0.02%
C: Dictated responses to a scribe	5	0.01%	3	0.01%
F: Used noninterfering assistive device	0	0.00%	0	0.00%
G: Used braille version of test	0	0.00%	1	0.00%
H: Used large-print version of test	5	0.01%	7	0.02%
J: Tested during more than one day	0	0.00%	7	0.02%
K: Had supervised breaks	69	0.20%	49	0.15%
L: Most beneficial time of day	5	0.01%	11	0.03%
M: Administered at home or in a hospital	3	0.01%	3	0.01%
N: Used a dictionary	4	0.01%	0	0.00%
O: Examiner presented using MCE or ASL	0	0.00%	0	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	1	0.00%	1	0.00%
X: Used an unlisted accommodation	6	0.02%	7	0.02%
Y: Leave blank	3	0.01%	4	0.01%
Z: Examiner read test questions aloud	5	0.01%	5	0.02%
Accom. or Mod. is in Section 504 plan	3	0.01%	4	0.01%
Accom. or Mod. is in IEP	90	0.26%	65	0.20%
English Learner Test Variation A	1	0.00%	0	0.00%
English Learner Test Variation B	0	0.00%	0	0.00%
English Learner Test Variation C	3	0.01%	6	0.02%
Any Accom., Mod., or EL Variation	105	0.31%	82	0.25%
No Accom., Mod., or EL Variation	34,192	99.69%	32,532	99.75%
English Learner (EL) Students	**Grade 10**	**Pct. of Total**	**Grade 11**	**Pct. of Total**
B: Marked responses in test booklet	7	0.01%	13	0.03%
C: Dictated responses to a scribe	5	0.01%	2	0.00%
F: Used noninterfering assistive device	3	0.01%	0	0.00%
G: Used braille version of test	4	0.01%	3	0.01%
H: Used large-print version of test	9	0.02%	7	0.01%
J: Tested during more than one day	28	0.05%	21	0.04%
K: Had supervised breaks	378	0.72%	322	0.67%

Special Services Summary for ELA, Grades Ten and Eleven				
L: Most beneficial time of day	65	0.12%	62	0.13%
M: Administered at home or in a hospital	13	0.02%	11	0.02%
N: Used a dictionary	42	0.08%	46	0.10%
O: Examiner presented using MCE or ASL	2	0.00%	1	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	1	0.00%	2	0.00%
X: Used an unlisted accommodation	92	0.17%	77	0.16%
Y: Leave blank	22	0.04%	24	0.05%
Z: Examiner read test questions aloud	49	0.09%	57	0.12%
Accom. or Mod. is in Section 504 plan	5	0.01%	8	0.02%
Accom. or Mod. is in IEP	539	1.02%	475	1.00%
English Learner Test Variation A	469	0.89%	311	0.65%
English Learner Test Variation B	129	0.24%	78	0.16%
English Learner Test Variation C	711	1.35%	577	1.21%
Any Accom., Mod., or EL Variation	1,447	2.74%	1,187	2.49%
No Accom., Mod., or EL Variation	51,313	97.26%	46,549	97.51%
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 10**	**Pct. of Total**	**Grade 11**	**Pct. of Total**
B: Marked responses in test booklet	12	0.01%	18	0.02%
C: Dictated responses to a scribe	2	0.00%	2	0.00%
F: Used noninterfering assistive device	3	0.00%	2	0.00%
G: Used braille version of test	10	0.01%	4	0.00%
H: Used large-print version of test	19	0.02%	15	0.01%
J: Tested during more than one day	10	0.01%	6	0.01%
K: Had supervised breaks	165	0.15%	141	0.13%
L: Most beneficial time of day	24	0.02%	21	0.02%
M: Administered at home or in a hospital	10	0.01%	10	0.01%
N: Used a dictionary	11	0.01%	12	0.01%
O: Examiner presented using MCE or ASL	0	0.00%	0	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	1	0.00%	2	0.00%
X: Used an unlisted accommodation	32	0.03%	27	0.02%
Y: Leave blank	21	0.02%	15	0.01%
Z: Examiner read test questions aloud	7	0.01%	11	0.01%
Accom. or Mod. is in Section 504 plan	8	0.01%	7	0.01%
Accom. or Mod. is in IEP	253	0.23%	210	0.19%
English Learner Test Variation A	4	0.00%	1	0.00%
English Learner Test Variation B	2	0.00%	1	0.00%
English Learner Test Variation C	2	0.00%	3	0.00%
Any Accom., Mod., or EL Variation	280	0.25%	235	0.21%
No Accom., Mod., or EL Variation	110,656	99.75%	111,614	99.79%

Table 2.D.7 Special Services Summary for History–Social Science, Grade Eight

Special Services Summary for History–Social Science, Grade Eight		
All Tested	**Grade 8**	**Pct. of Total**
B: Marked responses in test booklet	513	0.11%
C: Dictated responses to a scribe	37	0.01%
F: Used noninterfering assistive device	30	0.01%
G: Used braille version of test	25	0.01%
H: Used large-print version of test	146	0.03%
J: Tested during more than one day	850	0.19%
K: Had supervised breaks	4,211	0.93%
L: Most beneficial time of day	1,471	0.32%
M: Administered at home or in a hospital	97	0.02%
N: Used a dictionary	11	0.00%
O: Examiner presented using MCE or ASL	52	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	71	0.02%
X: Used an unlisted accommodation	1,298	0.29%
Y: Leave blank	546	0.12%
Z: Examiner read test questions aloud	4,205	0.92%
Accom. or Mod. is in Section 504 plan	232	0.05%
Accom. or Mod. is in IEP	9,370	2.06%
English Learner Test Variation A	284	0.06%
English Learner Test Variation B	45	0.01%
English Learner Test Variation C	251	0.06%
English Learner Test Variation D	221	0.05%
Any Accom., Mod., or EL Variation	10,541	2.32%
No Accom., Mod., or EL Variation	444,693	97.68%
Students Not in Special Education	**Grade 8**	**Pct. of Total**
B: Marked responses in test booklet	43	0.01%
C: Dictated responses to a scribe	7	0.00%
F: Used noninterfering assistive device	3	0.00%
G: Used braille version of test	3	0.00%
H: Used large-print version of test	17	0.00%
J: Tested during more than one day	20	0.00%
K: Had supervised breaks	116	0.03%
L: Most beneficial time of day	39	0.01%
M: Administered at home or in a hospital	52	0.01%
N: Used a dictionary	2	0.00%
O: Examiner presented using MCE or ASL	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	9	0.00%
X: Used an unlisted accommodation	75	0.02%
Y: Leave blank	51	0.01%
Z: Examiner read test questions aloud	49	0.01%

Special Services Summary for History–Social Science, Grade Eight		
Accom. or Mod. is in Section 504 plan	214	0.05%
Accom. or Mod. is in IEP	143	0.03%
English Learner Test Variation A	278	0.07%
English Learner Test Variation B	28	0.01%
English Learner Test Variation C	241	0.06%
English Learner Test Variation D	206	0.05%
Any Accom., Mod., or EL Variation	990	0.24%
No Accom., Mod., or EL Variation	409,653	99.76%
Students in Special Education	**Grade 8**	**Pct. of Total**
B: Marked responses in test booklet	468	1.06%
C: Dictated responses to a scribe	30	0.07%
F: Used noninterfering assistive device	26	0.06%
G: Used braille version of test	22	0.05%
H: Used large-print version of test	128	0.29%
J: Tested during more than one day	820	1.85%
K: Had supervised breaks	4,064	9.17%
L: Most beneficial time of day	1,417	3.20%
M: Administered at home or in a hospital	45	0.10%
N: Used a dictionary	9	0.02%
O: Examiner presented using MCE or ASL	52	0.12%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	62	0.14%
X: Used an unlisted accommodation	1,212	2.73%
Y: Leave blank	493	1.11%
Z: Examiner read test questions aloud	4,128	9.31%
Accom. or Mod. is in Section 504 plan	18	0.04%
Accom. or Mod. is in IEP	9,167	20.67%
English Learner Test Variation A	6	0.01%
English Learner Test Variation B	17	0.04%
English Learner Test Variation C	10	0.02%
English Learner Test Variation D	15	0.03%
Any Accom., Mod., or EL Variation	9,487	21.40%
No Accom., Mod., or EL Variation	34,854	78.60%
English-Only Students	**Grade 8**	**Pct. of Total**
B: Marked responses in test booklet	372	0.15%
C: Dictated responses to a scribe	25	0.01%
F: Used noninterfering assistive device	17	0.01%
G: Used braille version of test	13	0.01%
H: Used large-print version of test	102	0.04%
J: Tested during more than one day	501	0.20%
K: Had supervised breaks	2,447	0.96%
L: Most beneficial time of day	889	0.35%
M: Administered at home or in a hospital	69	0.03%
N: Used a dictionary	3	0.00%

Special Services Summary for History–Social Science, Grade Eight		
O: Examiner presented using MCE or ASL	37	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	47	0.02%
X: Used an unlisted accommodation	681	0.27%
Y: Leave blank	339	0.13%
Z: Examiner read test questions aloud	2,147	0.84%
Accom. or Mod. is in Section 504 plan	192	0.08%
Accom. or Mod. is in IEP	5,258	2.06%
English Learner Test Variation A	5	0.00%
English Learner Test Variation B	2	0.00%
English Learner Test Variation C	3	0.00%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	5,674	2.23%
No Accom., Mod., or EL Variation	249,031	97.77%
Initially Fluent English Proficient (I-FEP) Students	**Grade 8**	**Pct. of Total**
B: Marked responses in test booklet	10	0.03%
C: Dictated responses to a scribe	3	0.01%
F: Used noninterfering assistive device	1	0.00%
G: Used braille version of test	3	0.01%
H: Used large-print version of test	8	0.02%
J: Tested during more than one day	15	0.04%
K: Had supervised breaks	103	0.30%
L: Most beneficial time of day	38	0.11%
M: Administered at home or in a hospital	3	0.01%
N: Used a dictionary	2	0.01%
O: Examiner presented using MCE or ASL	2	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	2	0.01%
X: Used an unlisted accommodation	39	0.11%
Y: Leave blank	13	0.04%
Z: Examiner read test questions aloud	76	0.22%
Accom. or Mod. is in Section 504 plan	4	0.01%
Accom. or Mod. is in IEP	224	0.66%
English Learner Test Variation A	0	0.00%
English Learner Test Variation B	1	0.00%
English Learner Test Variation C	3	0.01%
English Learner Test Variation D	1	0.00%
Any Accom., Mod., or EL Variation	237	0.69%
No Accom., Mod., or EL Variation	33,949	99.31%
English Learner (EL) Students	**Grade 8**	**Pct. of Total**
B: Marked responses in test booklet	88	0.14%
C: Dictated responses to a scribe	5	0.01%
F: Used noninterfering assistive device	9	0.01%
G: Used braille version of test	7	0.01%

Special Services Summary for History–Social Science, Grade Eight		
H: Used large-print version of test	22	0.04%
J: Tested during more than one day	290	0.47%
K: Had supervised breaks	1,395	2.28%
L: Most beneficial time of day	443	0.72%
M: Administered at home or in a hospital	20	0.03%
N: Used a dictionary	5	0.01%
O: Examiner presented using MCE or ASL	13	0.02%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	17	0.03%
X: Used an unlisted accommodation	452	0.74%
Y: Leave blank	150	0.24%
Z: Examiner read test questions aloud	1,745	2.85%
Accom. or Mod. is in Section 504 plan	18	0.03%
Accom. or Mod. is in IEP	3,242	5.29%
English Learner Test Variation A	273	0.45%
English Learner Test Variation B	41	0.07%
English Learner Test Variation C	234	0.38%
English Learner Test Variation D	212	0.35%
Any Accom., Mod., or EL Variation	3,914	6.39%
No Accom., Mod., or EL Variation	57,339	93.61%
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 8**	**Pct. of Total**
B: Marked responses in test booklet	40	0.04%
C: Dictated responses to a scribe	2	0.00%
F: Used noninterfering assistive device	3	0.00%
G: Used braille version of test	2	0.00%
H: Used large-print version of test	14	0.01%
J: Tested during more than one day	36	0.03%
K: Had supervised breaks	245	0.23%
L: Most beneficial time of day	94	0.09%
M: Administered at home or in a hospital	5	0.00%
N: Used a dictionary	1	0.00%
O: Examiner presented using MCE or ASL	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	4	0.00%
X: Used an unlisted accommodation	118	0.11%
Y: Leave blank	44	0.04%
Z: Examiner read test questions aloud	227	0.22%
Accom. or Mod. is in Section 504 plan	16	0.02%
Accom. or Mod. is in IEP	614	0.59%

Special Services Summary for History–Social Science, Grade Eight		
English Learner Test Variation A	0	0.00%
English Learner Test Variation B	1	0.00%
English Learner Test Variation C	6	0.01%
English Learner Test Variation D	4	0.00%
Any Accom., Mod., or EL Variation	669	0.64%
No Accom., Mod., or EL Variation	103,758	99.36%

Table 2.D.8 Special Services Summary for World History

Special Services Summary for World History					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	26	169	3	198	0.04%
C: Dictated responses to a scribe	1	26	2	29	0.01%
F: Used noninterfering assistive device	2	20	0	22	0.00%
G: Used braille version of test	3	21	0	24	0.01%
H: Used large-print version of test	9	99	1	109	0.02%
J: Tested during more than one day	55	231	24	310	0.07%
K: Had supervised breaks	248	3,152	136	3,536	0.75%
L: Most beneficial time of day	84	467	34	585	0.12%
M: Administered at home or in a hospital	6	66	15	87	0.02%
N: Used a dictionary	4	52	5	61	0.01%
O: Examiner presented using MCE or ASL	2	48	1	51	0.01%
V: Used interfering assistive device	0	0	3	3	0.00%
W: Used an unlisted modification	2	8	0	10	0.00%
X: Used an unlisted accommodation	27	571	19	617	0.13%
Y: Leave blank	6	328	10	344	0.07%
Z: Examiner read test questions aloud	39	1,028	19	1,086	0.23%
Accom. or Mod. is in Section 504 plan	16	122	7	145	0.03%
Accom. or Mod. is in IEP	307	4,828	193	5,328	1.13%
English Learner Test Variation A	23	378	21	422	0.09%
English Learner Test Variation B	11	112	9	132	0.03%
English Learner Test Variation C	41	516	32	589	0.13%
English Learner Test Variation D	81	853	52	986	0.21%
Any Accom., Mod., or EL Variation	447	6,346	284	7,077	1.51%
No Accom., Mod., or EL Variation	34,105	411,698	16,724	462,527	98.49%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	1	10	0	11	0.00%
C: Dictated responses to a scribe	1	0	1	2	0.00%
F: Used noninterfering assistive device	0	2	0	2	0.00%
G: Used braille version of test	0	1	0	1	0.00%
H: Used large-print version of test	1	10	0	11	0.00%
J: Tested during more than one day	1	7	0	8	0.00%
K: Had supervised breaks	13	118	5	136	0.03%
L: Most beneficial time of day	3	24	0	27	0.01%
M: Administered at home or in a hospital	2	42	5	49	0.01%
N: Used a dictionary	0	2	0	2	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	3	3	0.00%
W: Used an unlisted modification	0	4	0	4	0.00%
X: Used an unlisted accommodation	3	33	2	38	0.01%
Y: Leave blank	2	31	0	33	0.01%
Z: Examiner read test questions aloud	0	15	1	16	0.00%

Special Services Summary for World History					
Accom. or Mod. is in Section 504 plan	13	108	7	128	0.03%
Accom. or Mod. is in IEP	8	115	2	125	0.03%
English Learner Test Variation A	23	360	21	404	0.09%
English Learner Test Variation B	8	67	8	83	0.02%
English Learner Test Variation C	41	507	32	580	0.14%
English Learner Test Variation D	74	770	50	894	0.21%
Any Accom., Mod., or EL Variation	120	1,384	85	1,589	0.37%
No Accom., Mod., or EL Variation	31,664	381,343	14,683	427,690	99.63%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	25	158	3	186	0.46%
C: Dictated responses to a scribe	0	26	1	27	0.07%
F: Used noninterfering assistive device	2	18	0	20	0.05%
G: Used braille version of test	3	20	0	23	0.06%
H: Used large-print version of test	8	88	1	97	0.24%
J: Tested during more than one day	54	223	23	300	0.75%
K: Had supervised breaks	235	3,024	130	3,389	8.43%
L: Most beneficial time of day	81	443	34	558	1.39%
M: Administered at home or in a hospital	4	24	10	38	0.09%
N: Used a dictionary	4	50	5	59	0.15%
O: Examiner presented using MCE or ASL	2	48	1	51	0.13%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	2	4	0	6	0.01%
X: Used an unlisted accommodation	24	536	17	577	1.44%
Y: Leave blank	4	296	10	310	0.77%
Z: Examiner read test questions aloud	39	1,010	17	1,066	2.65%
Accom. or Mod. is in Section 504 plan	3	13	0	16	0.04%
Accom. or Mod. is in IEP	299	4,696	190	5,185	12.90%
English Learner Test Variation A	0	18	0	18	0.04%
English Learner Test Variation B	3	45	1	49	0.12%
English Learner Test Variation C	0	9	0	9	0.02%
English Learner Test Variation D	7	83	2	92	0.23%
Any Accom., Mod., or EL Variation	327	4,944	198	5,469	13.60%
No Accom., Mod., or EL Variation	2,433	30,264	2,036	34,733	86.40%
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	19	122	1	142	0.05%
C: Dictated responses to a scribe	1	19	1	21	0.01%
F: Used noninterfering assistive device	2	9	0	11	0.00%
G: Used braille version of test	1	6	0	7	0.00%
H: Used large-print version of test	6	63	0	69	0.03%
J: Tested during more than one day	41	152	20	213	0.08%
K: Had supervised breaks	187	1,921	99	2,207	0.85%
L: Most beneficial time of day	66	311	24	401	0.15%
M: Administered at home or in a hospital	6	47	8	61	0.02%
N: Used a dictionary	0	26	2	28	0.01%

Special Services Summary for World History					
O: Examiner presented using MCE or ASL	2	26	0	28	0.01%
V: Used interfering assistive device	0	0	3	3	0.00%
W: Used an unlisted modification	2	7	0	9	0.00%
X: Used an unlisted accommodation	22	342	10	374	0.14%
Y: Leave blank	5	177	6	188	0.07%
Z: Examiner read test questions aloud	27	528	12	567	0.22%
Accom. or Mod. is in Section 504 plan	15	107	6	128	0.05%
Accom. or Mod. is in IEP	224	2,831	133	3,188	1.23%
English Learner Test Variation A	1	5	0	6	0.00%
English Learner Test Variation B	1	2	1	4	0.00%
English Learner Test Variation C	2	3	0	5	0.00%
English Learner Test Variation D	1	1	1	3	0.00%
Any Accom., Mod., or EL Variation	259	3,036	142	3,437	1.33%
No Accom., Mod., or EL Variation	17,935	228,798	8,929	255,662	98.67%
Initially Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	4	7	0	11	0.03%
C: Dictated responses to a scribe	0	1	0	1	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	2	4	0	6	0.02%
J: Tested during more than one day	2	4	0	6	0.02%
K: Had supervised breaks	6	87	3	96	0.27%
L: Most beneficial time of day	3	12	0	15	0.04%
M: Administered at home or in a hospital	0	3	1	4	0.01%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	1	1	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	1	11	2	14	0.04%
Y: Leave blank	0	9	0	9	0.03%
Z: Examiner read test questions aloud	0	27	1	28	0.08%
Accom. or Mod. is in Section 504 plan	0	3	0	3	0.01%
Accom. or Mod. is in IEP	10	123	7	140	0.39%
English Learner Test Variation A	0	1	0	1	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	2	0	2	0.01%
English Learner Test Variation D	0	2	0	2	0.01%
Any Accom., Mod., or EL Variation	12	135	8	155	0.43%
No Accom., Mod., or EL Variation	3,821	31,015	918	35,754	99.57%

Special Services Summary for World History					
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	2	25	0	27	0.05%
C: Dictated responses to a scribe	0	4	1	5	0.01%
F: Used noninterfering assistive device	0	8	0	8	0.01%
G: Used braille version of test	1	5	0	6	0.01%
H: Used large-print version of test	1	13	0	14	0.02%
J: Tested during more than one day	11	60	4	75	0.13%
K: Had supervised breaks	42	890	30	962	1.62%
L: Most beneficial time of day	12	114	10	136	0.23%
M: Administered at home or in a hospital	0	8	4	12	0.02%
N: Used a dictionary	4	20	2	26	0.04%
O: Examiner presented using MCE or ASL	0	22	0	22	0.04%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	3	172	7	182	0.31%
Y: Leave blank	1	110	4	115	0.19%
Z: Examiner read test questions aloud	10	407	6	423	0.71%
Accom. or Mod. is in Section 504 plan	1	5	1	7	0.01%
Accom. or Mod. is in IEP	58	1,478	46	1,582	2.67%
English Learner Test Variation A	22	367	21	410	0.69%
English Learner Test Variation B	9	107	8	124	0.21%
English Learner Test Variation C	38	509	32	579	0.98%
English Learner Test Variation D	79	846	51	976	1.65%
Any Accom., Mod., or EL Variation	158	2,746	125	3,029	5.11%
No Accom., Mod., or EL Variation	3,906	48,735	3,602	56,243	94.89%
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	1	15	2	18	0.02%
C: Dictated responses to a scribe	0	2	0	2	0.00%
F: Used noninterfering assistive device	0	3	0	3	0.00%
G: Used braille version of test	1	10	0	11	0.01%
H: Used large-print version of test	0	18	1	19	0.02%
J: Tested during more than one day	1	15	0	16	0.01%
K: Had supervised breaks	12	251	4	267	0.23%
L: Most beneficial time of day	2	30	0	32	0.03%
M: Administered at home or in a hospital	0	7	2	9	0.01%
N: Used a dictionary	0	6	1	7	0.01%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	1	0	1	0.00%
X: Used an unlisted accommodation	1	44	0	45	0.04%
Y: Leave blank	0	32	0	32	0.03%
Z: Examiner read test questions aloud	2	63	0	65	0.06%

Special Services Summary for World History					
Accom. or Mod. is in Section 504 plan	0	7	0	7	0.01%
Accom. or Mod. is in IEP	14	387	7	408	0.36%
English Learner Test Variation A	0	5	0	5	0.00%
English Learner Test Variation B	1	3	0	4	0.00%
English Learner Test Variation C	0	2	0	2	0.00%
English Learner Test Variation D	0	4	0	4	0.00%
Any Accom., Mod., or EL Variation	16	419	9	444	0.39%
No Accom., Mod., or EL Variation	8,388	102,604	3,236	114,228	99.61%

Table 2.D.9 Special Services Summary for History–Social Science, Grade Eleven

Special Services Summary for History–Social Science, Grade Eleven		
All Tested	**Grade 11**	**Pct. of Total**
B: Marked responses in test booklet	186	0.04%
C: Dictated responses to a scribe	38	0.01%
F: Used noninterfering assistive device	18	0.00%
G: Used braille version of test	17	0.00%
H: Used large-print version of test	104	0.02%
J: Tested during more than one day	275	0.06%
K: Had supervised breaks	3,061	0.69%
L: Most beneficial time of day	492	0.11%
M: Administered at home or in a hospital	85	0.02%
N: Used a dictionary	100	0.02%
O: Examiner presented using MCE or ASL	71	0.02%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	24	0.01%
X: Used an unlisted accommodation	525	0.12%
Y: Leave blank	363	0.08%
Z: Examiner read test questions aloud	1,010	0.23%
Accom. or Mod. is in Section 504 plan	116	0.03%
Accom. or Mod. is in IEP	4,773	1.07%
English Learner Test Variation A	310	0.07%
English Learner Test Variation B	98	0.02%
English Learner Test Variation C	551	0.12%
English Learner Test Variation D	795	0.18%
Any Accom., Mod., or EL Variation	6,235	1.40%
No Accom., Mod., or EL Variation	438,280	98.60%
Students Not in Special Education	**Grade 11**	**Pct. of Total**
B: Marked responses in test booklet	15	0.00%
C: Dictated responses to a scribe	4	0.00%
F: Used noninterfering assistive device	3	0.00%
G: Used braille version of test	0	0.00%
H: Used large-print version of test	9	0.00%
J: Tested during more than one day	12	0.00%
K: Had supervised breaks	101	0.02%
L: Most beneficial time of day	24	0.01%
M: Administered at home or in a hospital	45	0.01%
N: Used a dictionary	4	0.00%
O: Examiner presented using MCE or ASL	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	3	0.00%
X: Used an unlisted accommodation	31	0.01%
Y: Leave blank	28	0.01%
Z: Examiner read test questions aloud	23	0.01%

Special Services Summary for History–Social Science, Grade Eleven		
Accom. or Mod. is in Section 504 plan	110	0.03%
Accom. or Mod. is in IEP	91	0.02%
English Learner Test Variation A	304	0.07%
English Learner Test Variation B	66	0.02%
English Learner Test Variation C	551	0.14%
English Learner Test Variation D	717	0.18%
Any Accom., Mod., or EL Variation	1,306	0.32%
No Accom., Mod., or EL Variation	406,586	99.68%
Students in Special Education	**Grade 11**	**Pct. of Total**
B: Marked responses in test booklet	171	0.47%
C: Dictated responses to a scribe	33	0.09%
F: Used noninterfering assistive device	15	0.04%
G: Used braille version of test	17	0.05%
H: Used large-print version of test	95	0.26%
J: Tested during more than one day	261	0.71%
K: Had supervised breaks	2,953	8.08%
L: Most beneficial time of day	466	1.28%
M: Administered at home or in a hospital	39	0.11%
N: Used a dictionary	96	0.26%
O: Examiner presented using MCE or ASL	71	0.19%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	21	0.06%
X: Used an unlisted accommodation	493	1.35%
Y: Leave blank	332	0.91%
Z: Examiner read test questions aloud	984	2.69%
Accom. or Mod. is in Section 504 plan	4	0.01%
Accom. or Mod. is in IEP	4,671	12.78%
English Learner Test Variation A	6	0.02%
English Learner Test Variation B	32	0.09%
English Learner Test Variation C	0	0.00%
English Learner Test Variation D	78	0.21%
Any Accom., Mod., or EL Variation	4,916	13.46%
No Accom., Mod., or EL Variation	31,620	86.54%
English-Only Students	**Grade 11**	**Pct. of Total**
B: Marked responses in test booklet	130	0.05%
C: Dictated responses to a scribe	21	0.01%
F: Used noninterfering assistive device	12	0.00%
G: Used braille version of test	6	0.00%
H: Used large-print version of test	66	0.03%
J: Tested during more than one day	185	0.07%
K: Had supervised breaks	1,884	0.76%
L: Most beneficial time of day	320	0.13%
M: Administered at home or in a hospital	57	0.02%
N: Used a dictionary	56	0.02%

Special Services Summary for History–Social Science, Grade Eleven		
O: Examiner presented using MCE or ASL	42	0.02%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	21	0.01%
X: Used an unlisted accommodation	317	0.13%
Y: Leave blank	211	0.09%
Z: Examiner read test questions aloud	536	0.22%
Accom. or Mod. is in Section 504 plan	98	0.04%
Accom. or Mod. is in IEP	2,866	1.16%
English Learner Test Variation A	4	0.00%
English Learner Test Variation B	6	0.00%
English Learner Test Variation C	5	0.00%
English Learner Test Variation D	6	0.00%
Any Accom., Mod., or EL Variation	3,096	1.25%
No Accom., Mod., or EL Variation	244,131	98.75%
Initially Fluent English Proficient (I-FEP) Students	**Grade 11**	**Pct. of Total**
B: Marked responses in test booklet	6	0.02%
C: Dictated responses to a scribe	4	0.01%
F: Used noninterfering assistive device	1	0.00%
G: Used braille version of test	2	0.01%
H: Used large-print version of test	6	0.02%
J: Tested during more than one day	5	0.02%
K: Had supervised breaks	72	0.22%
L: Most beneficial time of day	10	0.03%
M: Administered at home or in a hospital	2	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented using MCE or ASL	1	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	16	0.05%
Y: Leave blank	12	0.04%
Z: Examiner read test questions aloud	25	0.08%
Accom. or Mod. is in Section 504 plan	3	0.01%
Accom. or Mod. is in IEP	117	0.36%
English Learner Test Variation A	0	0.00%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	6	0.02%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	134	0.41%
No Accom., Mod., or EL Variation	32,565	99.59%
English Learner (EL) Students	**Grade 11**	**Pct. of Total**
B: Marked responses in test booklet	25	0.05%
C: Dictated responses to a scribe	11	0.02%
F: Used noninterfering assistive device	3	0.01%
G: Used braille version of test	5	0.01%

Special Services Summary for History–Social Science, Grade Eleven		
H: Used large-print version of test	16	0.03%
J: Tested during more than one day	73	0.14%
K: Had supervised breaks	859	1.65%
L: Most beneficial time of day	133	0.26%
M: Administered at home or in a hospital	15	0.03%
N: Used a dictionary	37	0.07%
O: Examiner presented using MCE or ASL	28	0.05%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	2	0.00%
X: Used an unlisted accommodation	149	0.29%
Y: Leave blank	108	0.21%
Z: Examiner read test questions aloud	392	0.75%
Accom. or Mod. is in Section 504 plan	7	0.01%
Accom. or Mod. is in IEP	1,415	2.72%
English Learner Test Variation A	305	0.59%
English Learner Test Variation B	89	0.17%
English Learner Test Variation C	536	1.03%
English Learner Test Variation D	782	1.50%
Any Accom., Mod., or EL Variation	2,588	4.97%
No Accom., Mod., or EL Variation	49,469	95.03%
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 11**	**Pct. of Total**
B: Marked responses in test booklet	24	0.02%
C: Dictated responses to a scribe	2	0.00%
F: Used noninterfering assistive device	2	0.00%
G: Used braille version of test	4	0.00%
H: Used large-print version of test	16	0.01%
J: Tested during more than one day	11	0.01%
K: Had supervised breaks	239	0.21%
L: Most beneficial time of day	26	0.02%
M: Administered at home or in a hospital	11	0.01%
N: Used a dictionary	7	0.01%
O: Examiner presented using MCE or ASL	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	0	0.00%
X: Used an unlisted accommodation	38	0.03%
Y: Leave blank	32	0.03%
Z: Examiner read test questions aloud	52	0.05%
Accom. or Mod. is in Section 504 plan	7	0.01%
Accom. or Mod. is in IEP	365	0.33%

Special Services Summary for History–Social Science, Grade Eleven		
English Learner Test Variation A	1	0.00%
English Learner Test Variation B	1	0.00%
English Learner Test Variation C	3	0.00%
English Learner Test Variation D	6	0.01%
Any Accom., Mod., or EL Variation	402	0.36%
No Accom., Mod., or EL Variation	111,518	99.64%

Table 2.D.10 Special Services Summary for Mathematics, Grades Two and Three

Special Services Summary for Mathematics, Grades Two and Three				
All Tested	**Grade 2**	**Pct. of Total**	**Grade 3**	**Pct. of Total**
B: Marked responses in test booklet	468	0.10%	313	0.07%
C: Dictated responses to a scribe	120	0.03%	76	0.02%
F: Used noninterfering assistive device	81	0.02%	41	0.01%
G: Used braille version of test	18	0.00%	19	0.00%
H: Used large-print version of test	181	0.04%	168	0.04%
J: Tested during more than one day	1,268	0.27%	730	0.17%
K: Had supervised breaks	5,016	1.09%	3,048	0.69%
L: Most beneficial time of day	2,282	0.49%	1,224	0.28%
M: Administered at home or in a hospital	45	0.01%	44	0.01%
N: Used a dictionary	4	0.00%	1	0.00%
O: Examiner presented using MCE or ASL	72	0.02%	30	0.01%
Q: Used a calculator	12	0.00%	5	0.00%
R: Used an arithmetic table	52	0.01%	22	0.01%
S: Used math manipulatives	108	0.02%	24	0.01%
V: Used interfering assistive device	2	0.00%	0	0.00%
W: Used an unlisted modification	48	0.01%	28	0.01%
X: Used an unlisted accommodation	1,193	0.26%	822	0.19%
Y: Leave blank	344	0.07%	228	0.05%
Z: Examiner read test questions aloud	3,657	0.79%	3,831	0.87%
Accom. or Mod. is in Section 504 plan	333	0.07%	401	0.09%
Accom. or Mod. is in IEP	8,254	1.79%	6,284	1.43%
English Learner Test Variation A	405	0.09%	203	0.05%
English Learner Test Variation B	56	0.01%	54	0.01%
English Learner Test Variation C	208	0.05%	152	0.03%
English Learner Test Variation D	64	0.01%	42	0.01%
Any Accom., Mod., or EL Variation	9,586	2.08%	7,320	1.66%
No Accom., Mod., or EL Variation	451,592	97.92%	432,548	98.34%
Students Not in Special Education	**Grade 2**	**Pct. of Total**	**Grade 3**	**Pct. of Total**
B: Marked responses in test booklet	78	0.02%	45	0.01%
C: Dictated responses to a scribe	34	0.01%	29	0.01%
F: Used noninterfering assistive device	10	0.00%	5	0.00%
G: Used braille version of test	3	0.00%	1	0.00%
H: Used large-print version of test	32	0.01%	33	0.01%
J: Tested during more than one day	158	0.04%	88	0.02%
K: Had supervised breaks	817	0.19%	433	0.11%
L: Most beneficial time of day	322	0.08%	140	0.03%
M: Administered at home or in a hospital	22	0.01%	25	0.01%
N: Used a dictionary	3	0.00%	1	0.00%
O: Examiner presented using MCE or ASL	2	0.00%	1	0.00%
Q: Used a calculator	2	0.00%	0	0.00%
R: Used an arithmetic table	8	0.00%	3	0.00%
S: Used math manipulatives	18	0.00%	1	0.00%

Special Services Summary for Mathematics, Grades Two and Three				
V: Used interfering assistive device	2	0.00%	0	0.00%
W: Used an unlisted modification	16	0.00%	7	0.00%
X: Used an unlisted accommodation	227	0.05%	170	0.04%
Y: Leave blank	89	0.02%	38	0.01%
Z: Examiner read test questions aloud	557	0.13%	397	0.10%
Accom. or Mod. is in Section 504 plan	307	0.07%	377	0.09%
Accom. or Mod. is in IEP	1,141	0.27%	576	0.14%
English Learner Test Variation A	368	0.09%	190	0.05%
English Learner Test Variation B	28	0.01%	41	0.01%
English Learner Test Variation C	170	0.04%	132	0.03%
English Learner Test Variation D	60	0.01%	40	0.01%
Any Accom., Mod., or EL Variation	2,098	0.49%	1,375	0.33%
No Accom., Mod., or EL Variation	422,110	99.51%	410,798	99.67%
Students in Special Education	**Grade 2**	**Pct. of Total**	**Grade 3**	**Pct. of Total**
B: Marked responses in test booklet	387	1.05%	265	0.96%
C: Dictated responses to a scribe	86	0.23%	45	0.16%
F: Used noninterfering assistive device	71	0.19%	36	0.13%
G: Used braille version of test	15	0.04%	18	0.07%
H: Used large-print version of test	146	0.40%	131	0.47%
J: Tested during more than one day	1,106	3.00%	640	2.32%
K: Had supervised breaks	4,192	11.35%	2,597	9.41%
L: Most beneficial time of day	1,952	5.29%	1,076	3.90%
M: Administered at home or in a hospital	22	0.06%	19	0.07%
N: Used a dictionary	1	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	70	0.19%	29	0.11%
Q: Used a calculator	10	0.03%	5	0.02%
R: Used an arithmetic table	44	0.12%	19	0.07%
S: Used math manipulatives	90	0.24%	23	0.08%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	32	0.09%	21	0.08%
X: Used an unlisted accommodation	965	2.61%	649	2.35%
Y: Leave blank	255	0.69%	188	0.68%
Z: Examiner read test questions aloud	3,094	8.38%	3,405	12.34%
Accom. or Mod. is in Section 504 plan	26	0.07%	24	0.09%
Accom. or Mod. is in IEP	7,095	19.21%	5,664	20.53%
English Learner Test Variation A	36	0.10%	13	0.05%
English Learner Test Variation B	28	0.08%	13	0.05%
English Learner Test Variation C	38	0.10%	20	0.07%
English Learner Test Variation D	4	0.01%	2	0.01%
Any Accom., Mod., or EL Variation	7,470	20.23%	5,901	21.39%
No Accom., Mod., or EL Variation	29,458	79.77%	21,687	78.61%

Special Services Summary for Mathematics, Grades Two and Three				
English-Only Students	**Grade 2**	**Pct. of Total**	**Grade 3**	**Pct. of Total**
B: Marked responses in test booklet	299	0.11%	235	0.09%
C: Dictated responses to a scribe	77	0.03%	56	0.02%
F: Used noninterfering assistive device	55	0.02%	27	0.01%
G: Used braille version of test	6	0.00%	10	0.00%
H: Used large-print version of test	118	0.04%	117	0.05%
J: Tested during more than one day	751	0.28%	467	0.19%
K: Had supervised breaks	3,035	1.15%	2,005	0.80%
L: Most beneficial time of day	1,392	0.53%	786	0.31%
M: Administered at home or in a hospital	29	0.01%	33	0.01%
N: Used a dictionary	3	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	50	0.02%	20	0.01%
Q: Used a calculator	7	0.00%	2	0.00%
R: Used an arithmetic table	25	0.01%	17	0.01%
S: Used math manipulatives	47	0.02%	17	0.01%
V: Used interfering assistive device	2	0.00%	0	0.00%
W: Used an unlisted modification	35	0.01%	17	0.01%
X: Used an unlisted accommodation	707	0.27%	541	0.22%
Y: Leave blank	257	0.10%	165	0.07%
Z: Examiner read test questions aloud	2,114	0.80%	2,431	0.97%
Accom. or Mod. is in Section 504 plan	252	0.10%	317	0.13%
Accom. or Mod. is in IEP	4,993	1.89%	4,084	1.63%
English Learner Test Variation A	14	0.01%	3	0.00%
English Learner Test Variation B	7	0.00%	4	0.00%
English Learner Test Variation C	6	0.00%	6	0.00%
English Learner Test Variation D	4	0.00%	0	0.00%
Any Accom., Mod., or EL Variation	5,525	2.09%	4,574	1.83%
No Accom., Mod., or EL Variation	258,702	97.91%	245,247	98.17%
Initially Fluent English Proficient (I-FEP) Students	**Grade 2**	**Pct. of Total**	**Grade 3**	**Pct. of Total**
B: Marked responses in test booklet	3	0.02%	5	0.03%
C: Dictated responses to a scribe	0	0.00%	3	0.02%
F: Used noninterfering assistive device	0	0.00%	2	0.01%
G: Used braille version of test	1	0.01%	0	0.00%
H: Used large-print version of test	1	0.01%	6	0.03%
J: Tested during more than one day	7	0.04%	8	0.04%
K: Had supervised breaks	45	0.26%	46	0.24%
L: Most beneficial time of day	19	0.11%	17	0.09%
M: Administered at home or in a hospital	0	0.00%	1	0.01%
N: Used a dictionary	0	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	2	0.01%	1	0.01%
Q: Used a calculator	0	0.00%	0	0.00%
R: Used an arithmetic table	0	0.00%	0	0.00%
S: Used math manipulatives	0	0.00%	0	0.00%

Special Services Summary for Mathematics, Grades Two and Three				
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	0	0.00%	0	0.00%
X: Used an unlisted accommodation	10	0.06%	11	0.06%
Y: Leave blank	1	0.01%	5	0.03%
Z: Examiner read test questions aloud	24	0.14%	60	0.31%
Accom. or Mod. is in Section 504 plan	1	0.01%	10	0.05%
Accom. or Mod. is in IEP	61	0.36%	92	0.48%
English Learner Test Variation A	3	0.02%	2	0.01%
English Learner Test Variation B	0	0.00%	0	0.00%
English Learner Test Variation C	0	0.00%	1	0.01%
English Learner Test Variation D	1	0.01%	0	0.00%
Any Accom., Mod., or EL Variation	69	0.40%	113	0.59%
No Accom., Mod., or EL Variation	17,024	99.60%	19,116	99.41%
English Learner (EL) Students	**Grade 2**	**Pct. of Total**	**Grade 3**	**Pct. of Total**
B: Marked responses in test booklet	158	0.09%	62	0.04%
C: Dictated responses to a scribe	43	0.02%	15	0.01%
F: Used noninterfering assistive device	25	0.01%	10	0.01%
G: Used braille version of test	8	0.00%	3	0.00%
H: Used large-print version of test	54	0.03%	38	0.03%
J: Tested during more than one day	504	0.29%	242	0.18%
K: Had supervised breaks	1,897	1.10%	956	0.69%
L: Most beneficial time of day	856	0.50%	392	0.28%
M: Administered at home or in a hospital	16	0.01%	8	0.01%
N: Used a dictionary	1	0.00%	1	0.00%
O: Examiner presented using MCE or ASL	20	0.01%	9	0.01%
Q: Used a calculator	5	0.00%	3	0.00%
R: Used an arithmetic table	27	0.02%	5	0.00%
S: Used math manipulatives	59	0.03%	7	0.01%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	13	0.01%	11	0.01%
X: Used an unlisted accommodation	473	0.27%	255	0.18%
Y: Leave blank	84	0.05%	51	0.04%
Z: Examiner read test questions aloud	1,503	0.87%	1,301	0.94%
Accom. or Mod. is in Section 504 plan	76	0.04%	63	0.05%
Accom. or Mod. is in IEP	3,148	1.83%	2,016	1.46%
English Learner Test Variation A	388	0.22%	187	0.14%
English Learner Test Variation B	49	0.03%	49	0.04%
English Learner Test Variation C	202	0.12%	144	0.10%
English Learner Test Variation D	59	0.03%	41	0.03%
Any Accom., Mod., or EL Variation	3,931	2.28%	2,515	1.82%
No Accom., Mod., or EL Variation	168,529	97.72%	135,596	98.18%

Special Services Summary for Mathematics, Grades Two and Three				
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 2**	**Pct. of Total**	**Grade 3**	**Pct. of Total**
B: Marked responses in test booklet	3	0.04%	4	0.01%
C: Dictated responses to a scribe	0	0.00%	0	0.00%
F: Used noninterfering assistive device	0	0.00%	2	0.01%
G: Used braille version of test	0	0.00%	5	0.02%
H: Used large-print version of test	1	0.01%	2	0.01%
J: Tested during more than one day	0	0.00%	9	0.03%
K: Had supervised breaks	23	0.34%	31	0.10%
L: Most beneficial time of day	5	0.07%	23	0.07%
M: Administered at home or in a hospital	0	0.00%	2	0.01%
N: Used a dictionary	0	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	0	0.00%	0	0.00%
Q: Used a calculator	0	0.00%	0	0.00%
R: Used an arithmetic table	0	0.00%	0	0.00%
S: Used math manipulatives	2	0.03%	0	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	0	0.00%	0	0.00%
X: Used an unlisted accommodation	1	0.01%	14	0.04%
Y: Leave blank	2	0.03%	5	0.02%
Z: Examiner read test questions aloud	8	0.12%	28	0.09%
Accom. or Mod. is in Section 504 plan	4	0.06%	8	0.02%
Accom. or Mod. is in IEP	23	0.34%	67	0.21%
English Learner Test Variation A	0	0.00%	10	0.03%
English Learner Test Variation B	0	0.00%	0	0.00%
English Learner Test Variation C	0	0.00%	0	0.00%
English Learner Test Variation D	0	0.00%	0	0.00%
Any Accom., Mod., or EL Variation	29	0.43%	89	0.28%
No Accom., Mod., or EL Variation	6,677	99.57%	32,034	99.72%

Table 2.D.11 Special Services Summary for Mathematics, Grades Four and Five

Special Services Summary for Mathematics, Grades Four and Five				
All Tested	**Grade 4**	**Pct. of Total**	**Grade 5**	**Pct. of Total**
B: Marked responses in test booklet	632	0.15%	561	0.13%
C: Dictated responses to a scribe	43	0.01%	34	0.01%
F: Used noninterfering assistive device	35	0.01%	36	0.01%
G: Used braille version of test	13	0.00%	14	0.00%
H: Used large-print version of test	152	0.04%	152	0.04%
J: Tested during more than one day	696	0.16%	725	0.17%
K: Had supervised breaks	2,971	0.69%	2,988	0.70%
L: Most beneficial time of day	1,013	0.23%	1,091	0.26%
M: Administered at home or in a hospital	24	0.01%	49	0.01%
N: Used a dictionary	2	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	32	0.01%	24	0.01%
Q: Used a calculator	11	0.00%	52	0.01%
R: Used an arithmetic table	33	0.01%	37	0.01%
S: Used math manipulatives	12	0.00%	21	0.00%
V: Used interfering assistive device	1	0.00%	6	0.00%
W: Used an unlisted modification	42	0.01%	33	0.01%
X: Used an unlisted accommodation	734	0.17%	729	0.17%
Y: Leave blank	222	0.05%	209	0.05%
Z: Examiner read test questions aloud	3,334	0.77%	3,186	0.75%
Accom. or Mod. is in Section 504 plan	518	0.12%	468	0.11%
Accom. or Mod. is in IEP	5,821	1.35%	5,852	1.38%
English Learner Test Variation A	185	0.04%	171	0.04%
English Learner Test Variation B	41	0.01%	27	0.01%
English Learner Test Variation C	154	0.04%	144	0.03%
English Learner Test Variation D	70	0.02%	54	0.01%
Any Accom., Mod., or EL Variation	6,899	1.60%	6,839	1.61%
No Accom., Mod., or EL Variation	424,333	98.40%	417,556	98.39%
Students Not in Special Education	**Grade 4**	**Pct. of Total**	**Grade 5**	**Pct. of Total**
B: Marked responses in test booklet	110	0.03%	113	0.03%
C: Dictated responses to a scribe	21	0.01%	12	0.00%
F: Used noninterfering assistive device	5	0.00%	8	0.00%
G: Used braille version of test	1	0.00%	2	0.00%
H: Used large-print version of test	48	0.01%	46	0.01%
J: Tested during more than one day	88	0.02%	69	0.02%
K: Had supervised breaks	441	0.11%	342	0.09%
L: Most beneficial time of day	132	0.03%	126	0.03%
M: Administered at home or in a hospital	11	0.00%	30	0.01%
N: Used a dictionary	0	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	1	0.00%	1	0.00%
Q: Used a calculator	1	0.00%	7	0.00%
R: Used an arithmetic table	5	0.00%	5	0.00%
S: Used math manipulatives	1	0.00%	1	0.00%

Special Services Summary for Mathematics, Grades Four and Five				
V: Used interfering assistive device	0	0.00%	1	0.00%
W: Used an unlisted modification	18	0.00%	14	0.00%
X: Used an unlisted accommodation	160	0.04%	104	0.03%
Y: Leave blank	49	0.01%	48	0.01%
Z: Examiner read test questions aloud	280	0.07%	237	0.06%
Accom. or Mod. is in Section 504 plan	481	0.12%	436	0.11%
Accom. or Mod. is in IEP	439	0.11%	346	0.09%
English Learner Test Variation A	178	0.04%	163	0.04%
English Learner Test Variation B	32	0.01%	17	0.00%
English Learner Test Variation C	138	0.03%	127	0.03%
English Learner Test Variation D	69	0.02%	54	0.01%
Any Accom., Mod., or EL Variation	1,321	0.33%	1,114	0.28%
No Accom., Mod., or EL Variation	403,362	99.67%	398,415	99.72%
Students in Special Education	**Grade 4**	**Pct. of Total**	**Grade 5**	**Pct. of Total**
B: Marked responses in test booklet	510	2.06%	445	1.92%
C: Dictated responses to a scribe	22	0.09%	22	0.09%
F: Used noninterfering assistive device	30	0.12%	28	0.12%
G: Used braille version of test	12	0.05%	12	0.05%
H: Used large-print version of test	104	0.42%	105	0.45%
J: Tested during more than one day	599	2.43%	653	2.82%
K: Had supervised breaks	2,503	10.13%	2,627	11.33%
L: Most beneficial time of day	867	3.51%	955	4.12%
M: Administered at home or in a hospital	13	0.05%	19	0.08%
N: Used a dictionary	1	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	31	0.13%	23	0.10%
Q: Used a calculator	9	0.04%	42	0.18%
R: Used an arithmetic table	28	0.11%	32	0.14%
S: Used math manipulatives	11	0.04%	20	0.09%
V: Used interfering assistive device	1	0.00%	5	0.02%
W: Used an unlisted modification	24	0.10%	19	0.08%
X: Used an unlisted accommodation	569	2.30%	621	2.68%
Y: Leave blank	170	0.69%	160	0.69%
Z: Examiner read test questions aloud	2,995	12.13%	2,905	12.53%
Accom. or Mod. is in Section 504 plan	32	0.13%	27	0.12%
Accom. or Mod. is in IEP	5,313	21.51%	5,456	23.54%
English Learner Test Variation A	6	0.02%	7	0.03%
English Learner Test Variation B	9	0.04%	10	0.04%
English Learner Test Variation C	14	0.06%	16	0.07%
English Learner Test Variation D	1	0.00%	0	0.00%
Any Accom., Mod., or EL Variation	5,495	22.25%	5,664	24.44%
No Accom., Mod., or EL Variation	19,204	77.75%	17,514	75.56%

Special Services Summary for Mathematics, Grades Four and Five				
English-Only Students	**Grade 4**	**Pct. of Total**	**Grade 5**	**Pct. of Total**
B: Marked responses in test booklet	494	0.20%	412	0.17%
C: Dictated responses to a scribe	31	0.01%	25	0.01%
F: Used noninterfering assistive device	30	0.01%	21	0.01%
G: Used braille version of test	9	0.00%	4	0.00%
H: Used large-print version of test	109	0.04%	100	0.04%
J: Tested during more than one day	490	0.20%	483	0.20%
K: Had supervised breaks	2,053	0.84%	1,999	0.84%
L: Most beneficial time of day	670	0.28%	709	0.30%
M: Administered at home or in a hospital	16	0.01%	40	0.02%
N: Used a dictionary	2	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	22	0.01%	18	0.01%
Q: Used a calculator	10	0.00%	35	0.01%
R: Used an arithmetic table	24	0.01%	29	0.01%
S: Used math manipulatives	7	0.00%	15	0.01%
V: Used interfering assistive device	0	0.00%	6	0.00%
W: Used an unlisted modification	32	0.01%	27	0.01%
X: Used an unlisted accommodation	495	0.20%	513	0.22%
Y: Leave blank	158	0.06%	139	0.06%
Z: Examiner read test questions aloud	2,045	0.84%	1,877	0.79%
Accom. or Mod. is in Section 504 plan	401	0.16%	353	0.15%
Accom. or Mod. is in IEP	3,822	1.57%	3,761	1.59%
English Learner Test Variation A	2	0.00%	1	0.00%
English Learner Test Variation B	0	0.00%	0	0.00%
English Learner Test Variation C	2	0.00%	1	0.00%
English Learner Test Variation D	0	0.00%	0	0.00%
Any Accom., Mod., or EL Variation	4,362	1.79%	4,273	1.80%
No Accom., Mod., or EL Variation	239,033	98.21%	232,758	98.20%
Initially Fluent English Proficient (I-FEP) Students	**Grade 4**	**Pct. of Total**	**Grade 5**	**Pct. of Total**
B: Marked responses in test booklet	8	0.04%	13	0.07%
C: Dictated responses to a scribe	2	0.01%	1	0.01%
F: Used noninterfering assistive device	0	0.00%	2	0.01%
G: Used braille version of test	1	0.00%	2	0.01%
H: Used large-print version of test	3	0.01%	6	0.03%
J: Tested during more than one day	10	0.05%	13	0.07%
K: Had supervised breaks	50	0.24%	43	0.22%
L: Most beneficial time of day	17	0.08%	17	0.09%
M: Administered at home or in a hospital	2	0.01%	2	0.01%
N: Used a dictionary	0	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	2	0.01%	0	0.00%
Q: Used a calculator	0	0.00%	1	0.01%
R: Used an arithmetic table	1	0.00%	0	0.00%
S: Used math manipulatives	0	0.00%	0	0.00%

Special Services Summary for Mathematics, Grades Four and Five				
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	1	0.00%	0	0.00%
X: Used an unlisted accommodation	12	0.06%	11	0.06%
Y: Leave blank	5	0.02%	4	0.02%
Z: Examiner read test questions aloud	50	0.24%	43	0.22%
Accom. or Mod. is in Section 504 plan	17	0.08%	18	0.09%
Accom. or Mod. is in IEP	90	0.44%	86	0.43%
English Learner Test Variation A	0	0.00%	1	0.01%
English Learner Test Variation B	0	0.00%	0	0.00%
English Learner Test Variation C	1	0.00%	1	0.01%
English Learner Test Variation D	1	0.00%	1	0.01%
Any Accom., Mod., or EL Variation	112	0.55%	111	0.56%
No Accom., Mod., or EL Variation	20,417	99.45%	19,716	99.44%
English Learner (EL) Students	**Grade 4**	**Pct. of Total**	**Grade 5**	**Pct. of Total**
B: Marked responses in test booklet	112	0.10%	99	0.11%
C: Dictated responses to a scribe	8	0.01%	7	0.01%
F: Used noninterfering assistive device	4	0.00%	9	0.01%
G: Used braille version of test	2	0.00%	2	0.00%
H: Used large-print version of test	26	0.02%	35	0.04%
J: Tested during more than one day	183	0.17%	205	0.23%
K: Had supervised breaks	810	0.74%	865	0.98%
L: Most beneficial time of day	311	0.29%	325	0.37%
M: Administered at home or in a hospital	6	0.01%	5	0.01%
N: Used a dictionary	0	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	8	0.01%	6	0.01%
Q: Used a calculator	1	0.00%	16	0.02%
R: Used an arithmetic table	7	0.01%	7	0.01%
S: Used math manipulatives	4	0.00%	6	0.01%
V: Used interfering assistive device	1	0.00%	0	0.00%
W: Used an unlisted modification	9	0.01%	4	0.00%
X: Used an unlisted accommodation	214	0.20%	185	0.21%
Y: Leave blank	53	0.05%	57	0.06%
Z: Examiner read test questions aloud	1,192	1.09%	1,172	1.32%
Accom. or Mod. is in Section 504 plan	86	0.08%	74	0.08%
Accom. or Mod. is in IEP	1,809	1.66%	1,820	2.06%
English Learner Test Variation A	177	0.16%	164	0.19%
English Learner Test Variation B	41	0.04%	27	0.03%
English Learner Test Variation C	151	0.14%	139	0.16%
English Learner Test Variation D	69	0.06%	53	0.06%
Any Accom., Mod., or EL Variation	2,301	2.11%	2,225	2.51%
No Accom., Mod., or EL Variation	106,633	97.89%	86,285	97.49%

Special Services Summary for Mathematics, Grades Four and Five				
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 4**	**Pct. of Total**	**Grade 5**	**Pct. of Total**
B: Marked responses in test booklet	17	0.03%	35	0.04%
C: Dictated responses to a scribe	2	0.00%	1	0.00%
F: Used noninterfering assistive device	1	0.00%	4	0.01%
G: Used braille version of test	1	0.00%	6	0.01%
H: Used large-print version of test	14	0.02%	11	0.01%
J: Tested during more than one day	12	0.02%	23	0.03%
K: Had supervised breaks	50	0.09%	77	0.10%
L: Most beneficial time of day	12	0.02%	38	0.05%
M: Administered at home or in a hospital	0	0.00%	2	0.00%
N: Used a dictionary	0	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	0	0.00%	0	0.00%
Q: Used a calculator	0	0.00%	0	0.00%
R: Used an arithmetic table	1	0.00%	1	0.00%
S: Used math manipulatives	1	0.00%	0	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	0	0.00%	2	0.00%
X: Used an unlisted accommodation	13	0.02%	18	0.02%
Y: Leave blank	6	0.01%	7	0.01%
Z: Examiner read test questions aloud	38	0.07%	88	0.11%
Accom. or Mod. is in Section 504 plan	14	0.02%	22	0.03%
Accom. or Mod. is in IEP	86	0.15%	174	0.22%
English Learner Test Variation A	5	0.01%	5	0.01%
English Learner Test Variation B	0	0.00%	0	0.00%
English Learner Test Variation C	0	0.00%	3	0.00%
English Learner Test Variation D	0	0.00%	0	0.00%
Any Accom., Mod., or EL Variation	109	0.19%	217	0.28%
No Accom., Mod., or EL Variation	57,696	99.81%	78,332	99.72%

Table 2.D.12 Special Services Summary for Mathematics, Grades Six and Seven

Special Services Summary for Mathematics, Grades Six and Seven				
All Tested	**Grade 6**	**Pct. of Total**	**Grade 7**	**Pct. of Total**
B: Marked responses in test booklet	403	0.09%	258	0.07%
C: Dictated responses to a scribe	36	0.01%	28	0.01%
F: Used noninterfering assistive device	22	0.01%	30	0.01%
G: Used braille version of test	14	0.00%	10	0.00%
H: Used large-print version of test	136	0.03%	135	0.03%
J: Tested during more than one day	468	0.11%	371	0.09%
K: Had supervised breaks	2,154	0.50%	1,584	0.40%
L: Most beneficial time of day	783	0.18%	443	0.11%
M: Administered at home or in a hospital	57	0.01%	75	0.02%
N: Used a dictionary	1	0.00%	1	0.00%
O: Examiner presented using MCE or ASL	24	0.01%	17	0.00%
Q: Used a calculator	66	0.02%	80	0.02%
R: Used an arithmetic table	33	0.01%	14	0.00%
S: Used math manipulatives	11	0.00%	8	0.00%
V: Used interfering assistive device	2	0.00%	0	0.00%
W: Used an unlisted modification	29	0.01%	39	0.01%
X: Used an unlisted accommodation	624	0.15%	515	0.13%
Y: Leave blank	284	0.07%	267	0.07%
Z: Examiner read test questions aloud	1,840	0.43%	962	0.24%
Accom. or Mod. is in Section 504 plan	348	0.08%	257	0.07%
Accom. or Mod. is in IEP	4,273	1.00%	3,108	0.79%
English Learner Test Variation A	309	0.07%	552	0.14%
English Learner Test Variation B	58	0.01%	28	0.01%
English Learner Test Variation C	281	0.07%	377	0.10%
English Learner Test Variation D	158	0.04%	231	0.06%
Any Accom., Mod., or EL Variation	5,379	1.26%	4,452	1.13%
No Accom., Mod., or EL Variation	422,873	98.74%	388,927	98.87%
Students Not in Special Education	**Grade 6**	**Pct. of Total**	**Grade 7**	**Pct. of Total**
B: Marked responses in test booklet	80	0.02%	39	0.01%
C: Dictated responses to a scribe	13	0.00%	9	0.00%
F: Used noninterfering assistive device	2	0.00%	2	0.00%
G: Used braille version of test	2	0.00%	0	0.00%
H: Used large-print version of test	27	0.01%	28	0.01%
J: Tested during more than one day	40	0.01%	35	0.01%
K: Had supervised breaks	219	0.05%	161	0.04%
L: Most beneficial time of day	76	0.02%	34	0.01%
M: Administered at home or in a hospital	43	0.01%	55	0.01%
N: Used a dictionary	1	0.00%	1	0.00%
O: Examiner presented using MCE or ASL	2	0.00%	0	0.00%
Q: Used a calculator	7	0.00%	9	0.00%
R: Used an arithmetic table	4	0.00%	1	0.00%
S: Used math manipulatives	2	0.00%	0	0.00%

Special Services Summary for Mathematics, Grades Six and Seven				
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	9	0.00%	4	0.00%
X: Used an unlisted accommodation	95	0.02%	90	0.02%
Y: Leave blank	33	0.01%	68	0.02%
Z: Examiner read test questions aloud	107	0.03%	67	0.02%
Accom. or Mod. is in Section 504 plan	330	0.08%	244	0.07%
Accom. or Mod. is in IEP	194	0.05%	178	0.05%
English Learner Test Variation A	287	0.07%	548	0.15%
English Learner Test Variation B	41	0.01%	24	0.01%
English Learner Test Variation C	271	0.07%	372	0.10%
English Learner Test Variation D	153	0.04%	230	0.06%
Any Accom., Mod., or EL Variation	1,156	0.29%	1,399	0.38%
No Accom., Mod., or EL Variation	403,817	99.71%	371,409	99.62%
Students in Special Education	**Grade 6**	**Pct. of Total**	**Grade 7**	**Pct. of Total**
B: Marked responses in test booklet	321	1.48%	219	1.14%
C: Dictated responses to a scribe	22	0.10%	19	0.10%
F: Used noninterfering assistive device	20	0.09%	28	0.15%
G: Used braille version of test	12	0.06%	10	0.05%
H: Used large-print version of test	109	0.50%	107	0.56%
J: Tested during more than one day	424	1.96%	336	1.75%
K: Had supervised breaks	1,927	8.89%	1,417	7.39%
L: Most beneficial time of day	699	3.23%	408	2.13%
M: Administered at home or in a hospital	14	0.06%	20	0.10%
N: Used a dictionary	0	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	22	0.10%	17	0.09%
Q: Used a calculator	59	0.27%	71	0.37%
R: Used an arithmetic table	29	0.13%	13	0.07%
S: Used math manipulatives	9	0.04%	8	0.04%
V: Used interfering assistive device	2	0.01%	0	0.00%
W: Used an unlisted modification	20	0.09%	35	0.18%
X: Used an unlisted accommodation	528	2.44%	420	2.19%
Y: Leave blank	250	1.15%	199	1.04%
Z: Examiner read test questions aloud	1,711	7.90%	891	4.64%
Accom. or Mod. is in Section 504 plan	17	0.08%	12	0.06%
Accom. or Mod. is in IEP	4,050	18.69%	2,921	15.23%
English Learner Test Variation A	16	0.07%	1	0.01%
English Learner Test Variation B	16	0.07%	3	0.02%
English Learner Test Variation C	8	0.04%	4	0.02%
English Learner Test Variation D	2	0.01%	1	0.01%
Any Accom., Mod., or EL Variation	4,186	19.32%	3,040	15.85%
No Accom., Mod., or EL Variation	17,484	80.68%	16,144	84.15%

Special Services Summary for Mathematics, Grades Six and Seven				
English-Only Students	**Grade 6**	**Pct. of Total**	**Grade 7**	**Pct. of Total**
B: Marked responses in test booklet	311	0.13%	193	0.09%
C: Dictated responses to a scribe	24	0.01%	23	0.01%
F: Used noninterfering assistive device	9	0.00%	16	0.01%
G: Used braille version of test	9	0.00%	3	0.00%
H: Used large-print version of test	92	0.04%	103	0.05%
J: Tested during more than one day	276	0.12%	248	0.11%
K: Had supervised breaks	1,452	0.61%	1,102	0.51%
L: Most beneficial time of day	529	0.22%	290	0.13%
M: Administered at home or in a hospital	46	0.02%	53	0.02%
N: Used a dictionary	0	0.00%	1	0.00%
O: Examiner presented using MCE or ASL	20	0.01%	15	0.01%
Q: Used a calculator	57	0.02%	67	0.03%
R: Used an arithmetic table	27	0.01%	12	0.01%
S: Used math manipulatives	6	0.00%	6	0.00%
V: Used interfering assistive device	2	0.00%	0	0.00%
W: Used an unlisted modification	20	0.01%	26	0.01%
X: Used an unlisted accommodation	431	0.18%	366	0.17%
Y: Leave blank	209	0.09%	196	0.09%
Z: Examiner read test questions aloud	1,020	0.43%	528	0.24%
Accom. or Mod. is in Section 504 plan	282	0.12%	216	0.10%
Accom. or Mod. is in IEP	2,750	1.16%	2,053	0.94%
English Learner Test Variation A	22	0.01%	16	0.01%
English Learner Test Variation B	3	0.00%	2	0.00%
English Learner Test Variation C	7	0.00%	11	0.01%
English Learner Test Variation D	4	0.00%	2	0.00%
Any Accom., Mod., or EL Variation	3,162	1.33%	2,393	1.10%
No Accom., Mod., or EL Variation	234,761	98.67%	215,472	98.90%
Initially Fluent English Proficient (I-FEP) Students	**Grade 6**	**Pct. of Total**	**Grade 7**	**Pct. of Total**
B: Marked responses in test booklet	7	0.04%	14	0.06%
C: Dictated responses to a scribe	1	0.01%	0	0.00%
F: Used noninterfering assistive device	0	0.00%	1	0.00%
G: Used braille version of test	0	0.00%	4	0.02%
H: Used large-print version of test	1	0.01%	9	0.04%
J: Tested during more than one day	10	0.05%	6	0.02%
K: Had supervised breaks	30	0.15%	30	0.12%
L: Most beneficial time of day	8	0.04%	9	0.04%
M: Administered at home or in a hospital	0	0.00%	4	0.02%
N: Used a dictionary	0	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	0	0.00%	1	0.00%
Q: Used a calculator	1	0.01%	3	0.01%
R: Used an arithmetic table	0	0.00%	0	0.00%
S: Used math manipulatives	0	0.00%	0	0.00%

Special Services Summary for Mathematics, Grades Six and Seven				
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	1	0.01%	1	0.00%
X: Used an unlisted accommodation	11	0.06%	13	0.05%
Y: Leave blank	4	0.02%	6	0.02%
Z: Examiner read test questions aloud	26	0.13%	28	0.11%
Accom. or Mod. is in Section 504 plan	7	0.04%	5	0.02%
Accom. or Mod. is in IEP	63	0.32%	91	0.36%
English Learner Test Variation A	0	0.00%	0	0.00%
English Learner Test Variation B	0	0.00%	0	0.00%
English Learner Test Variation C	4	0.02%	6	0.02%
English Learner Test Variation D	6	0.03%	15	0.06%
Any Accom., Mod., or EL Variation	78	0.39%	120	0.47%
No Accom., Mod., or EL Variation	19,884	99.61%	25,307	99.53%
English Learner (EL) Students	**Grade 6**	**Pct. of Total**	**Grade 7**	**Pct. of Total**
B: Marked responses in test booklet	56	0.08%	30	0.05%
C: Dictated responses to a scribe	5	0.01%	1	0.00%
F: Used noninterfering assistive device	9	0.01%	7	0.01%
G: Used braille version of test	2	0.00%	1	0.00%
H: Used large-print version of test	24	0.03%	12	0.02%
J: Tested during more than one day	155	0.22%	98	0.16%
K: Had supervised breaks	552	0.78%	340	0.56%
L: Most beneficial time of day	204	0.29%	105	0.17%
M: Administered at home or in a hospital	7	0.01%	7	0.01%
N: Used a dictionary	1	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	4	0.01%	1	0.00%
Q: Used a calculator	8	0.01%	10	0.02%
R: Used an arithmetic table	6	0.01%	1	0.00%
S: Used math manipulatives	5	0.01%	2	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	8	0.01%	12	0.02%
X: Used an unlisted accommodation	156	0.22%	93	0.15%
Y: Leave blank	60	0.09%	46	0.08%
Z: Examiner read test questions aloud	717	1.02%	337	0.55%
Accom. or Mod. is in Section 504 plan	36	0.05%	21	0.03%
Accom. or Mod. is in IEP	1,233	1.75%	741	1.21%
English Learner Test Variation A	285	0.40%	527	0.86%
English Learner Test Variation B	54	0.08%	25	0.04%
English Learner Test Variation C	265	0.38%	352	0.58%
English Learner Test Variation D	145	0.21%	207	0.34%
Any Accom., Mod., or EL Variation	1,870	2.65%	1,665	2.73%
No Accom., Mod., or EL Variation	68,660	97.35%	59,361	97.27%

Special Services Summary for Mathematics, Grades Six and Seven				
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 6**	**Pct. of Total**	**Grade 7**	**Pct. of Total**
B: Marked responses in test booklet	27	0.03%	21	0.02%
C: Dictated responses to a scribe	6	0.01%	4	0.00%
F: Used noninterfering assistive device	4	0.00%	6	0.01%
G: Used braille version of test	3	0.00%	2	0.00%
H: Used large-print version of test	18	0.02%	10	0.01%
J: Tested during more than one day	26	0.03%	19	0.02%
K: Had supervised breaks	117	0.12%	111	0.13%
L: Most beneficial time of day	41	0.04%	38	0.04%
M: Administered at home or in a hospital	3	0.00%	8	0.01%
N: Used a dictionary	0	0.00%	0	0.00%
O: Examiner presented using MCE or ASL	0	0.00%	0	0.00%
Q: Used a calculator	0	0.00%	0	0.00%
R: Used an arithmetic table	0	0.00%	1	0.00%
S: Used math manipulatives	0	0.00%	0	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%
W: Used an unlisted modification	0	0.00%	0	0.00%
X: Used an unlisted accommodation	24	0.02%	40	0.05%
Y: Leave blank	11	0.01%	17	0.02%
Z: Examiner read test questions aloud	72	0.07%	66	0.07%
Accom. or Mod. is in Section 504 plan	21	0.02%	14	0.02%
Accom. or Mod. is in IEP	219	0.22%	211	0.24%
English Learner Test Variation A	1	0.00%	7	0.01%
English Learner Test Variation B	1	0.00%	0	0.00%
English Learner Test Variation C	1	0.00%	4	0.00%
English Learner Test Variation D	0	0.00%	1	0.00%
Any Accom., Mod., or EL Variation	251	0.25%	253	0.29%
No Accom., Mod., or EL Variation	99,065	99.75%	88,220	99.71%

Table 2.D.13 Special Services Summary for General Mathematics

Special Services Summary for General Mathematics				
All Tested	**Grade 8**	**Grade 9**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	400	105	505	0.27%
C: Dictated responses to a scribe	17	13	30	0.02%
F: Used noninterfering assistive device	17	3	20	0.01%
G: Used braille version of test	12	6	18	0.01%
H: Used large-print version of test	86	31	117	0.06%
J: Tested during more than one day	641	120	761	0.40%
K: Had supervised breaks	3,035	1,577	4,612	2.43%
L: Most beneficial time of day	1,086	329	1,415	0.75%
M: Administered at home or in a hospital	71	34	105	0.06%
N: Used a dictionary	3	1	4	0.00%
O: Examiner presented using MCE or ASL	43	37	80	0.04%
Q: Used a calculator	199	482	681	0.36%
R: Used an arithmetic table	39	44	83	0.04%
S: Used math manipulatives	63	5	68	0.04%
V: Used interfering assistive device	0	0	0	0.00%
W: Used an unlisted modification	55	6	61	0.03%
X: Used an unlisted accommodation	943	299	1,242	0.65%
Y: Leave blank	373	128	501	0.26%
Z: Examiner read test questions aloud	3,092	377	3,469	1.83%
Accom. or Mod. is in Section 504 plan	144	20	164	0.09%
Accom. or Mod. is in IEP	6,964	2,588	9,552	5.03%
English Learner Test Variation A	279	171	450	0.24%
English Learner Test Variation B	33	22	55	0.03%
English Learner Test Variation C	151	197	348	0.18%
English Learner Test Variation D	76	194	270	0.14%
Any Accom., Mod., or EL Variation	7,735	3,083	10,818	5.70%
No Accom., Mod., or EL Variation	139,563	39,484	179,047	94.30%
Students Not in Special Education	**Grade 8**	**Grade 9**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	21	3	24	0.02%
C: Dictated responses to a scribe	0	1	1	0.00%
F: Used noninterfering assistive device	1	0	1	0.00%
G: Used braille version of test	0	0	0	0.00%
H: Used large-print version of test	8	1	9	0.01%
J: Tested during more than one day	14	4	18	0.01%
K: Had supervised breaks	90	43	133	0.09%
L: Most beneficial time of day	28	7	35	0.02%
M: Administered at home or in a hospital	31	8	39	0.03%
N: Used a dictionary	1	0	1	0.00%
O: Examiner presented using MCE or ASL	0	1	1	0.00%
Q: Used a calculator	9	17	26	0.02%
R: Used an arithmetic table	3	0	3	0.00%
S: Used math manipulatives	2	0	2	0.00%

Special Services Summary for General Mathematics				
V: Used interfering assistive device	0	0	0	0.00%
W: Used an unlisted modification	7	0	7	0.00%
X: Used an unlisted accommodation	45	12	57	0.04%
Y: Leave blank	34	17	51	0.03%
Z: Examiner read test questions aloud	42	4	46	0.03%
Accom. or Mod. is in Section 504 plan	132	16	148	0.10%
Accom. or Mod. is in IEP	118	63	181	0.12%
English Learner Test Variation A	265	162	427	0.29%
English Learner Test Variation B	18	10	28	0.02%
English Learner Test Variation C	144	185	329	0.22%
English Learner Test Variation D	75	184	259	0.18%
Any Accom., Mod., or EL Variation	662	404	1,066	0.73%
No Accom., Mod., or EL Variation	116,511	28,788	145,299	99.27%
Students in Special Education	**Grade 8**	**Grade 9**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	379	102	481	1.11%
C: Dictated responses to a scribe	17	11	28	0.06%
F: Used noninterfering assistive device	15	3	18	0.04%
G: Used braille version of test	12	6	18	0.04%
H: Used large-print version of test	78	30	108	0.25%
J: Tested during more than one day	624	116	740	1.71%
K: Had supervised breaks	2,924	1,531	4,455	10.29%
L: Most beneficial time of day	1,046	321	1,367	3.16%
M: Administered at home or in a hospital	40	25	65	0.15%
N: Used a dictionary	2	1	3	0.01%
O: Examiner presented using MCE or ASL	43	36	79	0.18%
Q: Used a calculator	190	463	653	1.51%
R: Used an arithmetic table	36	44	80	0.18%
S: Used math manipulatives	60	5	65	0.15%
V: Used interfering assistive device	0	0	0	0.00%
W: Used an unlisted modification	47	6	53	0.12%
X: Used an unlisted accommodation	886	286	1,172	2.71%
Y: Leave blank	338	111	449	1.04%
Z: Examiner read test questions aloud	3,024	371	3,395	7.85%
Accom. or Mod. is in Section 504 plan	12	4	16	0.04%
Accom. or Mod. is in IEP	6,796	2,517	9,313	21.52%
English Learner Test Variation A	14	9	23	0.05%
English Learner Test Variation B	15	12	27	0.06%
English Learner Test Variation C	7	12	19	0.04%
English Learner Test Variation D	1	10	11	0.03%
Any Accom., Mod., or EL Variation	7,021	2,671	9,692	22.40%
No Accom., Mod., or EL Variation	22,934	10,648	33,582	77.60%

Special Services Summary for General Mathematics				
English-Only Students	**Grade 8**	**Grade 9**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	292	77	369	0.34%
C: Dictated responses to a scribe	12	10	22	0.02%
F: Used noninterfering assistive device	11	1	12	0.01%
G: Used braille version of test	5	5	10	0.01%
H: Used large-print version of test	55	22	77	0.07%
J: Tested during more than one day	380	85	465	0.43%
K: Had supervised breaks	1,880	1,045	2,925	2.69%
L: Most beneficial time of day	677	222	899	0.83%
M: Administered at home or in a hospital	44	29	73	0.07%
N: Used a dictionary	0	1	1	0.00%
O: Examiner presented using MCE or ASL	31	28	59	0.05%
Q: Used a calculator	146	311	457	0.42%
R: Used an arithmetic table	27	11	38	0.03%
S: Used math manipulatives	32	4	36	0.03%
V: Used interfering assistive device	0	0	0	0.00%
W: Used an unlisted modification	34	4	38	0.03%
X: Used an unlisted accommodation	472	206	678	0.62%
Y: Leave blank	227	73	300	0.28%
Z: Examiner read test questions aloud	1,623	207	1,830	1.68%
Accom. or Mod. is in Section 504 plan	123	19	142	0.13%
Accom. or Mod. is in IEP	4,017	1,671	5,688	5.23%
English Learner Test Variation A	14	3	17	0.02%
English Learner Test Variation B	2	0	2	0.00%
English Learner Test Variation C	2	5	7	0.01%
English Learner Test Variation D	2	12	14	0.01%
Any Accom., Mod., or EL Variation	4,284	1,798	6,082	5.60%
No Accom., Mod., or EL Variation	78,557	24,055	102,612	94.40%
Initially Fluent English Proficient (I-FEP) Students	**Grade 8**	**Grade 9**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	6	2	8	0.10%
C: Dictated responses to a scribe	0	0	0	0.00%
F: Used noninterfering assistive device	1	0	1	0.01%
G: Used braille version of test	2	1	3	0.04%
H: Used large-print version of test	5	1	6	0.08%
J: Tested during more than one day	15	4	19	0.24%
K: Had supervised breaks	68	27	95	1.20%
L: Most beneficial time of day	25	7	32	0.40%
M: Administered at home or in a hospital	3	1	4	0.05%
N: Used a dictionary	0	0	0	0.00%
O: Examiner presented using MCE or ASL	2	0	2	0.03%
Q: Used a calculator	3	6	9	0.11%
R: Used an arithmetic table	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0.00%

Special Services Summary for General Mathematics				
V: Used interfering assistive device	0	0	0	0.00%
W: Used an unlisted modification	2	0	2	0.03%
X: Used an unlisted accommodation	24	6	30	0.38%
Y: Leave blank	14	2	16	0.20%
Z: Examiner read test questions aloud	65	11	76	0.96%
Accom. or Mod. is in Section 504 plan	1	0	1	0.01%
Accom. or Mod. is in IEP	155	50	205	2.58%
English Learner Test Variation A	0	0	0	0.00%
English Learner Test Variation B	2	0	2	0.03%
English Learner Test Variation C	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0.00%
Any Accom., Mod., or EL Variation	162	53	215	2.71%
No Accom., Mod., or EL Variation	6,283	1,437	7,720	97.29%
English Learner (EL) Students	**Grade 8**	**Grade 9**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	73	21	94	0.21%
C: Dictated responses to a scribe	4	2	6	0.01%
F: Used noninterfering assistive device	5	2	7	0.02%
G: Used braille version of test	4	0	4	0.01%
H: Used large-print version of test	18	8	26	0.06%
J: Tested during more than one day	215	28	243	0.54%
K: Had supervised breaks	938	402	1,340	2.98%
L: Most beneficial time of day	315	85	400	0.89%
M: Administered at home or in a hospital	20	4	24	0.05%
N: Used a dictionary	3	0	3	0.01%
O: Examiner presented using MCE or ASL	10	7	17	0.04%
Q: Used a calculator	42	151	193	0.43%
R: Used an arithmetic table	11	32	43	0.10%
S: Used math manipulatives	23	0	23	0.05%
V: Used interfering assistive device	0	0	0	0.00%
W: Used an unlisted modification	18	2	20	0.04%
X: Used an unlisted accommodation	361	70	431	0.96%
Y: Leave blank	114	47	161	0.36%
Z: Examiner read test questions aloud	1,253	151	1,404	3.12%
Accom. or Mod. is in Section 504 plan	13	1	14	0.03%
Accom. or Mod. is in IEP	2,390	725	3,115	6.93%
English Learner Test Variation A	261	168	429	0.95%
English Learner Test Variation B	29	22	51	0.11%
English Learner Test Variation C	144	192	336	0.75%
English Learner Test Variation D	73	182	255	0.57%
Any Accom., Mod., or EL Variation	2,854	1,085	3,939	8.76%
No Accom., Mod., or EL Variation	31,835	9,204	41,039	91.24%

Special Services Summary for General Mathematics				
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 8**	**Grade 9**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	26	5	31	0.11%
C: Dictated responses to a scribe	1	1	2	0.01%
F: Used noninterfering assistive device	0	0	0	0.00%
G: Used braille version of test	1	0	1	0.00%
H: Used large-print version of test	8	0	8	0.03%
J: Tested during more than one day	24	3	27	0.10%
K: Had supervised breaks	132	99	231	0.83%
L: Most beneficial time of day	64	14	78	0.28%
M: Administered at home or in a hospital	4	0	4	0.01%
N: Used a dictionary	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	2	2	0.01%
Q: Used a calculator	7	14	21	0.08%
R: Used an arithmetic table	1	1	2	0.01%
S: Used math manipulatives	6	1	7	0.03%
V: Used interfering assistive device	0	0	0	0.00%
W: Used an unlisted modification	1	0	1	0.00%
X: Used an unlisted accommodation	83	17	100	0.36%
Y: Leave blank	18	6	24	0.09%
Z: Examiner read test questions aloud	142	8	150	0.54%
Accom. or Mod. is in Section 504 plan	7	0	7	0.03%
Accom. or Mod. is in IEP	379	138	517	1.86%
English Learner Test Variation A	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0.00%
English Learner Test Variation C	4	0	4	0.01%
English Learner Test Variation D	1	0	1	0.00%
Any Accom., Mod., or EL Variation	405	143	548	1.97%
No Accom., Mod., or EL Variation	22,555	4,667	27,222	98.03%

Table 2.D.14 Special Services Summary for Algebra I

Special Services Summary for Algebra I							
All Tested	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	11	100	65	57	22	255	0.04%
C: Dictated responses to a scribe	2	23	9	8	2	44	0.01%
F: Used noninterfering assistive device	0	10	12	6	1	29	0.00%
G: Used braille version of test	1	10	9	6	1	27	0.00%
H: Used large-print version of test	9	77	47	25	11	169	0.02%
J: Tested during more than one day	8	134	103	94	63	402	0.06%
K: Had supervised breaks	28	604	1,154	874	437	3,097	0.45%
L: Most beneficial time of day	11	205	218	171	106	711	0.10%
M: Administered at home or in a hospital	3	26	36	35	21	121	0.02%
N: Used a dictionary	0	4	25	15	9	53	0.01%
O: Examiner presented using MCE or ASL	0	5	12	7	6	30	0.00%
Q: Used a calculator	2	25	340	367	285	1,019	0.15%
R: Used an arithmetic table	0	5	16	8	9	38	0.01%
S: Used math manipulatives	1	5	7	5	4	22	0.00%
V: Used interfering assistive device	0	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	7	7	2	1	17	0.00%
X: Used an unlisted accommodation	7	256	270	161	81	775	0.11%
Y: Leave blank	10	107	120	81	41	359	0.05%
Z: Examiner read test questions aloud	6	264	205	148	90	713	0.10%
Accom. or Mod. is in Section 504 plan	16	132	67	53	27	295	0.04%
Accom. or Mod. is in IEP	48	1,117	1,890	1,454	804	5,313	0.78%
English Learner Test Variation A	1	95	432	229	106	863	0.13%
English Learner Test Variation B	0	16	103	51	20	190	0.03%
English Learner Test Variation C	3	135	574	318	166	1,196	0.17%
English Learner Test Variation D	10	182	955	493	224	1,864	0.27%
Any Accom., Mod., or EL Variation	81	1,610	3,423	2,286	1,213	8,613	1.26%
No Accom., Mod., or EL Variation	40,891	266,956	231,407	92,544	43,365	675,163	98.74%
Students Not in Special Education	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	3	21	8	3	1	36	0.01%
C: Dictated responses to a scribe	1	13	2	0	0	16	0.00%
F: Used noninterfering assistive device	0	2	0	0	0	2	0.00%
G: Used braille version of test	0	2	0	0	0	2	0.00%
H: Used large-print version of test	1	16	7	5	3	32	0.00%
J: Tested during more than one day	1	11	3	6	1	22	0.00%
K: Had supervised breaks	3	48	91	51	39	232	0.04%
L: Most beneficial time of day	2	16	18	12	4	52	0.01%
M: Administered at home or in a hospital	2	20	21	17	8	68	0.01%
N: Used a dictionary	0	1	2	2	0	5	0.00%
O: Examiner presented using MCE or ASL	0	0	0	1	0	1	0.00%
Q: Used a calculator	1	7	17	16	18	59	0.01%

Special Services Summary for Algebra I							
R: Used an arithmetic table	0	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	1	0	0	1	0.00%
V: Used interfering assistive device	0	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	2	4	2	0	8	0.00%
X: Used an unlisted accommodation	2	41	27	12	8	90	0.01%
Y: Leave blank	6	26	17	13	5	67	0.01%
Z: Examiner read test questions aloud	1	14	11	6	4	36	0.01%
Accom. or Mod. is in Section 504 plan	14	125	58	46	26	269	0.04%
Accom. or Mod. is in IEP	3	49	103	66	38	259	0.04%
English Learner Test Variation A	1	95	425	222	106	849	0.13%
English Learner Test Variation B	0	13	91	48	19	171	0.03%
English Learner Test Variation C	3	133	570	315	166	1,187	0.18%
English Learner Test Variation D	10	178	883	467	206	1,744	0.27%
Any Accom., Mod., or EL Variation	34	512	1,465	816	377	3,204	0.50%
No Accom., Mod., or EL Variation	40,269	260,035	218,793	84,328	38,763	642,188	99.50%
Students in Special Education	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	8	79	57	53	21	218	0.57%
C: Dictated responses to a scribe	1	10	7	8	2	28	0.07%
F: Used noninterfering assistive device	0	8	12	6	1	27	0.07%
G: Used braille version of test	1	8	9	6	1	25	0.07%
H: Used large-print version of test	8	61	40	19	8	136	0.36%
J: Tested during more than one day	7	122	100	88	62	379	0.99%
K: Had supervised breaks	25	555	1,060	821	397	2,858	7.48%
L: Most beneficial time of day	9	188	200	159	102	658	1.72%
M: Administered at home or in a hospital	1	6	15	18	13	53	0.14%
N: Used a dictionary	0	3	23	13	9	48	0.13%
O: Examiner presented using MCE or ASL	0	5	12	6	6	29	0.08%
Q: Used a calculator	1	18	323	351	267	960	2.51%
R: Used an arithmetic table	0	5	16	8	9	38	0.10%
S: Used math manipulatives	1	5	6	5	4	21	0.05%
V: Used interfering assistive device	0	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	5	3	0	1	9	0.02%
X: Used an unlisted accommodation	5	214	243	149	73	684	1.79%
Y: Leave blank	4	81	103	68	36	292	0.76%
Z: Examiner read test questions aloud	5	249	194	140	85	673	1.76%
Accom. or Mod. is in Section 504 plan	2	7	9	7	1	26	0.07%
Accom. or Mod. is in IEP	45	1,065	1,784	1,384	765	5,043	13.20%
English Learner Test Variation A	0	0	7	7	0	14	0.04%
English Learner Test Variation B	0	3	12	3	1	19	0.05%
English Learner Test Variation C	0	2	4	3	0	9	0.02%
English Learner Test Variation D	0	4	72	26	18	120	0.31%
Any Accom., Mod., or EL Variation	47	1,095	1,955	1,466	835	5,398	14.13%
No Accom., Mod., or EL Variation	523	6,904	12,588	8,200	4,592	32,807	85.87%

Special Services Summary for Algebra I

English-Only Students	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Total	Pct. of Total
B: Marked responses in test booklet	9	68	53	51	20	201	0.05%
C: Dictated responses to a scribe	1	13	9	7	2	32	0.01%
F: Used noninterfering assistive device	0	3	9	5	0	17	0.00%
G: Used braille version of test	0	1	5	2	0	8	0.00%
H: Used large-print version of test	7	63	27	14	7	118	0.03%
J: Tested during more than one day	7	80	69	75	54	285	0.08%
K: Had supervised breaks	24	357	694	625	328	2,028	0.54%
L: Most beneficial time of day	9	108	138	129	85	469	0.12%
M: Administered at home or in a hospital	3	21	26	24	12	86	0.02%
N: Used a dictionary	0	0	13	10	7	30	0.01%
O: Examiner presented using MCE or ASL	0	5	6	4	4	19	0.01%
Q: Used a calculator	1	19	192	249	191	652	0.17%
R: Used an arithmetic table	0	4	7	4	7	22	0.01%
S: Used math manipulatives	0	3	6	3	3	15	0.00%
V: Used interfering assistive device	0	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	3	6	2	0	11	0.00%
X: Used an unlisted accommodation	5	174	162	111	56	508	0.14%
Y: Leave blank	9	75	81	45	27	237	0.06%
Z: Examiner read test questions aloud	6	126	123	105	55	415	0.11%
Accom. or Mod. is in Section 504 plan	13	109	59	48	24	253	0.07%
Accom. or Mod. is in IEP	38	664	1,128	1,005	572	3,407	0.91%
English Learner Test Variation A	0	0	26	2	1	29	0.01%
English Learner Test Variation B	0	1	11	1	1	14	0.00%
English Learner Test Variation C	0	1	30	6	2	39	0.01%
English Learner Test Variation D	0	0	20	3	2	25	0.01%
Any Accom., Mod., or EL Variation	53	808	1,299	1,102	634	3,896	1.04%
No Accom., Mod., or EL Variation	23,562	148,564	126,460	49,846	23,402	371,834	98.96%
Initially Fluent English Proficient (I-FEP) Students	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	4	3	0	0	7	0.01%
C: Dictated responses to a scribe	1	3	0	0	0	4	0.01%
F: Used noninterfering assistive device	0	1	0	0	0	1	0.00%
G: Used braille version of test	0	2	0	0	0	2	0.00%
H: Used large-print version of test	0	4	4	1	0	9	0.02%
J: Tested during more than one day	0	3	2	0	0	5	0.01%
K: Had supervised breaks	0	21	34	30	6	91	0.18%
L: Most beneficial time of day	0	11	4	4	1	20	0.04%
M: Administered at home or in a hospital	0	0	0	1	0	1	0.00%
N: Used a dictionary	0	2	0	0	0	2	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0	0.00%
Q: Used a calculator	1	2	11	10	5	29	0.06%
R: Used an arithmetic table	0	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0	0.00%

Special Services Summary for Algebra I							
V: Used interfering assistive device	0	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	1	0	0	0	1	0.00%
X: Used an unlisted accommodation	0	11	9	3	0	23	0.05%
Y: Leave blank	0	2	2	1	3	8	0.02%
Z: Examiner read test questions aloud	0	4	6	2	1	13	0.03%
Accom. or Mod. is in Section 504 plan	1	5	0	0	1	7	0.01%
Accom. or Mod. is in IEP	0	42	58	42	13	155	0.31%
English Learner Test Variation A	0	0	1	1	0	2	0.00%
English Learner Test Variation B	0	0	0	0	0	0	0.00%
English Learner Test Variation C	0	3	1	1	0	5	0.01%
English Learner Test Variation D	0	3	5	2	0	10	0.02%
Any Accom., Mod., or EL Variation	2	52	69	47	15	185	0.37%
No Accom., Mod., or EL Variation	5,586	22,437	15,302	4,492	2,017	49,834	99.63%
English Learner (EL) Students	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	13	3	3	1	20	0.02%
C: Dictated responses to a scribe	0	3	0	1	0	4	0.00%
F: Used noninterfering assistive device	0	3	1	1	1	6	0.01%
G: Used braille version of test	0	4	1	2	1	8	0.01%
H: Used large-print version of test	0	2	4	6	2	14	0.01%
J: Tested during more than one day	1	36	20	15	9	81	0.08%
K: Had supervised breaks	3	137	285	145	80	650	0.67%
L: Most beneficial time of day	1	51	52	23	16	143	0.15%
M: Administered at home or in a hospital	0	2	3	5	5	15	0.02%
N: Used a dictionary	0	1	11	4	2	18	0.02%
O: Examiner presented using MCE or ASL	0	0	5	3	2	10	0.01%
Q: Used a calculator	0	1	106	85	67	259	0.27%
R: Used an arithmetic table	0	1	7	4	2	14	0.01%
S: Used math manipulatives	0	1	1	2	0	4	0.00%
V: Used interfering assistive device	0	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	1	1	0.00%
X: Used an unlisted accommodation	2	42	74	40	21	179	0.19%
Y: Leave blank	1	20	29	22	9	81	0.08%
Z: Examiner read test questions aloud	0	102	56	33	27	218	0.23%
Accom. or Mod. is in Section 504 plan	1	8	3	4	2	18	0.02%
Accom. or Mod. is in IEP	5	260	482	291	167	1,205	1.25%
English Learner Test Variation A	1	93	400	226	105	825	0.85%
English Learner Test Variation B	0	14	89	50	18	171	0.18%
English Learner Test Variation C	3	123	536	311	162	1,135	1.17%
English Learner Test Variation D	10	169	916	485	221	1,801	1.86%
Any Accom., Mod., or EL Variation	20	569	1,796	1,010	504	3,899	4.03%
No Accom., Mod., or EL Variation	629	23,222	37,782	20,812	10,376	92,821	95.97%

Special Services Summary for Algebra I

Reclassified Fluent English Proficient (R-FEP) Students	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Total	Pct. of Total
B: Marked responses in test booklet	2	15	6	2	0	25	0.02%
C: Dictated responses to a scribe	0	2	0	0	0	2	0.00%
F: Used noninterfering assistive device	0	3	2	0	0	5	0.00%
G: Used braille version of test	1	3	3	2	0	9	0.01%
H: Used large-print version of test	2	8	12	3	2	27	0.02%
J: Tested during more than one day	0	15	11	4	0	30	0.02%
K: Had supervised breaks	1	86	139	72	22	320	0.20%
L: Most beneficial time of day	1	34	23	14	4	76	0.05%
M: Administered at home or in a hospital	0	3	7	4	4	18	0.01%
N: Used a dictionary	0	1	1	1	0	3	0.00%
O: Examiner presented using MCE or ASL	0	0	1	0	0	1	0.00%
Q: Used a calculator	0	3	29	22	21	75	0.05%
R: Used an arithmetic table	0	0	2	0	0	2	0.00%
S: Used math manipulatives	1	0	0	0	1	2	0.00%
V: Used interfering assistive device	0	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	3	1	0	0	4	0.00%
X: Used an unlisted accommodation	0	26	25	6	4	61	0.04%
Y: Leave blank	0	10	8	13	2	33	0.02%
Z: Examiner read test questions aloud	0	31	19	8	6	64	0.04%
Accom. or Mod. is in Section 504 plan	1	8	5	1	0	15	0.01%
Accom. or Mod. is in IEP	5	146	218	110	51	530	0.33%
English Learner Test Variation A	0	0	3	0	0	3	0.00%
English Learner Test Variation B	0	1	3	0	0	4	0.00%
English Learner Test Variation C	0	3	4	0	1	8	0.00%
English Learner Test Variation D	0	4	9	2	0	15	0.01%
Any Accom., Mod., or EL Variation	6	165	247	119	57	594	0.37%
No Accom., Mod., or EL Variation	11,097	72,469	51,456	17,151	7,449	159,622	99.63%

Table 2.D.15 Special Services Summary for Geometry

Special Services Summary for Geometry						
All Tested	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	7	22	41	29	99	0.02%
C: Dictated responses to a scribe	0	7	8	6	21	0.01%
F: Used noninterfering assistive device	0	3	6	4	13	0.00%
G: Used braille version of test	0	4	9	3	16	0.00%
H: Used large-print version of test	2	17	34	17	70	0.02%
J: Tested during more than one day	2	10	36	33	81	0.02%
K: Had supervised breaks	6	87	517	412	1,022	0.25%
L: Most beneficial time of day	6	20	85	63	174	0.04%
M: Administered at home or in a hospital	1	17	25	19	62	0.02%
N: Used a dictionary	0	1	16	15	32	0.01%
O: Examiner presented using MCE or ASL	1	1	6	6	14	0.00%
Q: Used a calculator	0	53	186	208	447	0.11%
R: Used an arithmetic table	0	0	6	7	13	0.00%
S: Used math manipulatives	0	0	6	3	9	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	1	3	0	4	0.00%
X: Used an unlisted accommodation	7	21	102	88	218	0.05%
Y: Leave blank	3	26	40	35	104	0.03%
Z: Examiner read test questions aloud	0	17	101	68	186	0.05%
Accom. or Mod. is in Section 504 plan	13	28	59	30	130	0.03%
Accom. or Mod. is in IEP	15	199	870	704	1,788	0.44%
English Learner Test Variation A	1	73	156	110	340	0.08%
English Learner Test Variation B	0	7	34	15	56	0.01%
English Learner Test Variation C	2	105	208	150	465	0.11%
English Learner Test Variation D	1	148	332	233	714	0.18%
Any Accom., Mod., or EL Variation	32	468	1,465	1,138	3,103	0.76%
No Accom., Mod., or EL Variation	30,935	145,163	151,754	75,372	403,224	99.24%
Students Not in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	4	2	4	5	15	0.00%
C: Dictated responses to a scribe	0	2	0	2	4	0.00%
F: Used noninterfering assistive device	0	1	0	0	1	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	1	2	3	3	9	0.00%
J: Tested during more than one day	1	0	1	3	5	0.00%
K: Had supervised breaks	1	8	35	22	66	0.02%
L: Most beneficial time of day	3	2	7	9	21	0.01%
M: Administered at home or in a hospital	0	15	17	12	44	0.01%
N: Used a dictionary	0	1	1	0	2	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	7	11	8	26	0.01%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%

Special Services Summary for Geometry						
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	1	2	0	3	0.00%
X: Used an unlisted accommodation	6	4	16	7	33	0.01%
Y: Leave blank	3	9	12	4	28	0.01%
Z: Examiner read test questions aloud	0	4	4	8	16	0.00%
Accom. or Mod. is in Section 504 plan	13	26	53	28	120	0.03%
Accom. or Mod. is in IEP	3	9	33	20	65	0.02%
English Learner Test Variation A	1	73	156	109	339	0.09%
English Learner Test Variation B	0	6	27	15	48	0.01%
English Learner Test Variation C	2	105	207	150	464	0.12%
English Learner Test Variation D	1	143	315	223	682	0.17%
Any Accom., Mod., or EL Variation	20	263	584	399	1,266	0.32%
No Accom., Mod., or EL Variation	30,653	142,901	145,559	70,879	389,992	99.68%
Students in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	3	20	37	24	84	0.56%
C: Dictated responses to a scribe	0	5	8	4	17	0.11%
F: Used noninterfering assistive device	0	2	6	4	12	0.08%
G: Used braille version of test	0	4	9	3	16	0.11%
H: Used large-print version of test	1	15	31	14	61	0.41%
J: Tested during more than one day	1	10	35	30	76	0.50%
K: Had supervised breaks	5	79	482	390	956	6.35%
L: Most beneficial time of day	3	18	78	54	153	1.02%
M: Administered at home or in a hospital	1	2	8	7	18	0.12%
N: Used a dictionary	0	0	15	15	30	0.20%
O: Examiner presented using MCE or ASL	1	1	6	6	14	0.09%
Q: Used a calculator	0	46	175	200	421	2.80%
R: Used an arithmetic table	0	0	6	7	13	0.09%
S: Used math manipulatives	0	0	6	3	9	0.06%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	1	0	1	0.01%
X: Used an unlisted accommodation	1	17	86	81	185	1.23%
Y: Leave blank	0	17	28	31	76	0.50%
Z: Examiner read test questions aloud	0	13	97	60	170	1.13%
Accom. or Mod. is in Section 504 plan	0	2	6	2	10	0.07%
Accom. or Mod. is in IEP	12	190	837	684	1,723	11.44%
English Learner Test Variation A	0	0	0	1	1	0.01%
English Learner Test Variation B	0	1	7	0	8	0.05%
English Learner Test Variation C	0	0	1	0	1	0.01%
English Learner Test Variation D	0	5	17	10	32	0.21%
Any Accom., Mod., or EL Variation	12	205	881	739	1,837	12.20%
No Accom., Mod., or EL Variation	282	2,261	6,189	4,487	13,219	87.80%

Special Services Summary for Geometry						
English-Only Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	5	19	28	23	75	0.03%
C: Dictated responses to a scribe	0	7	6	3	16	0.01%
F: Used noninterfering assistive device	0	2	3	3	8	0.00%
G: Used braille version of test	0	4	3	1	8	0.00%
H: Used large-print version of test	1	12	22	12	47	0.02%
J: Tested during more than one day	1	9	27	28	65	0.03%
K: Had supervised breaks	4	56	322	285	667	0.29%
L: Most beneficial time of day	3	17	52	43	115	0.05%
M: Administered at home or in a hospital	1	15	18	11	45	0.02%
N: Used a dictionary	0	1	8	8	17	0.01%
O: Examiner presented using MCE or ASL	0	0	2	4	6	0.00%
Q: Used a calculator	0	25	105	148	278	0.12%
R: Used an arithmetic table	0	0	3	1	4	0.00%
S: Used math manipulatives	0	0	2	2	4	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	1	3	0	4	0.00%
X: Used an unlisted accommodation	5	15	62	54	136	0.06%
Y: Leave blank	2	22	25	20	69	0.03%
Z: Examiner read test questions aloud	0	11	64	39	114	0.05%
Accom. or Mod. is in Section 504 plan	11	23	55	25	114	0.05%
Accom. or Mod. is in IEP	8	126	519	477	1,130	0.50%
English Learner Test Variation A	0	0	1	2	3	0.00%
English Learner Test Variation B	0	1	0	0	1	0.00%
English Learner Test Variation C	0	0	2	2	4	0.00%
English Learner Test Variation D	0	1	0	2	3	0.00%
Any Accom., Mod., or EL Variation	19	168	599	538	1,324	0.58%
No Accom., Mod., or EL Variation	17,926	83,782	83,689	39,605	225,002	99.42%
Initially Fluent English Proficient (I-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	1	2	3	1	7	0.02%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	1	0	1	0.00%
H: Used large-print version of test	1	2	3	1	7	0.02%
J: Tested during more than one day	1	0	0	0	1	0.00%
K: Had supervised breaks	1	3	19	15	38	0.11%
L: Most beneficial time of day	1	1	3	1	6	0.02%
M: Administered at home or in a hospital	0	0	1	1	2	0.01%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	3	6	6	15	0.04%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%

Special Services Summary for Geometry						
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	1	1	1	5	8	0.02%
Y: Leave blank	1	0	1	1	3	0.01%
Z: Examiner read test questions aloud	0	0	4	6	10	0.03%
Accom. or Mod. is in Section 504 plan	0	2	0	0	2	0.01%
Accom. or Mod. is in IEP	3	6	33	25	67	0.20%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	1	0	0	1	0.00%
English Learner Test Variation D	0	5	2	0	7	0.02%
Any Accom., Mod., or EL Variation	3	15	35	27	80	0.24%
No Accom., Mod., or EL Variation	4,785	14,731	10,049	4,291	33,856	99.76%
English Learner (EL) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	5	3	8	0.02%
C: Dictated responses to a scribe	0	0	1	3	4	0.01%
F: Used noninterfering assistive device	0	0	2	0	2	0.01%
G: Used braille version of test	0	0	1	1	2	0.01%
H: Used large-print version of test	0	1	2	3	6	0.02%
J: Tested during more than one day	0	1	9	5	15	0.04%
K: Had supervised breaks	0	16	130	79	225	0.58%
L: Most beneficial time of day	1	1	26	16	44	0.11%
M: Administered at home or in a hospital	0	1	4	5	10	0.03%
N: Used a dictionary	0	0	8	7	15	0.04%
O: Examiner presented using MCE or ASL	1	1	4	2	8	0.02%
Q: Used a calculator	0	17	53	43	113	0.29%
R: Used an arithmetic table	0	0	2	6	8	0.02%
S: Used math manipulatives	0	0	4	1	5	0.01%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	5	28	20	53	0.14%
Y: Leave blank	0	3	10	10	23	0.06%
Z: Examiner read test questions aloud	0	3	28	20	51	0.13%
Accom. or Mod. is in Section 504 plan	0	2	1	3	6	0.02%
Accom. or Mod. is in IEP	2	44	227	147	420	1.09%
English Learner Test Variation A	1	68	153	108	330	0.85%
English Learner Test Variation B	0	5	32	15	52	0.13%
English Learner Test Variation C	2	103	203	148	456	1.18%
English Learner Test Variation D	1	137	327	231	696	1.80%
Any Accom., Mod., or EL Variation	6	251	726	513	1,496	3.88%
No Accom., Mod., or EL Variation	208	6,592	17,890	12,412	37,102	96.12%

Special Services Summary for Geometry						
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	1	1	5	2	9	0.01%
C: Dictated responses to a scribe	0	0	1	0	1	0.00%
F: Used noninterfering assistive device	0	1	1	1	3	0.00%
G: Used braille version of test	0	0	4	1	5	0.00%
H: Used large-print version of test	0	2	7	1	10	0.01%
J: Tested during more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	1	12	45	33	91	0.09%
L: Most beneficial time of day	1	1	4	3	9	0.01%
M: Administered at home or in a hospital	0	1	2	2	5	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	8	22	11	41	0.04%
R: Used an arithmetic table	0	0	1	0	1	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	1	0	11	9	21	0.02%
Y: Leave blank	0	1	4	4	9	0.01%
Z: Examiner read test questions aloud	0	3	5	3	11	0.01%
Accom. or Mod. is in Section 504 plan	2	1	3	2	8	0.01%
Accom. or Mod. is in IEP	2	23	90	55	170	0.16%
English Learner Test Variation A	0	5	2	0	7	0.01%
English Learner Test Variation B	0	1	2	0	3	0.00%
English Learner Test Variation C	0	1	2	0	3	0.00%
English Learner Test Variation D	0	5	2	0	7	0.01%
Any Accom., Mod., or EL Variation	4	34	102	60	200	0.19%
No Accom., Mod., or EL Variation	8,002	39,939	39,942	18,955	106,838	99.81%

Table 2.D.16 Special Services Summary for Algebra II

Special Services Summary for Algebra II						
All Tested	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	8	20	35	63	0.02%
C: Dictated responses to a scribe	0	0	5	6	11	0.00%
F: Used noninterfering assistive device	0	0	4	5	9	0.00%
G: Used braille version of test	0	0	5	7	12	0.00%
H: Used large-print version of test	0	5	20	17	42	0.01%
J: Tested during more than one day	1	1	10	22	34	0.01%
K: Had supervised breaks	1	43	215	416	675	0.23%
L: Most beneficial time of day	0	5	19	41	65	0.02%
M: Administered at home or in a hospital	1	1	5	11	18	0.01%
N: Used a dictionary	0	1	3	10	14	0.00%
O: Examiner presented using MCE or ASL	0	0	5	26	31	0.01%
Q: Used a calculator	0	8	41	151	200	0.07%
R: Used an arithmetic table	0	0	3	10	13	0.00%
S: Used math manipulatives	0	1	2	4	7	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	2	2	0.00%
X: Used an unlisted accommodation	0	15	81	76	172	0.06%
Y: Leave blank	0	4	27	52	83	0.03%
Z: Examiner read test questions aloud	0	16	20	72	108	0.04%
Accom. or Mod. is in Section 504 plan	0	8	32	30	70	0.02%
Accom. or Mod. is in IEP	1	64	358	715	1,138	0.39%
English Learner Test Variation A	0	15	34	41	90	0.03%
English Learner Test Variation B	0	2	14	29	45	0.02%
English Learner Test Variation C	0	31	88	124	243	0.08%
English Learner Test Variation D	0	32	141	198	371	0.13%
Any Accom., Mod., or EL Variation	2	130	609	1,072	1,813	0.62%
No Accom., Mod., or EL Variation	1,003	36,344	136,158	119,287	292,792	99.38%
Students Not in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	3	2	5	10	0.00%
C: Dictated responses to a scribe	0	0	1	0	1	0.00%
F: Used noninterfering assistive device	0	0	2	1	3	0.00%
G: Used braille version of test	0	0	1	0	1	0.00%
H: Used large-print version of test	0	0	2	1	3	0.00%
J: Tested during more than one day	0	0	2	1	3	0.00%
K: Had supervised breaks	0	4	10	25	39	0.01%
L: Most beneficial time of day	0	1	2	3	6	0.00%
M: Administered at home or in a hospital	1	1	5	8	15	0.01%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	1	3	5	9	0.00%
R: Used an arithmetic table	0	0	1	0	1	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%

Special Services Summary for Algebra II						
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	1	1	0.00%
X: Used an unlisted accommodation	0	3	14	8	25	0.01%
Y: Leave blank	0	1	11	7	19	0.01%
Z: Examiner read test questions aloud	0	1	2	2	5	0.00%
Accom. or Mod. is in Section 504 plan	0	8	30	29	67	0.02%
Accom. or Mod. is in IEP	0	5	12	21	38	0.01%
English Learner Test Variation A	0	15	34	41	90	0.03%
English Learner Test Variation B	0	2	13	20	35	0.01%
English Learner Test Variation C	0	31	88	124	243	0.08%
English Learner Test Variation D	0	32	138	183	353	0.12%
Any Accom., Mod., or EL Variation	1	67	254	334	656	0.23%
No Accom., Mod., or EL Variation	994	36,028	133,886	114,891	285,799	99.77%
Students in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	5	18	30	53	0.65%
C: Dictated responses to a scribe	0	0	4	6	10	0.12%
F: Used noninterfering assistive device	0	0	2	4	6	0.07%
G: Used braille version of test	0	0	4	7	11	0.14%
H: Used large-print version of test	0	5	18	16	39	0.48%
J: Tested during more than one day	1	1	7	21	30	0.37%
K: Had supervised breaks	1	39	202	390	632	7.77%
L: Most beneficial time of day	0	4	17	38	59	0.73%
M: Administered at home or in a hospital	0	0	0	3	3	0.04%
N: Used a dictionary	0	1	3	10	14	0.17%
O: Examiner presented using MCE or ASL	0	0	5	26	31	0.38%
Q: Used a calculator	0	7	38	146	191	2.35%
R: Used an arithmetic table	0	0	2	10	12	0.15%
S: Used math manipulatives	0	1	2	4	7	0.09%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	1	1	0.01%
X: Used an unlisted accommodation	0	12	67	68	147	1.81%
Y: Leave blank	0	3	16	45	64	0.79%
Z: Examiner read test questions aloud	0	15	18	70	103	1.27%
Accom. or Mod. is in Section 504 plan	0	0	2	1	3	0.04%
Accom. or Mod. is in IEP	1	59	342	693	1,095	13.46%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	1	9	10	0.12%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	3	15	18	0.22%
Any Accom., Mod., or EL Variation	1	63	351	737	1,152	14.16%
No Accom., Mod., or EL Variation	9	315	2,267	4,392	6,983	85.84%

Special Services Summary for Algebra II						
English-Only Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	5	15	20	40	0.02%
C: Dictated responses to a scribe	0	0	5	4	9	0.01%
F: Used noninterfering assistive device	0	0	1	3	4	0.00%
G: Used braille version of test	0	0	1	3	4	0.00%
H: Used large-print version of test	0	3	11	11	25	0.02%
J: Tested during more than one day	1	0	6	12	19	0.01%
K: Had supervised breaks	1	17	121	235	374	0.23%
L: Most beneficial time of day	0	3	16	22	41	0.03%
M: Administered at home or in a hospital	0	1	2	5	8	0.00%
N: Used a dictionary	0	0	2	3	5	0.00%
O: Examiner presented using MCE or ASL	0	0	3	11	14	0.01%
Q: Used a calculator	0	2	23	72	97	0.06%
R: Used an arithmetic table	0	0	1	5	6	0.00%
S: Used math manipulatives	0	1	0	2	3	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	2	2	0.00%
X: Used an unlisted accommodation	0	11	44	42	97	0.06%
Y: Leave blank	0	1	18	30	49	0.03%
Z: Examiner read test questions aloud	0	9	12	49	70	0.04%
Accom. or Mod. is in Section 504 plan	0	8	28	24	60	0.04%
Accom. or Mod. is in IEP	1	29	194	380	604	0.37%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	1	1	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	1	1	0.00%
Any Accom., Mod., or EL Variation	1	38	232	430	701	0.43%
No Accom., Mod., or EL Variation	555	19,864	76,485	64,932	161,836	99.57%
Initially Fluent English Proficient (I-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	1	2	3	0.01%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used Braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	1	2	3	0.01%
J: Tested during more than one day	0	0	0	2	2	0.01%
K: Had supervised breaks	0	2	8	11	21	0.08%
L: Most beneficial time of day	0	0	0	3	3	0.01%
M: Administered at home or in a hospital	0	0	0	1	1	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	1	0	1	0.00%
Q: Used a calculator	0	0	2	2	4	0.01%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%

Special Services Summary for Algebra II						
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	1	4	3	8	0.03%
Y: Leave blank	0	0	1	0	1	0.00%
Z: Examiner read test questions aloud	0	0	1	1	2	0.01%
Accom. or Mod. is in Section 504 plan	0	0	1	2	3	0.01%
Accom. or Mod. is in IEP	0	2	17	18	37	0.13%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	6	6	0.02%
English Learner Test Variation D	0	1	1	2	4	0.01%
Any Accom., Mod., or EL Variation	0	4	19	27	50	0.18%
No Accom., Mod., or EL Variation	224	5,729	13,386	8,115	27,454	99.82%
English Learner (EL) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	1	0	3	4	0.02%
C: Dictated responses to a scribe	0	0	0	1	1	0.01%
F: Used noninterfering assistive device	0	0	0	1	1	0.01%
G: Used braille version of test	0	0	0	1	1	0.01%
H: Used large-print version of test	0	0	1	2	3	0.02%
J: Tested during more than one day	0	0	2	6	8	0.04%
K: Had supervised breaks	0	17	61	117	195	1.06%
L: Most beneficial time of day	0	1	1	9	11	0.06%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	1	1	6	8	0.04%
O: Examiner presented using MCE or ASL	0	0	1	15	16	0.09%
Q: Used a calculator	0	4	7	48	59	0.32%
R: Used an arithmetic table	0	0	1	2	3	0.02%
S: Used math manipulatives	0	0	2	2	4	0.02%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	2	23	21	46	0.25%
Y: Leave blank	0	3	5	12	20	0.11%
Z: Examiner read test questions aloud	0	5	6	17	28	0.15%
Accom. or Mod. is in Section 504 plan	0	0	0	1	1	0.01%
Accom. or Mod. is in IEP	0	21	91	208	320	1.75%
English Learner Test Variation A	0	15	33	41	89	0.49%
English Learner Test Variation B	0	2	14	27	43	0.23%
English Learner Test Variation C	0	31	88	118	237	1.29%
English Learner Test Variation D	0	31	135	192	358	1.95%
Any Accom., Mod., or EL Variation	0	75	290	494	859	4.69%
No Accom., Mod., or EL Variation	14	906	5,685	10,861	17,466	95.31%

Special Services Summary for Algebra II						
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	2	4	10	16	0.02%
C: Dictated responses to a scribe	0	0	0	1	1	0.00%
F: Used noninterfering assistive device	0	0	3	1	4	0.00%
G: Used braille version of test	0	0	4	3	7	0.01%
H: Used large-print version of test	0	2	7	2	11	0.01%
J: Tested during more than one day	0	1	2	2	5	0.01%
K: Had supervised breaks	0	7	25	53	85	0.10%
L: Most beneficial time of day	0	1	2	7	10	0.01%
M: Administered at home or in a hospital	1	0	3	5	9	0.01%
N: Used a dictionary	0	0	0	1	1	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	2	8	28	38	0.04%
R: Used an arithmetic table	0	0	1	3	4	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	1	10	10	21	0.02%
Y: Leave blank	0	0	3	10	13	0.02%
Z: Examiner read test questions aloud	0	2	0	5	7	0.01%
Accom. or Mod. is in Section 504 plan	0	0	3	3	6	0.01%
Accom. or Mod. is in IEP	0	12	54	108	174	0.20%
English Learner Test Variation A	0	0	1	0	1	0.00%
English Learner Test Variation B	0	0	0	1	1	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	4	2	6	0.01%
Any Accom., Mod., or EL Variation	1	13	65	119	198	0.23%
No Accom., Mod., or EL Variation	210	9,821	40,503	35,249	85,783	99.77%

Table 2.D.17 Special Services Summary for Summative High School Mathematics

Special Services Summary for Summative High School Mathematics					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	3	17	20	0.01%
C: Dictated responses to a scribe	0	0	2	2	0.00%
F: Used noninterfering assistive device	0	0	2	2	0.00%
G: Used braille version of test	0	0	1	1	0.00%
H: Used large-print version of test	0	4	14	18	0.01%
J: Tested during more than one day	1	2	7	10	0.01%
K: Had supervised breaks	3	5	60	68	0.04%
L: Most beneficial time of day	0	2	10	12	0.01%
M: Administered at home or in a hospital	0	0	7	7	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	1	2	3	0.00%
Q: Used a calculator	11	0	13	24	0.01%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	2	23	25	0.02%
Y: Leave blank	0	1	13	14	0.01%
Z: Examiner read test questions aloud	0	0	8	8	0.00%
Accom. or Mod. is in Section 504 plan	0	1	22	23	0.01%
Accom. or Mod. is in IEP	10	13	105	128	0.08%
English Learner Test Variation A	1	3	8	12	0.01%
English Learner Test Variation B	0	1	1	2	0.00%
English Learner Test Variation C	2	17	53	72	0.04%
English Learner Test Variation D	0	12	45	57	0.04%
Any Accom., Mod., or EL Variation	14	39	235	288	0.18%
No Accom., Mod., or EL Variation	1,000	27,133	132,410	160,543	99.82%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	1	1	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	1	1	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	2	2	0.00%
J: Tested during more than one day	0	0	3	3	0.00%
K: Had supervised breaks	0	0	6	6	0.00%
L: Most beneficial time of day	0	0	1	1	0.00%
M: Administered at home or in a hospital	0	0	7	7	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Summative High School Mathematics					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	8	8	0.01%
Y: Leave blank	0	1	7	8	0.01%
Z: Examiner read test questions aloud	0	0	1	1	0.00%
Accom. or Mod. is in Section 504 plan	0	1	21	22	0.01%
Accom. or Mod. is in IEP	0	0	4	4	0.00%
English Learner Test Variation A	1	3	8	12	0.01%
English Learner Test Variation B	0	1	1	2	0.00%
English Learner Test Variation C	2	17	53	72	0.05%
English Learner Test Variation D	0	12	44	56	0.04%
Any Accom., Mod., or EL Variation	2	26	125	153	0.10%
No Accom., Mod., or EL Variation	987	26,970	131,220	159,177	99.90%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	3	16	19	1.27%
C: Dictated responses to a scribe	0	0	2	2	0.13%
F: Used noninterfering assistive device	0	0	1	1	0.07%
G: Used braille version of test	0	0	1	1	0.07%
H: Used large-print version of test	0	4	12	16	1.07%
J: Tested during more than one day	1	2	4	7	0.47%
K: Had supervised breaks	3	5	54	62	4.13%
L: Most beneficial time of day	0	2	9	11	0.73%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	1	2	3	0.20%
Q: Used a calculator	11	0	13	24	1.60%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	2	15	17	1.13%
Y: Leave blank	0	0	6	6	0.40%
Z: Examiner read test questions aloud	0	0	7	7	0.47%
Accom. or Mod. is in Section 504 plan	0	0	1	1	0.07%
Accom. or Mod. is in IEP	10	13	101	124	8.26%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	1	1	0.07%
Any Accom., Mod., or EL Variation	12	13	110	135	8.99%
No Accom., Mod., or EL Variation	13	163	1,190	1,366	91.01%

Special Services Summary for Summative High School Mathematics					
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	2	9	11	0.01%
C: Dictated responses to a scribe	0	0	2	2	0.00%
F: Used noninterfering assistive device	0	0	2	2	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	1	7	8	0.01%
J: Tested during more than one day	1	1	6	8	0.01%
K: Had supervised breaks	1	3	31	35	0.04%
L: Most beneficial time of day	0	1	7	8	0.01%
M: Administered at home or in a hospital	0	0	6	6	0.01%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	1	1	2	0.00%
Q: Used a calculator	2	0	10	12	0.01%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	2	16	18	0.02%
Y: Leave blank	0	1	11	12	0.01%
Z: Examiner read test questions aloud	0	0	7	7	0.01%
Accom. or Mod. is in Section 504 plan	0	1	19	20	0.02%
Accom. or Mod. is in IEP	3	8	64	75	0.08%
English Learner Test Variation A	0	2	0	2	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	1	1	2	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	3	11	96	110	0.12%
No Accom., Mod., or EL Variation	485	15,032	75,238	90,755	99.88%
Initially Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	2	2	0.01%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	1	1	0.00%
H: Used large-print version of test	0	0	2	2	0.01%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	4	4	0.02%
L: Most beneficial time of day	0	0	1	1	0.00%
M: Administered at home or in a hospital	0	0	1	1	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Summative High School Mathematics					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	1	1	0.00%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	1	1	0.00%
Accom. or Mod. is in IEP	0	0	4	4	0.02%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	1	0	1	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	1	8	9	0.04%
No Accom., Mod., or EL Variation	301	4,733	15,042	20,076	99.96%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	2	1	8	11	0.32%
L: Most beneficial time of day	0	0	1	1	0.03%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	1	1	0.03%
Q: Used a calculator	9	0	3	12	0.35%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	4	4	0.12%
Y: Leave blank	0	0	1	1	0.03%
Z: Examiner read test questions aloud	0	0	1	1	0.03%
Accom. or Mod. is in Section 504 plan	0	0	1	1	0.03%
Accom. or Mod. is in IEP	7	1	14	22	0.64%
English Learner Test Variation A	1	1	7	9	0.26%
English Learner Test Variation B	0	1	1	2	0.06%
English Learner Test Variation C	2	15	51	68	1.99%
English Learner Test Variation D	0	12	44	56	1.64%
Any Accom., Mod., or EL Variation	11	23	105	139	4.06%
No Accom., Mod., or EL Variation	23	321	2,939	3,283	95.94%

Special Services Summary for Summative High School Mathematics					
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	1	6	7	0.02%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	3	5	8	0.02%
J: Tested during more than one day	0	1	1	2	0.00%
K: Had supervised breaks	0	1	17	18	0.04%
L: Most beneficial time of day	0	1	1	2	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	1	1	0.00%
Y: Leave blank	0	0	1	1	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	4	23	27	0.06%
English Learner Test Variation A	0	0	1	1	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	1	1	0.00%
English Learner Test Variation D	0	0	1	1	0.00%
Any Accom., Mod., or EL Variation	0	4	25	29	0.06%
No Accom., Mod., or EL Variation	189	7,032	39,119	46,340	99.94%

Table 2.D.18 Special Services Summary for Integrated Mathematics 1

Special Services Summary for Integrated Mathematics 1						
All Tested	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	1	2	3	0.02%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	4	3	7	0.05%
J: Tested during more than one day	0	7	2	2	11	0.08%
K: Had supervised breaks	0	11	103	89	203	1.50%
L: Most beneficial time of day	0	0	8	7	15	0.11%
M: Administered at home or in a hospital	0	0	1	2	3	0.02%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	1	0	0	1	0.01%
Q: Used a calculator	0	1	4	29	34	0.25%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	1	1	0.01%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	2	19	5	26	0.19%
Y: Leave blank	0	0	0	2	2	0.01%
Z: Examiner read test questions aloud	0	4	9	5	18	0.13%
Accom. or Mod. is in Section 504 plan	0	0	1	3	4	0.03%
Accom. or Mod. is in IEP	0	20	124	118	262	1.93%
English Learner Test Variation A	0	0	14	8	22	0.16%
English Learner Test Variation B	0	0	13	2	15	0.11%
English Learner Test Variation C	0	0	12	7	19	0.14%
English Learner Test Variation D	0	2	22	18	42	0.31%
Any Accom., Mod., or EL Variation	0	26	173	158	357	2.63%
No Accom., Mod., or EL Variation	95	1,060	6,274	5,786	13,215	97.37%
Students Not in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	3	3	6	0.05%
L: Most beneficial time of day	0	0	1	3	4	0.03%
M: Administered at home or in a hospital	0	0	1	1	2	0.02%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	1	0	0	1	0.01%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%

Special Services Summary for Integrated Mathematics 1						
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	1	3	4	0.03%
Accom. or Mod. is in IEP	0	1	2	0	3	0.03%
English Learner Test Variation A	0	0	13	8	21	0.18%
English Learner Test Variation B	0	0	8	2	10	0.08%
English Learner Test Variation C	0	0	12	7	19	0.16%
English Learner Test Variation D	0	2	21	16	39	0.33%
Any Accom., Mod., or EL Variation	0	3	39	29	71	0.59%
No Accom., Mod., or EL Variation	90	1,019	5,636	5,127	11,872	99.41%
Students in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	1	2	3	0.18%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	4	3	7	0.43%
J: Tested during more than one day	0	7	2	2	11	0.68%
K: Had supervised breaks	0	11	100	85	196	12.07%
L: Most beneficial time of day	0	0	7	4	11	0.68%
M: Administered at home or in a hospital	0	0	0	1	1	0.06%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	1	0	0	1	0.06%
Q: Used a calculator	0	0	4	29	33	2.03%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	1	1	0.06%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	2	19	5	26	1.60%
Y: Leave blank	0	0	0	2	2	0.12%
Z: Examiner read test questions aloud	0	4	9	5	18	1.11%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	19	122	117	258	15.89%
English Learner Test Variation A	0	0	1	0	1	0.06%
English Learner Test Variation B	0	0	5	0	5	0.31%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	1	2	3	0.18%
Any Accom., Mod., or EL Variation	0	23	134	128	285	17.55%
No Accom., Mod., or EL Variation	5	41	636	657	1,339	82.45%

Special Services Summary for Integrated Mathematics 1						
English-Only Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	1	1	2	0.03%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	4	3	7	0.09%
J: Tested during more than one day	0	3	1	2	6	0.08%
K: Had supervised breaks	0	6	49	53	108	1.39%
L: Most beneficial time of day	0	0	1	7	8	0.10%
M: Administered at home or in a hospital	0	0	1	2	3	0.04%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	1	0	0	1	0.01%
Q: Used a calculator	0	1	4	15	20	0.26%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	1	1	0.01%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	1	3	5	9	0.12%
Y: Leave blank	0	0	0	1	1	0.01%
Z: Examiner read test questions aloud	0	3	9	3	15	0.19%
Accom. or Mod. is in Section 504 plan	0	0	1	3	4	0.05%
Accom. or Mod. is in IEP	0	11	63	70	144	1.86%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	1	7	0	8	0.10%
Any Accom., Mod., or EL Variation	0	14	72	78	164	2.11%
No Accom., Mod., or EL Variation	58	635	3,530	3,371	7,594	97.89%
Initially Fluent English Proficient (I-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	1	4	5	0.71%
L: Most beneficial time of day	0	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%

Special Services Summary for Integrated Mathematics 1						
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	1	1	0.14%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	1	4	5	0.71%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	1	4	5	0.71%
No Accom., Mod., or EL Variation	10	67	296	324	697	99.29%
English Learner (EL) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	4	0	0	4	0.17%
K: Had supervised breaks	0	4	36	19	59	2.52%
L: Most beneficial time of day	0	0	5	0	5	0.21%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	10	10	0.43%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	1	13	0	14	0.60%
Y: Leave blank	0	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	1	0	1	2	0.09%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	8	42	27	77	3.29%
English Learner Test Variation A	0	0	13	8	21	0.90%
English Learner Test Variation B	0	0	13	2	15	0.64%
English Learner Test Variation C	0	0	12	6	18	0.77%
English Learner Test Variation D	0	1	11	17	29	1.24%
Any Accom., Mod., or EL Variation	0	11	74	56	141	6.02%
No Accom., Mod., or EL Variation	14	118	1,096	974	2,202	93.98%

Special Services Summary for Integrated Mathematics 1						
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	1	1	0.04%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	0	1	0	1	0.04%
K: Had supervised breaks	0	1	16	13	30	1.09%
L: Most beneficial time of day	0	0	2	0	2	0.07%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	4	4	0.15%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	3	0	3	0.11%
Y: Leave blank	0	0	0	1	1	0.04%
Z: Examiner read test questions aloud	0	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	1	17	17	35	1.27%
English Learner Test Variation A	0	0	1	0	1	0.04%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	1	1	0.04%
English Learner Test Variation D	0	0	4	1	5	0.18%
Any Accom., Mod., or EL Variation	0	1	25	20	46	1.67%
No Accom., Mod., or EL Variation	13	239	1,345	1,113	2,710	98.33%

Table 2.D.19 Special Services Summary for Integrated Mathematics 2

Special Services Summary for Integrated Mathematics 2						
All Tested	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	1	1	0.02%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	1	1	0.02%
J: Tested during more than one day	0	0	0	1	1	0.02%
K: Had supervised breaks	0	1	24	47	72	1.45%
L: Most beneficial time of day	0	0	1	2	3	0.06%
M: Administered at home or in a hospital	0	0	0	2	2	0.04%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	1	5	6	0.12%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0	0.00%
Y: Leave blank	0	0	1	2	3	0.06%
Z: Examiner read test questions aloud	0	0	2	7	9	0.18%
Accom. or Mod. is in Section 504 plan	0	0	0	1	1	0.02%
Accom. or Mod. is in IEP	0	1	26	58	85	1.71%
English Learner Test Variation A	0	0	0	2	2	0.04%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	1	1	0.02%
English Learner Test Variation D	0	0	0	1	1	0.02%
Any Accom., Mod., or EL Variation	0	1	26	64	91	1.83%
No Accom., Mod., or EL Variation	39	270	1,248	3,324	4,881	98.17%
Students Not in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	1	1	2	0.04%
L: Most beneficial time of day	0	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	1	1	0.02%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	1	1	0.02%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%

Special Services Summary for Integrated Mathematics 2						
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	1	1	0.02%
Accom. or Mod. is in IEP	0	0	1	1	2	0.04%
English Learner Test Variation A	0	0	0	2	2	0.04%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	1	1	0.02%
English Learner Test Variation D	0	0	0	1	1	0.02%
Any Accom., Mod., or EL Variation	0	0	1	6	7	0.15%
No Accom., Mod., or EL Variation	39	263	1,213	3,089	4,604	99.85%
Students in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	1	1	0.28%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	1	1	0.28%
J: Tested during more than one day	0	0	0	1	1	0.28%
K: Had supervised breaks	0	1	23	46	70	19.39%
L: Most beneficial time of day	0	0	1	2	3	0.83%
M: Administered at home or in a hospital	0	0	0	1	1	0.28%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	1	4	5	1.39%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0	0.00%
Y: Leave blank	0	0	1	2	3	0.83%
Z: Examiner read test questions aloud	0	0	2	7	9	2.49%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	1	25	57	83	22.99%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	1	25	58	84	23.27%
No Accom., Mod., or EL Variation	0	7	35	235	277	76.73%

Special Services Summary for Integrated Mathematics 2						
English-Only Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	1	1	0.03%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	1	1	0.03%
J: Tested during more than one day	0	0	0	1	1	0.03%
K: Had supervised breaks	0	0	7	28	35	1.19%
L: Most beneficial time of day	0	0	1	2	3	0.10%
M: Administered at home or in a hospital	0	0	0	2	2	0.07%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	1	5	6	0.20%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	1	3	4	0.14%
Accom. or Mod. is in Section 504 plan	0	0	0	1	1	0.03%
Accom. or Mod. is in IEP	0	0	8	38	46	1.57%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	8	40	48	1.64%
No Accom., Mod., or EL Variation	19	152	717	1,995	2,883	98.36%
Initially Fluent English Proficient (I-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	2	2	0.70%
L: Most beneficial time of day	0	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%

Special Services Summary for Integrated Mathematics 2						
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	0	2	2	0.70%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	0	2	2	0.70%
No Accom., Mod., or EL Variation	4	20	70	189	283	99.30%
English Learner (EL) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	1	12	17	30	5.26%
L: Most beneficial time of day	0	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0	0.00%
Y: Leave blank	0	0	0	2	2	0.35%
Z: Examiner read test questions aloud	0	0	1	4	5	0.88%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	1	12	18	31	5.44%
English Learner Test Variation A	0	0	0	2	2	0.35%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	1	1	0.18%
English Learner Test Variation D	0	0	0	1	1	0.18%
Any Accom., Mod., or EL Variation	0	1	12	22	35	6.14%
No Accom., Mod., or EL Variation	3	10	97	425	535	93.86%

Special Services Summary for Integrated Mathematics 2						
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	5	0	5	0.42%
L: Most beneficial time of day	0	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0	0.00%
Y: Leave blank	0	0	1	0	1	0.08%
Z: Examiner read test questions aloud	0	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	6	0	6	0.51%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	6	0	6	0.51%
No Accom., Mod., or EL Variation	13	88	360	714	1,175	99.49%

Table 2.D.20 Special Services Summary for Integrated Mathematics 3

Special Services Summary for Integrated Mathematics 3						
All Tested	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	2	2	0.27%
L: Most beneficial time of day	0	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	1	1	0.13%
Y: Leave blank	0	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	1	1	0.13%
Accom. or Mod. is in IEP	0	0	0	1	1	0.13%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	1	0	1	0.13%
Any Accom., Mod., or EL Variation	0	0	1	3	4	0.54%
No Accom., Mod., or EL Variation	3	17	200	521	741	99.46%
Students Not in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0	0.00%
L: Most beneficial time of day	0	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%

Special Services Summary for Integrated Mathematics 3						
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	1	1	0.14%
Y: Leave blank	0	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	1	1	0.14%
Accom. or Mod. is in IEP	0	0	0	0	0	0.00%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	1	0	1	0.14%
Any Accom., Mod., or EL Variation	0	0	1	1	2	0.28%
No Accom., Mod., or EL Variation	3	16	198	497	714	99.72%
Students in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	2	2	6.90%
L: Most beneficial time of day	0	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	0	1	1	3.45%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	0	2	2	6.90%
No Accom., Mod., or EL Variation	0	1	2	24	27	93.10%

Special Services Summary for Integrated Mathematics 3						
English-Only Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	1	1	0.23%
L: Most beneficial time of day	0	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	1	1	0.23%
Y: Leave blank	0	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	1	1	0.23%
Accom. or Mod. is in IEP	0	0	0	0	0	0.00%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	0	2	2	0.46%
No Accom., Mod., or EL Variation	2	8	114	307	431	99.54%
Initially Fluent English Proficient (I-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0	0.00%
L: Most beneficial time of day	0	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%

Special Services Summary for Integrated Mathematics 3						
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	0	0	0	0.00%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	0	0	0	0.00%
No Accom., Mod., or EL Variation	0	1	15	38	54	100.00%
English Learner (EL) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0	0.00%
L: Most beneficial time of day	0	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	0	0	0	0.00%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	1	0	1	2.44%
Any Accom., Mod., or EL Variation	0	0	1	0	1	2.44%
No Accom., Mod., or EL Variation	0	2	6	32	40	97.56%

Special Services Summary for Integrated Mathematics 3						
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	1	1	0.46%
L: Most beneficial time of day	0	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	0	1	1	0.46%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	0	1	1	0.46%
No Accom., Mod., or EL Variation	1	6	65	144	216	99.54%

Table 2.D.21 Special Services Summary for Science, Grades Five, Eight, and Ten (Life Science)

Special Services Summary for Science, Grades Five, Eight, and Ten (Life Science)						
All Tested	**Grade 5**	**Pct. of Total**	**Grade 8**	**Pct. of Total**	**Grade 10 Life Sci.**	**Pct. of Total**
B: Marked responses in test booklet	495	0.12%	234	0.05%	143	0.03%
C: Dictated responses to a scribe	31	0.01%	21	0.00%	16	0.00%
F: Used noninterfering assistive device	34	0.01%	13	0.00%	14	0.00%
G: Used braille version of test	15	0.00%	21	0.00%	20	0.00%
H: Used large-print version of test	133	0.03%	92	0.02%	85	0.02%
J: Tested during more than one day	529	0.13%	342	0.08%	108	0.02%
K: Had supervised breaks	2,387	0.56%	1,478	0.34%	1,692	0.38%
L: Most beneficial time of day	842	0.20%	518	0.12%	261	0.06%
M: Administered at home or in a hospital	46	0.01%	70	0.02%	51	0.01%
N: Used a dictionary	1	0.00%	7	0.00%	44	0.01%
O: Examiner presented using MCE or ASL	19	0.00%	8	0.00%	9	0.00%
Q: Used a calculator	10	0.00%	41	0.01%	61	0.01%
R: Used an arithmetic table	8	0.00%	6	0.00%	1	0.00%
S: Used math manipulatives	8	0.00%	11	0.00%	2	0.00%
V: Used interfering assistive device	5	0.00%	0	0.00%	0	0.00%
W: Used an unlisted modification	22	0.01%	42	0.01%	4	0.00%
X: Used an unlisted accommodation	644	0.15%	603	0.14%	352	0.08%
Y: Leave blank	230	0.05%	241	0.06%	151	0.03%
Z: Examiner read test questions aloud	2,129	0.50%	853	0.20%	360	0.08%
Accom. or Mod. is in Section 504 plan	409	0.10%	231	0.05%	129	0.03%
Accom. or Mod. is in IEP	4,549	1.08%	3,024	0.70%	2,421	0.55%
English Learner Test Variation A	143	0.03%	293	0.07%	456	0.10%
English Learner Test Variation B	17	0.00%	37	0.01%	110	0.02%
English Learner Test Variation C	117	0.03%	236	0.05%	662	0.15%
English Learner Test Variation D	89	0.02%	284	0.07%	867	0.20%
Any Accom., Mod., or EL Variation	5,427	1.28%	4,026	0.93%	4,022	0.91%
No Accom., Mod., or EL Variation	417,525	98.72%	427,113	99.07%	439,524	99.09%
Students Not in Special Education	**Grade 5**	**Pct. of Total**	**Grade 8**	**Pct. of Total**	**Grade 10**	**Pct. of Total**
B: Marked responses in test booklet	109	0.03%	40	0.01%	13	0.00%
C: Dictated responses to a scribe	12	0.00%	8	0.00%	0	0.00%
F: Used noninterfering assistive device	6	0.00%	1	0.00%	3	0.00%
G: Used braille version of test	1	0.00%	3	0.00%	1	0.00%
H: Used large-print version of test	43	0.01%	16	0.00%	11	0.00%
J: Tested during more than one day	50	0.01%	18	0.00%	6	0.00%
K: Had supervised breaks	295	0.07%	109	0.03%	154	0.04%
L: Most beneficial time of day	116	0.03%	34	0.01%	22	0.01%
M: Administered at home or in a hospital	26	0.01%	48	0.01%	35	0.01%
N: Used a dictionary	0	0.00%	2	0.00%	4	0.00%
O: Examiner presented using MCE or ASL	1	0.00%	0	0.00%	0	0.00%
Q: Used a calculator	1	0.00%	6	0.00%	3	0.00%

Special Services Summary for Science, Grades Five, Eight, and Ten (Life Science)

All Tested	Grade 5	Pct. of Total	Grade 8	Pct. of Total	Grade 10 Life Sci.	Pct. of Total
R: Used an arithmetic table	0	0.00%	2	0.00%	0	0.00%
S: Used math manipulatives	1	0.00%	1	0.00%	0	0.00%
V: Used interfering assistive device	1	0.00%	0	0.00%	0	0.00%
W: Used an unlisted modification	12	0.00%	10	0.00%	3	0.00%
X: Used an unlisted accommodation	86	0.02%	72	0.02%	42	0.01%
Y: Leave blank	47	0.01%	51	0.01%	34	0.01%
Z: Examiner read test questions aloud	192	0.05%	51	0.01%	13	0.00%
Accom. or Mod. is in Section 504 plan	382	0.10%	214	0.05%	117	0.03%
Accom. or Mod. is in IEP	306	0.08%	133	0.03%	126	0.03%
English Learner Test Variation A	139	0.03%	290	0.07%	444	0.11%
English Learner Test Variation B	9	0.00%	28	0.01%	97	0.02%
English Learner Test Variation C	103	0.03%	233	0.06%	659	0.16%
English Learner Test Variation D	88	0.02%	278	0.07%	801	0.19%
Any Accom., Mod., or EL Variation	1,020	0.26%	1,033	0.25%	1,561	0.37%
No Accom., Mod., or EL Variation	398,329	99.74%	409,421	99.75%	417,536	99.63%
Students in Special Education	**Grade 5**	**Pct. of Total**	**Grade 8**	**Pct. of Total**	**Grade 10**	**Pct. of Total**
B: Marked responses in test booklet	383	1.75%	194	0.94%	129	0.53%
C: Dictated responses to a scribe	19	0.09%	13	0.06%	16	0.07%
F: Used noninterfering assistive device	28	0.13%	12	0.06%	11	0.05%
G: Used braille version of test	14	0.06%	18	0.09%	19	0.08%
H: Used large-print version of test	88	0.40%	76	0.37%	73	0.30%
J: Tested during more than one day	478	2.18%	323	1.57%	101	0.41%
K: Had supervised breaks	2,071	9.46%	1,367	6.63%	1,533	6.28%
L: Most beneficial time of day	715	3.27%	480	2.33%	239	0.98%
M: Administered at home or in a hospital	20	0.09%	22	0.11%	16	0.07%
N: Used a dictionary	1	0.00%	5	0.02%	40	0.16%
O: Examiner presented using MCE or ASL	18	0.08%	8	0.04%	9	0.04%
Q: Used a calculator	9	0.04%	35	0.17%	58	0.24%
R: Used an arithmetic table	8	0.04%	4	0.02%	1	0.00%
S: Used math manipulatives	7	0.03%	10	0.05%	2	0.01%
V: Used interfering assistive device	4	0.02%	0	0.00%	0	0.00%
W: Used an unlisted modification	10	0.05%	32	0.16%	1	0.00%
X: Used an unlisted accommodation	553	2.53%	529	2.56%	308	1.26%
Y: Leave blank	183	0.84%	190	0.92%	116	0.48%
Z: Examiner read test questions aloud	1,906	8.71%	799	3.87%	345	1.41%
Accom. or Mod. is in Section 504 plan	23	0.11%	17	0.08%	12	0.05%
Accom. or Mod. is in IEP	4,195	19.17%	2,881	13.96%	2,285	9.37%
English Learner Test Variation A	3	0.01%	3	0.01%	12	0.05%
English Learner Test Variation B	8	0.04%	9	0.04%	13	0.05%
English Learner Test Variation C	13	0.06%	3	0.01%	3	0.01%
English Learner Test Variation D	0	0.00%	6	0.03%	66	0.27%

Special Services Summary for Science, Grades Five, Eight, and Ten (Life Science)

All Tested	Grade 5	Pct. of Total	Grade 8	Pct. of Total	Grade 10 Life Sci.	Pct. of Total
Any Accom., Mod., or EL Variation	4,348	19.87%	2,983	14.46%	2,451	10.05%
No Accom., Mod., or EL Variation	17,537	80.13%	17,648	85.54%	21,943	89.95%
English-Only Students	**Grade 5**	**Pct. of Total**	**Grade 8**	**Pct. of Total**	**Grade 10**	**Pct. of Total**
B: Marked responses in test booklet	380	0.16%	183	0.08%	103	0.04%
C: Dictated responses to a scribe	24	0.01%	12	0.00%	13	0.01%
F: Used noninterfering assistive device	17	0.01%	9	0.00%	7	0.00%
G: Used braille version of test	4	0.00%	10	0.00%	6	0.00%
H: Used large-print version of test	89	0.04%	65	0.03%	51	0.02%
J: Tested during more than one day	380	0.16%	220	0.09%	89	0.04%
K: Had supervised breaks	1,666	0.70%	1,001	0.41%	1,108	0.45%
L: Most beneficial time of day	578	0.24%	363	0.15%	178	0.07%
M: Administered at home or in a hospital	38	0.02%	50	0.02%	35	0.01%
N: Used a dictionary	0	0.00%	1	0.00%	22	0.01%
O: Examiner presented using MCE or ASL	17	0.01%	7	0.00%	6	0.00%
Q: Used a calculator	8	0.00%	29	0.01%	35	0.01%
R: Used an arithmetic table	8	0.00%	4	0.00%	1	0.00%
S: Used math manipulatives	6	0.00%	7	0.00%	0	0.00%
V: Used interfering assistive device	5	0.00%	0	0.00%	0	0.00%
W: Used an unlisted modification	18	0.01%	30	0.01%	4	0.00%
X: Used an unlisted accommodation	472	0.20%	371	0.15%	222	0.09%
Y: Leave blank	160	0.07%	178	0.07%	109	0.04%
Z: Examiner read test questions aloud	1,345	0.57%	480	0.20%	208	0.08%
Accom. or Mod. is in Section 504 plan	306	0.13%	194	0.08%	115	0.05%
Accom. or Mod. is in IEP	3,108	1.31%	1,964	0.81%	1,563	0.64%
English Learner Test Variation A	1	0.00%	6	0.00%	5	0.00%
English Learner Test Variation B	0	0.00%	2	0.00%	3	0.00%
English Learner Test Variation C	1	0.00%	2	0.00%	9	0.00%
English Learner Test Variation D	0	0.00%	0	0.00%	5	0.00%
Any Accom., Mod., or EL Variation	3,546	1.50%	2,250	0.93%	1,762	0.72%
No Accom., Mod., or EL Variation	232,885	98.50%	239,711	99.07%	244,079	99.28%
Initially Fluent English Proficient (I-FEP) Students	**Grade 5**	**Pct. of Total**	**Grade 8**	**Pct. of Total**	**Grade 10**	**Pct. of Total**
B: Marked responses in test booklet	11	0.06%	8	0.02%	8	0.02%
C: Dictated responses to a scribe	1	0.01%	3	0.01%	0	0.00%
F: Used noninterfering assistive device	1	0.01%	1	0.00%	0	0.00%
G: Used braille version of test	2	0.01%	3	0.01%	1	0.00%
H: Used large-print version of test	5	0.03%	6	0.02%	5	0.01%
J: Tested during more than one day	7	0.04%	9	0.03%	0	0.00%
K: Had supervised breaks	33	0.17%	48	0.14%	55	0.16%
L: Most beneficial time of day	13	0.07%	19	0.06%	6	0.02%
M: Administered at home or in a hospital	0	0.00%	3	0.01%	2	0.01%
N: Used a dictionary	0	0.00%	2	0.01%	0	0.00%

Special Services Summary for Science, Grades Five, Eight, and Ten (Life Science)						
All Tested	**Grade 5**	**Pct. of Total**	**Grade 8**	**Pct. of Total**	**Grade 10 Life Sci.**	**Pct. of Total**
O: Examiner presented using MCE or ASL	0	0.00%	0	0.00%	1	0.00%
Q: Used a calculator	0	0.00%	3	0.01%	2	0.01%
R: Used an arithmetic table	0	0.00%	0	0.00%	0	0.00%
S: Used math manipulatives	0	0.00%	0	0.00%	0	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%	0	0.00%
W: Used an unlisted modification	0	0.00%	1	0.00%	0	0.00%
X: Used an unlisted accommodation	11	0.06%	21	0.06%	6	0.02%
Y: Leave blank	3	0.02%	8	0.02%	3	0.01%
Z: Examiner read test questions aloud	25	0.13%	25	0.07%	8	0.02%
Accom. or Mod. is in Section 504 plan	15	0.08%	4	0.01%	3	0.01%
Accom. or Mod. is in IEP	62	0.31%	108	0.32%	77	0.23%
English Learner Test Variation A	1	0.01%	0	0.00%	1	0.00%
English Learner Test Variation B	0	0.00%	0	0.00%	0	0.00%
English Learner Test Variation C	0	0.00%	3	0.01%	3	0.01%
English Learner Test Variation D	0	0.00%	2	0.01%	2	0.01%
Any Accom., Mod., or EL Variation	82	0.41%	122	0.36%	88	0.26%
No Accom., Mod., or EL Variation	19,732	99.59%	33,548	99.64%	33,979	99.74%
English Learner (EL) Students	**Grade 5**	**Pct. of Total**	**Grade 8**	**Pct. of Total**	**Grade 10**	**Pct. of Total**
B: Marked responses in test booklet	72	0.08%	22	0.04%	17	0.03%
C: Dictated responses to a scribe	5	0.01%	3	0.01%	2	0.00%
F: Used noninterfering assistive device	13	0.01%	1	0.00%	3	0.01%
G: Used braille version of test	4	0.00%	5	0.01%	4	0.01%
H: Used large-print version of test	30	0.03%	10	0.02%	10	0.02%
J: Tested during more than one day	124	0.14%	90	0.17%	11	0.02%
K: Had supervised breaks	621	0.71%	295	0.57%	352	0.67%
L: Most beneficial time of day	218	0.25%	84	0.16%	54	0.10%
M: Administered at home or in a hospital	5	0.01%	11	0.02%	9	0.02%
N: Used a dictionary	1	0.00%	3	0.01%	19	0.04%
O: Examiner presented using MCE or ASL	2	0.00%	1	0.00%	2	0.00%
Q: Used a calculator	2	0.00%	4	0.01%	19	0.04%
R: Used an arithmetic table	0	0.00%	1	0.00%	0	0.00%
S: Used math manipulatives	2	0.00%	1	0.00%	2	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%	0	0.00%
W: Used an unlisted modification	2	0.00%	7	0.01%	0	0.00%
X: Used an unlisted accommodation	148	0.17%	137	0.26%	93	0.18%
Y: Leave blank	57	0.06%	34	0.07%	21	0.04%
Z: Examiner read test questions aloud	705	0.80%	275	0.53%	116	0.22%
Accom. or Mod. is in Section 504 plan	67	0.08%	15	0.03%	4	0.01%
Accom. or Mod. is in IEP	1,235	1.41%	663	1.28%	539	1.02%

Special Services Summary for Science, Grades Five, Eight, and Ten (Life Science)						
All Tested	**Grade 5**	**Pct. of Total**	**Grade 8**	**Pct. of Total**	**Grade 10 Life Sci.**	**Pct. of Total**
English Learner Test Variation A	137	0.16%	281	0.54%	446	0.85%
English Learner Test Variation B	16	0.02%	34	0.07%	105	0.20%
English Learner Test Variation C	114	0.13%	220	0.42%	647	1.23%
English Learner Test Variation D	89	0.10%	272	0.52%	857	1.63%
Any Accom., Mod., or EL Variation	1,620	1.85%	1,312	2.53%	1,888	3.58%
No Accom., Mod., or EL Variation	86,095	98.15%	50,528	97.47%	50,823	96.42%
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 5**	**Pct. of Total**	**Grade 8**	**Pct. of Total**	**Grade 10**	**Pct. of Total**
B: Marked responses in test booklet	31	0.04%	19	0.02%	14	0.01%
C: Dictated responses to a scribe	1	0.00%	1	0.00%	1	0.00%
F: Used noninterfering assistive device	3	0.00%	2	0.00%	4	0.00%
G: Used braille version of test	5	0.01%	3	0.00%	9	0.01%
H: Used large-print version of test	9	0.01%	11	0.01%	18	0.02%
J: Tested during more than one day	17	0.02%	18	0.02%	8	0.01%
K: Had supervised breaks	63	0.08%	125	0.12%	175	0.16%
L: Most beneficial time of day	31	0.04%	48	0.05%	23	0.02%
M: Administered at home or in a hospital	3	0.00%	6	0.01%	5	0.00%
N: Used a dictionary	0	0.00%	1	0.00%	3	0.00%
O: Examiner presented using MCE or ASL	0	0.00%	0	0.00%	0	0.00%
Q: Used a calculator	0	0.00%	5	0.00%	5	0.00%
R: Used an arithmetic table	0	0.00%	1	0.00%	0	0.00%
S: Used math manipulatives	0	0.00%	2	0.00%	0	0.00%
V: Used interfering assistive device	0	0.00%	0	0.00%	0	0.00%
W: Used an unlisted modification	2	0.00%	4	0.00%	0	0.00%
X: Used an unlisted accommodation	11	0.01%	68	0.07%	30	0.03%
Y: Leave blank	8	0.01%	21	0.02%	18	0.02%
Z: Examiner read test questions aloud	49	0.06%	72	0.07%	27	0.02%
Accom. or Mod. is in Section 504 plan	20	0.03%	16	0.02%	7	0.01%
Accom. or Mod. is in IEP	135	0.17%	273	0.26%	236	0.21%
English Learner Test Variation A	4	0.01%	0	0.00%	4	0.00%
English Learner Test Variation B	1	0.00%	1	0.00%	2	0.00%
English Learner Test Variation C	2	0.00%	6	0.01%	2	0.00%
English Learner Test Variation D	0	0.00%	4	0.00%	3	0.00%
Any Accom., Mod., or EL Variation	168	0.21%	312	0.30%	277	0.25%
No Accom., Mod., or EL Variation	78,345	99.79%	102,741	99.70%	110,008	99.75%

Table 2.D.22 Special Services Summary for Biology

Special Services Summary for Biology					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	57	101	46	204	0.04%
C: Dictated responses to a scribe	12	17	7	36	0.01%
F: Used noninterfering assistive device	7	17	3	27	0.00%
G: Used braille version of test	5	14	2	21	0.00%
H: Used large-print version of test	43	61	16	120	0.02%
J: Tested during more than one day	64	101	58	223	0.04%
K: Had supervised breaks	1,014	1,910	577	3,501	0.63%
L: Most beneficial time of day	217	234	129	580	0.10%
M: Administered at home or in a hospital	26	41	28	95	0.02%
N: Used a dictionary	12	34	22	68	0.01%
O: Examiner presented using MCE or ASL	2	41	12	55	0.01%
Q: Used a calculator	33	81	46	160	0.03%
R: Used an arithmetic table	0	2	0	2	0.00%
S: Used math manipulatives	2	1	3	6	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	3	8	2	13	0.00%
X: Used an unlisted accommodation	297	322	136	755	0.14%
Y: Leave blank	90	226	87	403	0.07%
Z: Examiner read test questions aloud	308	650	253	1,211	0.22%
Accom. or Mod. is in Section 504 plan	45	70	28	143	0.03%
Accom. or Mod. is in IEP	1,562	3,004	1,025	5,591	1.01%
English Learner Test Variation A	135	261	74	470	0.08%
English Learner Test Variation B	19	71	23	113	0.02%
English Learner Test Variation C	224	346	153	723	0.13%
English Learner Test Variation D	444	668	213	1,325	0.24%
Any Accom., Mod., or EL Variation	2,252	4,093	1,408	7,753	1.40%
No Accom., Mod., or EL Variation	236,667	211,756	97,399	545,822	98.60%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	7	6	2	15	0.00%
C: Dictated responses to a scribe	3	2	1	6	0.00%
F: Used noninterfering assistive device	1	3	1	5	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	4	4	1	9	0.00%
J: Tested during more than one day	1	5	4	10	0.00%
K: Had supervised breaks	43	69	22	134	0.03%
L: Most beneficial time of day	17	16	6	39	0.01%
M: Administered at home or in a hospital	23	25	16	64	0.01%
N: Used a dictionary	2	5	0	7	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	4	5	0	9	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Biology					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	3	0	3	0.00%
X: Used an unlisted accommodation	19	25	12	56	0.01%
Y: Leave blank	17	11	3	31	0.01%
Z: Examiner read test questions aloud	4	8	1	13	0.00%
Accom. or Mod. is in Section 504 plan	44	65	28	137	0.03%
Accom. or Mod. is in IEP	50	67	14	131	0.03%
English Learner Test Variation A	134	248	71	453	0.09%
English Learner Test Variation B	16	43	22	81	0.02%
English Learner Test Variation C	222	345	153	720	0.14%
English Learner Test Variation D	414	615	197	1,226	0.24%
Any Accom., Mod., or EL Variation	621	1,011	355	1,987	0.39%
No Accom., Mod., or EL Variation	225,748	193,874	90,898	510,520	99.61%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	50	95	44	189	0.46%
C: Dictated responses to a scribe	9	15	6	30	0.07%
F: Used noninterfering assistive device	6	14	2	22	0.05%
G: Used braille version of test	5	14	2	21	0.05%
H: Used large-print version of test	39	56	15	110	0.27%
J: Tested during more than one day	63	96	54	213	0.52%
K: Had supervised breaks	968	1,834	553	3,355	8.19%
L: Most beneficial time of day	199	218	122	539	1.32%
M: Administered at home or in a hospital	3	16	12	31	0.08%
N: Used a dictionary	10	29	22	61	0.15%
O: Examiner presented using MCE or ASL	2	41	12	55	0.13%
Q: Used a calculator	29	76	46	151	0.37%
R: Used an arithmetic table	0	2	0	2	0.00%
S: Used math manipulatives	2	1	3	6	0.01%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	3	5	2	10	0.02%
X: Used an unlisted accommodation	277	296	124	697	1.70%
Y: Leave blank	73	214	84	371	0.91%
Z: Examiner read test questions aloud	303	641	251	1,195	2.92%
Accom. or Mod. is in Section 504 plan	1	4	0	5	0.01%
Accom. or Mod. is in IEP	1,507	2,928	1,009	5,444	13.29%
English Learner Test Variation A	1	13	3	17	0.04%
English Learner Test Variation B	3	28	1	32	0.08%
English Learner Test Variation C	2	1	0	3	0.01%
English Learner Test Variation D	30	53	16	99	0.24%
Any Accom., Mod., or EL Variation	1,626	3,072	1,051	5,749	14.04%
No Accom., Mod., or EL Variation	10,895	17,821	6,485	35,201	85.96%

Special Services Summary for Biology					
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	41	77	29	147	0.05%
C: Dictated responses to a scribe	10	8	5	23	0.01%
F: Used noninterfering assistive device	6	7	2	15	0.00%
G: Used braille version of test	4	4	0	8	0.00%
H: Used large-print version of test	26	33	11	70	0.02%
J: Tested during more than one day	55	73	46	174	0.06%
K: Had supervised breaks	551	1,161	373	2,085	0.68%
L: Most beneficial time of day	129	161	89	379	0.12%
M: Administered at home or in a hospital	20	29	16	65	0.02%
N: Used a dictionary	8	17	10	35	0.01%
O: Examiner presented using MCE or ASL	2	22	9	33	0.01%
Q: Used a calculator	18	51	24	93	0.03%
R: Used an arithmetic table	0	2	0	2	0.00%
S: Used math manipulatives	1	1	3	5	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	3	6	1	10	0.00%
X: Used an unlisted accommodation	169	193	82	444	0.14%
Y: Leave blank	74	120	49	243	0.08%
Z: Examiner read test questions aloud	136	334	133	603	0.20%
Accom. or Mod. is in Section 504 plan	41	60	23	124	0.04%
Accom. or Mod. is in IEP	841	1,752	629	3,222	1.05%
English Learner Test Variation A	3	3	2	8	0.00%
English Learner Test Variation B	0	2	0	2	0.00%
English Learner Test Variation C	3	2	0	5	0.00%
English Learner Test Variation D	1	1	1	3	0.00%
Any Accom., Mod., or EL Variation	955	1,875	678	3,508	1.14%
No Accom., Mod., or EL Variation	134,026	114,520	55,360	303,906	98.86%
Initially Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	3	4	1	8	0.02%
C: Dictated responses to a scribe	0	0	1	1	0.00%
F: Used noninterfering assistive device	0	0	1	1	0.00%
G: Used braille version of test	0	0	1	1	0.00%
H: Used large-print version of test	4	4	0	8	0.02%
J: Tested during more than one day	1	1	2	4	0.01%
K: Had supervised breaks	38	55	20	113	0.25%
L: Most beneficial time of day	9	8	3	20	0.04%
M: Administered at home or in a hospital	0	1	2	3	0.01%
N: Used a dictionary	0	1	0	1	0.00%
O: Examiner presented using MCE or ASL	0	1	0	1	0.00%
Q: Used a calculator	1	5	0	6	0.01%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Biology					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	9	5	4	18	0.04%
Y: Leave blank	2	6	4	12	0.03%
Z: Examiner read test questions aloud	5	17	9	31	0.07%
Accom. or Mod. is in Section 504 plan	1	1	1	3	0.01%
Accom. or Mod. is in IEP	48	79	31	158	0.35%
English Learner Test Variation A	0	1	0	1	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	1	1	1	3	0.01%
English Learner Test Variation D	8	1	0	9	0.02%
Any Accom., Mod., or EL Variation	64	86	35	185	0.41%
No Accom., Mod., or EL Variation	23,342	13,943	7,907	45,192	99.59%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	5	9	12	26	0.04%
C: Dictated responses to a scribe	1	7	1	9	0.01%
F: Used noninterfering assistive device	0	6	0	6	0.01%
G: Used braille version of test	0	3	1	4	0.01%
H: Used large-print version of test	2	12	4	18	0.03%
J: Tested during more than one day	6	17	8	31	0.05%
K: Had supervised breaks	313	522	148	983	1.52%
L: Most beneficial time of day	62	47	33	142	0.22%
M: Administered at home or in a hospital	2	6	4	12	0.02%
N: Used a dictionary	4	16	12	32	0.05%
O: Examiner presented using MCE or ASL	0	18	3	21	0.03%
Q: Used a calculator	11	21	20	52	0.08%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	1	0	0	1	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	1	1	0.00%
X: Used an unlisted accommodation	90	98	39	227	0.35%
Y: Leave blank	13	79	23	115	0.18%
Z: Examiner read test questions aloud	146	255	100	501	0.78%
Accom. or Mod. is in Section 504 plan	1	3	2	6	0.01%
Accom. or Mod. is in IEP	516	915	300	1,731	2.68%
English Learner Test Variation A	129	252	71	452	0.70%
English Learner Test Variation B	18	67	23	108	0.17%
English Learner Test Variation C	216	341	150	707	1.09%
English Learner Test Variation D	430	662	210	1,302	2.01%
Any Accom., Mod., or EL Variation	1,051	1,846	618	3,515	5.44%
No Accom., Mod., or EL Variation	18,488	31,570	11,065	61,123	94.56%

Special Services Summary for Biology					
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	7	11	3	21	0.02%
C: Dictated responses to a scribe	1	2	0	3	0.00%
F: Used noninterfering assistive device	1	4	0	5	0.00%
G: Used braille version of test	1	7	0	8	0.01%
H: Used large-print version of test	11	11	1	23	0.02%
J: Tested during more than one day	2	10	1	13	0.01%
K: Had supervised breaks	110	169	35	314	0.23%
L: Most beneficial time of day	16	18	4	38	0.03%
M: Administered at home or in a hospital	4	5	6	15	0.01%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	3	4	2	9	0.01%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	2	0	2	0.00%
X: Used an unlisted accommodation	28	26	10	64	0.05%
Y: Leave blank	1	21	11	33	0.02%
Z: Examiner read test questions aloud	21	43	10	74	0.05%
Accom. or Mod. is in Section 504 plan	2	6	2	10	0.01%
Accom. or Mod. is in IEP	154	253	63	470	0.35%
English Learner Test Variation A	3	5	1	9	0.01%
English Learner Test Variation B	1	2	0	3	0.00%
English Learner Test Variation C	3	1	2	6	0.00%
English Learner Test Variation D	4	3	2	9	0.01%
Any Accom., Mod., or EL Variation	177	279	75	531	0.39%
No Accom., Mod., or EL Variation	60,544	51,419	22,932	134,895	99.61%

Table 2.D.23 Special Services Summary for Chemistry

Special Services Summary for Chemistry					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	19	22	41	0.01%
C: Dictated responses to a scribe	0	3	4	7	0.00%
F: Used noninterfering assistive device	0	3	5	8	0.00%
G: Used braille version of test	0	4	3	7	0.00%
H: Used large-print version of test	0	19	14	33	0.01%
J: Tested during more than one day	2	12	22	36	0.01%
K: Had supervised breaks	30	202	351	583	0.20%
L: Most beneficial time of day	3	23	46	72	0.03%
M: Administered at home or in a hospital	0	2	3	5	0.00%
N: Used a dictionary	1	1	9	11	0.00%
O: Examiner presented using MCE or ASL	0	2	21	23	0.01%
Q: Used a calculator	2	20	63	85	0.03%
R: Used an arithmetic table	0	1	2	3	0.00%
S: Used math manipulatives	1	2	1	4	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	1	1	0.00%
X: Used an unlisted accommodation	11	73	74	158	0.06%
Y: Leave blank	0	19	50	69	0.02%
Z: Examiner read test questions aloud	8	39	72	119	0.04%
Accom. or Mod. is in Section 504 plan	2	27	26	55	0.02%
Accom. or Mod. is in IEP	36	318	578	932	0.33%
English Learner Test Variation A	4	32	25	61	0.02%
English Learner Test Variation B	1	8	10	19	0.01%
English Learner Test Variation C	7	56	72	135	0.05%
English Learner Test Variation D	4	59	110	173	0.06%
Any Accom., Mod., or EL Variation	49	458	788	1,295	0.45%
No Accom., Mod., or EL Variation	5,686	145,741	132,816	284,243	99.55%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	3	2	5	0.00%
C: Dictated responses to a scribe	0	0	1	1	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	4	2	6	0.00%
J: Tested during more than one day	0	1	2	3	0.00%
K: Had supervised breaks	3	13	18	34	0.01%
L: Most beneficial time of day	1	3	4	8	0.00%
M: Administered at home or in a hospital	0	2	3	5	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	1	0	1	2	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Chemistry					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	1	1	0.00%
X: Used an unlisted accommodation	0	9	8	17	0.01%
Y: Leave blank	0	10	2	12	0.00%
Z: Examiner read test questions aloud	1	1	2	4	0.00%
Accom. or Mod. is in Section 504 plan	2	25	22	49	0.02%
Accom. or Mod. is in IEP	3	12	14	29	0.01%
English Learner Test Variation A	4	31	25	60	0.02%
English Learner Test Variation B	1	7	8	16	0.01%
English Learner Test Variation C	7	56	71	134	0.05%
English Learner Test Variation D	4	56	107	167	0.06%
Any Accom., Mod., or EL Variation	14	136	191	341	0.12%
No Accom., Mod., or EL Variation	5,501	142,936	128,598	277,035	99.88%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	16	20	36	0.44%
C: Dictated responses to a scribe	0	3	3	6	0.07%
F: Used noninterfering assistive device	0	3	5	8	0.10%
G: Used braille version of test	0	4	3	7	0.09%
H: Used large-print version of test	0	15	12	27	0.33%
J: Tested during more than one day	2	11	20	33	0.40%
K: Had supervised breaks	27	188	333	548	6.72%
L: Most beneficial time of day	2	20	42	64	0.79%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	1	1	9	11	0.13%
O: Examiner presented using MCE or ASL	0	2	21	23	0.28%
Q: Used a calculator	1	20	62	83	1.02%
R: Used an arithmetic table	0	1	2	3	0.04%
S: Used math manipulatives	1	2	1	4	0.05%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	11	64	66	141	1.73%
Y: Leave blank	0	9	45	54	0.66%
Z: Examiner read test questions aloud	7	38	70	115	1.41%
Accom. or Mod. is in Section 504 plan	0	2	2	4	0.05%
Accom. or Mod. is in IEP	33	305	563	901	11.05%
English Learner Test Variation A	0	1	0	1	0.01%
English Learner Test Variation B	0	1	2	3	0.04%
English Learner Test Variation C	0	0	1	1	0.01%
English Learner Test Variation D	0	3	3	6	0.07%
Any Accom., Mod., or EL Variation	35	321	594	950	11.66%
No Accom., Mod., or EL Variation	185	2,800	4,216	7,201	88.34%

Special Services Summary for Chemistry					
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	13	10	23	0.01%
C: Dictated responses to a scribe	0	3	3	6	0.00%
F: Used noninterfering assistive device	0	1	3	4	0.00%
G: Used braille version of test	0	1	1	2	0.00%
H: Used large-print version of test	0	12	9	21	0.01%
J: Tested during more than one day	2	8	12	22	0.01%
K: Had supervised breaks	8	91	166	265	0.17%
L: Most beneficial time of day	2	10	24	36	0.02%
M: Administered at home or in a hospital	0	1	2	3	0.00%
N: Used a dictionary	1	1	4	6	0.00%
O: Examiner presented using MCE or ASL	0	2	6	8	0.01%
Q: Used a calculator	2	10	41	53	0.03%
R: Used an arithmetic table	0	0	1	1	0.00%
S: Used math manipulatives	1	0	1	2	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	1	1	0.00%
X: Used an unlisted accommodation	6	33	37	76	0.05%
Y: Leave blank	0	13	21	34	0.02%
Z: Examiner read test questions aloud	6	17	26	49	0.03%
Accom. or Mod. is in Section 504 plan	2	24	21	47	0.03%
Accom. or Mod. is in IEP	13	150	265	428	0.28%
English Learner Test Variation A	0	2	0	2	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	1	1	0.00%
English Learner Test Variation D	0	0	1	1	0.00%
Any Accom., Mod., or EL Variation	15	184	305	504	0.32%
No Accom., Mod., or EL Variation	2,780	82,159	69,708	154,647	99.68%
Initially Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	2	3	5	0.02%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	4	4	0.01%
J: Tested during more than one day	0	0	1	1	0.00%
K: Had supervised breaks	0	9	9	18	0.07%
L: Most beneficial time of day	0	0	2	2	0.01%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	1	0	1	0.00%
R: Used an arithmetic table	0	1	0	1	0.00%
S: Used math manipulatives	0	1	0	1	0.00%

Special Services Summary for Chemistry					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	6	3	9	0.03%
Y: Leave blank	0	1	1	2	0.01%
Z: Examiner read test questions aloud	0	3	3	6	0.02%
Accom. or Mod. is in Section 504 plan	0	1	1	2	0.01%
Accom. or Mod. is in IEP	0	18	17	35	0.13%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	1	1	2	0.01%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	20	20	40	0.15%
No Accom., Mod., or EL Variation	728	15,507	10,938	27,173	99.85%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	1	2	3	0.02%
C: Dictated responses to a scribe	0	0	1	1	0.01%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	1	0	1	0.01%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	1	7	8	0.04%
K: Had supervised breaks	17	83	122	222	1.24%
L: Most beneficial time of day	0	11	16	27	0.15%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	5	5	0.03%
O: Examiner presented using MCE or ASL	0	0	15	15	0.08%
Q: Used a calculator	0	6	10	16	0.09%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	1	0	1	0.01%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	3	22	23	48	0.27%
Y: Leave blank	0	3	21	24	0.13%
Z: Examiner read test questions aloud	2	16	35	53	0.30%
Accom. or Mod. is in Section 504 plan	0	0	1	1	0.01%
Accom. or Mod. is in IEP	16	106	203	325	1.82%
English Learner Test Variation A	4	30	25	59	0.33%
English Learner Test Variation B	1	7	9	17	0.09%
English Learner Test Variation C	7	54	70	131	0.73%
English Learner Test Variation D	4	57	108	169	0.94%
Any Accom., Mod., or EL Variation	27	205	363	595	3.32%
No Accom., Mod., or EL Variation	588	6,120	10,595	17,303	96.68%

Special Services Summary for Chemistry					
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	3	7	10	0.01%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	2	2	4	0.00%
G: Used braille version of test	0	2	2	4	0.00%
H: Used large-print version of test	0	7	1	8	0.01%
J: Tested during more than one day	0	3	2	5	0.01%
K: Had supervised breaks	5	19	54	78	0.09%
L: Most beneficial time of day	1	2	4	7	0.01%
M: Administered at home or in a hospital	0	1	1	2	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	3	12	15	0.02%
R: Used an arithmetic table	0	0	1	1	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	2	12	11	25	0.03%
Y: Leave blank	0	2	7	9	0.01%
Z: Examiner read test questions aloud	0	3	8	11	0.01%
Accom. or Mod. is in Section 504 plan	0	2	3	5	0.01%
Accom. or Mod. is in IEP	7	44	93	144	0.17%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	1	1	2	0.00%
English Learner Test Variation C	0	1	0	1	0.00%
English Learner Test Variation D	0	2	1	3	0.00%
Any Accom., Mod., or EL Variation	7	49	100	156	0.18%
No Accom., Mod., or EL Variation	1,588	41,854	41,465	84,907	99.82%

Table 2.D.24 Special Services Summary for Earth Science

Special Services Summary for Earth Science					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	108	28	22	158	0.08%
C: Dictated responses to a scribe	7	5	7	19	0.01%
F: Used noninterfering assistive device	5	1	2	8	0.00%
G: Used braille version of test	6	2	2	10	0.01%
H: Used large-print version of test	36	10	15	61	0.03%
J: Tested during more than one day	144	21	37	202	0.10%
K: Had supervised breaks	1,732	377	467	2,576	1.29%
L: Most beneficial time of day	255	80	62	397	0.20%
M: Administered at home or in a hospital	30	13	13	56	0.03%
N: Used a dictionary	8	1	3	12	0.01%
O: Examiner presented using MCE or ASL	11	1	5	17	0.01%
Q: Used a calculator	39	0	8	47	0.02%
R: Used an arithmetic table	1	0	0	1	0.00%
S: Used math manipulatives	0	1	0	1	0.00%
V: Used interfering assistive device	1	0	0	1	0.00%
W: Used an unlisted modification	5	1	0	6	0.00%
X: Used an unlisted accommodation	199	65	127	391	0.20%
Y: Leave blank	204	43	45	292	0.15%
Z: Examiner read test questions aloud	553	110	166	829	0.42%
Accom. or Mod. is in Section 504 plan	50	20	15	85	0.04%
Accom. or Mod. is in IEP	2,530	550	740	3,820	1.92%
English Learner Test Variation A	194	50	60	304	0.15%
English Learner Test Variation B	88	15	7	110	0.06%
English Learner Test Variation C	235	71	76	382	0.19%
English Learner Test Variation D	398	57	114	569	0.29%
Any Accom., Mod., or EL Variation	3,254	706	948	4,908	2.46%
No Accom., Mod., or EL Variation	124,169	29,399	40,904	194,472	97.54%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	5	1	0	6	0.00%
C: Dictated responses to a scribe	1	0	1	2	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	3	0	2	5	0.00%
J: Tested during more than one day	6	0	0	6	0.00%
K: Had supervised breaks	57	7	18	82	0.05%
L: Most beneficial time of day	5	4	1	10	0.01%
M: Administered at home or in a hospital	14	7	8	29	0.02%
N: Used a dictionary	2	0	0	2	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	2	0	0	2	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Earth Science					
V: Used interfering assistive device	1	0	0	1	0.00%
W: Used an unlisted modification	3	1	0	4	0.00%
X: Used an unlisted accommodation	16	5	1	22	0.01%
Y: Leave blank	14	8	4	26	0.02%
Z: Examiner read test questions aloud	5	2	3	10	0.01%
Accom. or Mod. is in Section 504 plan	44	17	15	76	0.04%
Accom. or Mod. is in IEP	50	9	11	70	0.04%
English Learner Test Variation A	188	50	60	298	0.17%
English Learner Test Variation B	47	14	6	67	0.04%
English Learner Test Variation C	231	71	76	378	0.22%
English Learner Test Variation D	359	54	107	520	0.30%
Any Accom., Mod., or EL Variation	614	138	191	943	0.54%
No Accom., Mod., or EL Variation	111,477	25,006	35,857	172,340	99.46%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	103	26	22	151	0.58%
C: Dictated responses to a scribe	6	5	6	17	0.07%
F: Used noninterfering assistive device	5	1	2	8	0.03%
G: Used braille version of test	6	2	2	10	0.04%
H: Used large-print version of test	33	10	13	56	0.22%
J: Tested during more than one day	138	21	37	196	0.75%
K: Had supervised breaks	1,671	369	449	2,489	9.57%
L: Most beneficial time of day	250	76	61	387	1.49%
M: Administered at home or in a hospital	16	6	5	27	0.10%
N: Used a dictionary	6	1	3	10	0.04%
O: Examiner presented using MCE or ASL	11	1	5	17	0.07%
Q: Used a calculator	37	0	8	45	0.17%
R: Used an arithmetic table	1	0	0	1	0.00%
S: Used math manipulatives	0	1	0	1	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	2	0	0	2	0.01%
X: Used an unlisted accommodation	183	60	126	369	1.42%
Y: Leave blank	189	35	41	265	1.02%
Z: Examiner read test questions aloud	547	108	163	818	3.15%
Accom. or Mod. is in Section 504 plan	6	3	0	9	0.03%
Accom. or Mod. is in IEP	2,474	539	729	3,742	14.39%
English Learner Test Variation A	6	0	0	6	0.02%
English Learner Test Variation B	40	1	1	42	0.16%
English Learner Test Variation C	4	0	0	4	0.02%
English Learner Test Variation D	39	3	7	49	0.19%
Any Accom., Mod., or EL Variation	2,634	566	757	3,957	15.21%
No Accom., Mod., or EL Variation	12,639	4,381	5,032	22,052	84.79%

Special Services Summary for Earth Science					
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	84	23	17	124	0.11%
C: Dictated responses to a scribe	7	5	1	13	0.01%
F: Used noninterfering assistive device	3	0	2	5	0.00%
G: Used braille version of test	4	2	0	6	0.01%
H: Used large-print version of test	22	6	8	36	0.03%
J: Tested during more than one day	95	20	25	140	0.12%
K: Had supervised breaks	1,102	253	302	1,657	1.44%
L: Most beneficial time of day	174	59	41	274	0.24%
M: Administered at home or in a hospital	26	8	6	40	0.03%
N: Used a dictionary	3	0	0	3	0.00%
O: Examiner presented using MCE or ASL	7	1	4	12	0.01%
Q: Used a calculator	31	0	5	36	0.03%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	1	0	1	0.00%
V: Used interfering assistive device	1	0	0	1	0.00%
W: Used an unlisted modification	4	1	0	5	0.00%
X: Used an unlisted accommodation	140	48	78	266	0.23%
Y: Leave blank	128	29	28	185	0.16%
Z: Examiner read test questions aloud	290	51	90	431	0.37%
Accom. or Mod. is in Section 504 plan	44	19	15	78	0.07%
Accom. or Mod. is in IEP	1,559	344	455	2,358	2.05%
English Learner Test Variation A	5	0	0	5	0.00%
English Learner Test Variation B	12	0	1	13	0.01%
English Learner Test Variation C	3	0	0	3	0.00%
English Learner Test Variation D	6	0	0	6	0.01%
Any Accom., Mod., or EL Variation	1,694	380	486	2,560	2.23%
No Accom., Mod., or EL Variation	72,218	17,328	22,904	112,450	97.77%
Initially Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	4	0	0	4	0.04%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	1	0	0	1	0.01%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	2	0	0	2	0.02%
K: Had supervised breaks	29	15	6	50	0.46%
L: Most beneficial time of day	1	2	0	3	0.03%
M: Administered at home or in a hospital	0	2	0	2	0.02%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	1	0	0	1	0.01%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Earth Science					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	7	1	2	10	0.09%
Y: Leave blank	3	1	2	6	0.06%
Z: Examiner read test questions aloud	22	0	3	25	0.23%
Accom. or Mod. is in Section 504 plan	0	1	0	1	0.01%
Accom. or Mod. is in IEP	57	16	12	85	0.78%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	60	18	12	90	0.83%
No Accom., Mod., or EL Variation	7,099	1,315	2,327	10,741	99.17%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	9	3	3	15	0.04%
C: Dictated responses to a scribe	0	0	6	6	0.02%
F: Used noninterfering assistive device	2	1	0	3	0.01%
G: Used braille version of test	0	0	1	1	0.00%
H: Used large-print version of test	11	1	4	16	0.05%
J: Tested during more than one day	38	1	10	49	0.14%
K: Had supervised breaks	486	80	118	684	1.95%
L: Most beneficial time of day	69	14	15	98	0.28%
M: Administered at home or in a hospital	3	2	6	11	0.03%
N: Used a dictionary	5	0	2	7	0.02%
O: Examiner presented using MCE or ASL	3	0	1	4	0.01%
Q: Used a calculator	4	0	2	6	0.02%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	38	12	40	90	0.26%
Y: Leave blank	58	10	13	81	0.23%
Z: Examiner read test questions aloud	214	52	63	329	0.94%
Accom. or Mod. is in Section 504 plan	3	0	0	3	0.01%
Accom. or Mod. is in IEP	743	150	214	1,107	3.16%
English Learner Test Variation A	185	50	60	295	0.84%
English Learner Test Variation B	72	15	6	93	0.27%
English Learner Test Variation C	230	71	76	377	1.08%
English Learner Test Variation D	384	57	114	555	1.58%
Any Accom., Mod., or EL Variation	1,310	266	389	1,965	5.61%
No Accom., Mod., or EL Variation	20,415	5,501	7,135	33,051	94.39%

Special Services Summary for Earth Science					
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	11	2	2	15	0.04%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	1	0	1	2	0.01%
H: Used large-print version of test	3	3	3	9	0.02%
J: Tested during more than one day	9	0	2	11	0.03%
K: Had supervised breaks	113	29	41	183	0.48%
L: Most beneficial time of day	11	5	5	21	0.06%
M: Administered at home or in a hospital	1	1	1	3	0.01%
N: Used a dictionary	0	1	1	2	0.01%
O: Examiner presented using MCE or ASL	1	0	0	1	0.00%
Q: Used a calculator	3	0	1	4	0.01%
R: Used an arithmetic table	1	0	0	1	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	1	0	0	1	0.00%
X: Used an unlisted accommodation	14	3	7	24	0.06%
Y: Leave blank	15	3	2	20	0.05%
Z: Examiner read test questions aloud	27	7	9	43	0.11%
Accom. or Mod. is in Section 504 plan	3	0	0	3	0.01%
Accom. or Mod. is in IEP	170	39	58	267	0.70%
English Learner Test Variation A	4	0	0	4	0.01%
English Learner Test Variation B	4	0	0	4	0.01%
English Learner Test Variation C	2	0	0	2	0.01%
English Learner Test Variation D	7	0	0	7	0.02%
Any Accom., Mod., or EL Variation	187	41	59	287	0.75%
No Accom., Mod., or EL Variation	24,230	5,187	8,477	37,894	99.25%

Table 2.D.25 Special Services Summary for Physics

Special Services Summary for Physics					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	1	3	11	15	0.02%
C: Dictated responses to a scribe	0	1	1	2	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	2	2	0.00%
H: Used large-print version of test	3	2	7	12	0.01%
J: Tested during more than one day	6	4	7	17	0.02%
K: Had supervised breaks	111	41	127	279	0.33%
L: Most beneficial time of day	2	14	29	45	0.05%
M: Administered at home or in a hospital	1	0	2	3	0.00%
N: Used a dictionary	0	1	0	1	0.00%
O: Examiner presented using MCE or ASL	0	1	0	1	0.00%
Q: Used a calculator	2	32	18	52	0.06%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	1	1	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	1	0	1	2	0.00%
X: Used an unlisted accommodation	39	9	26	74	0.09%
Y: Leave blank	1	1	9	11	0.01%
Z: Examiner read test questions aloud	28	17	17	62	0.07%
Accom. or Mod. is in Section 504 plan	5	0	12	17	0.02%
Accom. or Mod. is in IEP	158	65	176	399	0.47%
English Learner Test Variation A	14	4	10	28	0.03%
English Learner Test Variation B	3	1	0	4	0.00%
English Learner Test Variation C	27	17	22	66	0.08%
English Learner Test Variation D	0	11	14	25	0.03%
Any Accom., Mod., or EL Variation	192	122	231	545	0.64%
No Accom., Mod., or EL Variation	16,227	10,435	58,266	84,928	99.36%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	1	1	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	1	1	0.00%
J: Tested during more than one day	0	0	2	2	0.00%
K: Had supervised breaks	9	1	7	17	0.02%
L: Most beneficial time of day	1	0	3	4	0.00%
M: Administered at home or in a hospital	0	0	1	1	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	1	0	1	0.00%
Q: Used a calculator	0	27	1	28	0.03%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Physics					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	4	1	6	11	0.01%
Y: Leave blank	0	0	5	5	0.01%
Z: Examiner read test questions aloud	1	0	0	1	0.00%
Accom. or Mod. is in Section 504 plan	4	0	12	16	0.02%
Accom. or Mod. is in IEP	10	2	9	21	0.03%
English Learner Test Variation A	14	4	10	28	0.03%
English Learner Test Variation B	1	1	0	2	0.00%
English Learner Test Variation C	26	17	22	65	0.08%
English Learner Test Variation D	0	10	14	24	0.03%
Any Accom., Mod., or EL Variation	40	57	61	158	0.19%
No Accom., Mod., or EL Variation	15,511	10,081	56,926	82,518	99.81%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	1	3	10	14	0.50%
C: Dictated responses to a scribe	0	1	1	2	0.07%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	2	2	0.07%
H: Used large-print version of test	3	2	6	11	0.39%
J: Tested during more than one day	6	4	5	15	0.54%
K: Had supervised breaks	102	40	120	262	9.40%
L: Most beneficial time of day	1	14	26	41	1.47%
M: Administered at home or in a hospital	1	0	1	2	0.07%
N: Used a dictionary	0	1	0	1	0.04%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	2	5	17	24	0.86%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	1	1	0.04%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	1	0	1	2	0.07%
X: Used an unlisted accommodation	35	8	20	63	2.26%
Y: Leave blank	0	1	4	5	0.18%
Z: Examiner read test questions aloud	27	17	17	61	2.19%
Accom. or Mod. is in Section 504 plan	1	0	0	1	0.04%
Accom. or Mod. is in IEP	147	63	167	377	13.53%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	2	0	0	2	0.07%
English Learner Test Variation C	1	0	0	1	0.04%
English Learner Test Variation D	0	1	0	1	0.04%
Any Accom., Mod., or EL Variation	151	65	170	386	13.85%
No Accom., Mod., or EL Variation	710	353	1,338	2,401	86.15%

Special Services Summary for Physics					
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	1	3	7	11	0.02%
C: Dictated responses to a scribe	0	0	1	1	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	1	1	0.00%
H: Used large-print version of test	3	1	4	8	0.02%
J: Tested during more than one day	3	3	6	12	0.03%
K: Had supervised breaks	60	28	74	162	0.35%
L: Most beneficial time of day	1	12	19	32	0.07%
M: Administered at home or in a hospital	0	0	1	1	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	1	27	9	37	0.08%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	1	1	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	1	0	1	2	0.00%
X: Used an unlisted accommodation	31	9	10	50	0.11%
Y: Leave blank	1	1	8	10	0.02%
Z: Examiner read test questions aloud	7	15	13	35	0.07%
Accom. or Mod. is in Section 504 plan	4	0	8	12	0.03%
Accom. or Mod. is in IEP	93	48	106	247	0.53%
English Learner Test Variation A	3	0	1	4	0.01%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	3	0	0	3	0.01%
English Learner Test Variation D	0	0	1	1	0.00%
Any Accom., Mod., or EL Variation	102	73	119	294	0.63%
No Accom., Mod., or EL Variation	8,356	6,195	32,079	46,630	99.37%
Initially Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	1	1	0.01%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	1	3	3	7	0.08%
L: Most beneficial time of day	0	1	0	1	0.01%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	1	1	0.01%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Physics					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	2	0	3	5	0.06%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	1	0	1	2	0.02%
Accom. or Mod. is in Section 504 plan	0	0	1	1	0.01%
Accom. or Mod. is in IEP	3	3	4	10	0.12%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	3	3	6	12	0.14%
No Accom., Mod., or EL Variation	1,731	990	5,792	8,513	99.86%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	3	1	0	4	0.08%
K: Had supervised breaks	40	7	34	81	1.68%
L: Most beneficial time of day	0	1	8	9	0.19%
M: Administered at home or in a hospital	1	0	1	2	0.04%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	4	7	11	0.23%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	6	0	11	17	0.35%
Y: Leave blank	0	0	1	1	0.02%
Z: Examiner read test questions aloud	19	1	3	23	0.48%
Accom. or Mod. is in Section 504 plan	1	0	2	3	0.06%
Accom. or Mod. is in IEP	50	9	43	102	2.11%
English Learner Test Variation A	11	4	9	24	0.50%
English Learner Test Variation B	1	1	0	2	0.04%
English Learner Test Variation C	24	17	22	63	1.30%
English Learner Test Variation D	0	11	13	24	0.50%
Any Accom., Mod., or EL Variation	75	39	82	196	4.06%
No Accom., Mod., or EL Variation	1,443	690	2,503	4,636	95.94%

Special Services Summary for Physics					
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	4	4	0.02%
C: Dictated responses to a scribe	0	1	0	1	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	1	1	0.00%
H: Used large-print version of test	0	1	2	3	0.01%
J: Tested during more than one day	0	0	1	1	0.00%
K: Had supervised breaks	9	3	16	28	0.11%
L: Most beneficial time of day	1	0	2	3	0.01%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	1	0	1	0.00%
O: Examiner presented using MCE or ASL	0	1	0	1	0.00%
Q: Used a calculator	1	1	1	3	0.01%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	2	2	0.01%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	1	1	0	2	0.01%
Accom. or Mod. is in Section 504 plan	0	0	1	1	0.00%
Accom. or Mod. is in IEP	11	5	23	39	0.16%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	2	0	0	2	0.01%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	11	7	24	42	0.17%
No Accom., Mod., or EL Variation	4,663	2,550	17,841	25,054	99.83%

Table 2.D.26 Special Services Summary for Integrated/Coordinated Science 1

Special Services Summary for Integrated/Coordinated Science 1					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	11	1	5	17	0.04%
C: Dictated responses to a scribe	1	0	1	2	0.01%
F: Used noninterfering assistive device	3	0	0	3	0.01%
G: Used braille version of test	4	0	2	6	0.02%
H: Used large-print version of test	10	1	5	16	0.04%
J: Tested during more than one day	14	5	18	37	0.09%
K: Had supervised breaks	295	56	77	428	1.08%
L: Most beneficial time of day	127	26	28	181	0.45%
M: Administered at home or in a hospital	0	0	5	5	0.01%
N: Used a dictionary	4	2	7	13	0.03%
O: Examiner presented using MCE or ASL	12	0	1	13	0.03%
Q: Used a calculator	29	10	10	49	0.12%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	1	0	0	1	0.00%
X: Used an unlisted accommodation	62	5	7	74	0.19%
Y: Leave blank	10	6	3	19	0.05%
Z: Examiner read test questions aloud	80	4	28	112	0.28%
Accom. or Mod. is in Section 504 plan	1	0	1	2	0.01%
Accom. or Mod. is in IEP	471	81	134	686	1.72%
English Learner Test Variation A	27	6	3	36	0.09%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	59	12	17	88	0.22%
English Learner Test Variation D	36	17	7	60	0.15%
Any Accom., Mod., or EL Variation	560	106	156	822	2.07%
No Accom., Mod., or EL Variation	27,841	3,864	7,275	38,980	97.93%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	1	0	0	1	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	4	0	0	4	0.01%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	1	1	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	1	0	1	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Integrated/Coordinated Science 1					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	1	0	0	1	0.00%
X: Used an unlisted accommodation	3	0	0	3	0.01%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	1	1	0.00%
Accom. or Mod. is in Section 504 plan	1	0	1	2	0.01%
Accom. or Mod. is in IEP	8	1	0	9	0.03%
English Learner Test Variation A	26	6	3	35	0.10%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	58	12	17	87	0.25%
English Learner Test Variation D	35	16	7	58	0.17%
Any Accom., Mod., or EL Variation	85	23	21	129	0.37%
No Accom., Mod., or EL Variation	25,026	3,175	6,226	34,427	99.63%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	11	1	5	17	0.33%
C: Dictated responses to a scribe	1	0	1	2	0.04%
F: Used noninterfering assistive device	3	0	0	3	0.06%
G: Used braille version of test	4	0	2	6	0.11%
H: Used large-print version of test	9	1	5	15	0.29%
J: Tested during more than one day	14	5	18	37	0.71%
K: Had supervised breaks	288	55	77	420	8.04%
L: Most beneficial time of day	126	26	28	180	3.44%
M: Administered at home or in a hospital	0	0	4	4	0.08%
N: Used a dictionary	4	2	7	13	0.25%
O: Examiner presented using MCE or ASL	12	0	1	13	0.25%
Q: Used a calculator	29	9	10	48	0.92%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	59	5	7	71	1.36%
Y: Leave blank	10	6	3	19	0.36%
Z: Examiner read test questions aloud	80	4	27	111	2.12%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	460	79	134	673	12.88%
English Learner Test Variation A	1	0	0	1	0.02%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	1	0	0	1	0.02%
English Learner Test Variation D	1	1	0	2	0.04%
Any Accom., Mod., or EL Variation	472	82	135	689	13.18%
No Accom., Mod., or EL Variation	2,804	686	1,048	4,538	86.82%

Special Services Summary for Integrated/Coordinated Science 1					
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	7	1	4	12	0.06%
C: Dictated responses to a scribe	1	0	0	1	0.00%
F: Used noninterfering assistive device	1	0	0	1	0.00%
G: Used braille version of test	3	0	0	3	0.01%
H: Used large-print version of test	5	0	4	9	0.04%
J: Tested during more than one day	11	3	17	31	0.15%
K: Had supervised breaks	175	39	59	273	1.36%
L: Most beneficial time of day	89	21	23	133	0.66%
M: Administered at home or in a hospital	0	0	4	4	0.02%
N: Used a dictionary	2	1	4	7	0.03%
O: Examiner presented using MCE or ASL	4	0	1	5	0.02%
Q: Used a calculator	17	8	7	32	0.16%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	1	0	0	1	0.00%
X: Used an unlisted accommodation	38	1	4	43	0.21%
Y: Leave blank	7	2	3	12	0.06%
Z: Examiner read test questions aloud	42	3	21	66	0.33%
Accom. or Mod. is in Section 504 plan	0	0	1	1	0.00%
Accom. or Mod. is in IEP	278	51	101	430	2.15%
English Learner Test Variation A	1	0	0	1	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	10	0	1	11	0.05%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	295	52	105	452	2.26%
No Accom., Mod., or EL Variation	13,798	2,058	3,714	19,570	97.74%
Initially Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	1	0	0	3	0.11%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	2	1	0	3	0.11%
J: Tested during more than one day	1	0	0	1	0.04%
K: Had supervised breaks	11	0	2	13	0.47%
L: Most beneficial time of day	4	0	1	5	0.18%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	1	0	0	1	0.04%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Integrated/Coordinated Science 1					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	2	0	0	2	0.07%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	16	1	2	19	0.69%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	16	1	2	19	0.69%
No Accom., Mod., or EL Variation	2,230	170	321	2,721	99.31%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	1	0	0	1	0.01%
C: Dictated responses to a scribe	0	0	1	1	0.01%
F: Used noninterfering assistive device	1	0	0	1	0.01%
G: Used braille version of test	1	0	2	3	0.04%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	2	1	1	4	0.06%
K: Had supervised breaks	79	16	14	109	1.52%
L: Most beneficial time of day	25	5	3	33	0.46%
M: Administered at home or in a hospital	0	0	1	1	0.01%
N: Used a dictionary	1	1	3	5	0.07%
O: Examiner presented using MCE or ASL	6	0	0	6	0.08%
Q: Used a calculator	8	2	3	13	0.18%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	19	4	2	25	0.35%
Y: Leave blank	1	4	0	5	0.07%
Z: Examiner read test questions aloud	25	0	5	30	0.42%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	129	26	27	182	2.53%
English Learner Test Variation A	26	6	3	35	0.49%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	49	12	16	77	1.07%
English Learner Test Variation D	36	17	7	60	0.84%
Any Accom., Mod., or EL Variation	200	50	45	295	4.11%
No Accom., Mod., or EL Variation	4,265	900	1,725	6,890	95.89%

Special Services Summary for Integrated/Coordinated Science 1					
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	1	1	0.01%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	1	0	0	1	0.01%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	3	0	1	4	0.04%
J: Tested during more than one day	0	1	0	1	0.01%
K: Had supervised breaks	30	1	2	33	0.34%
L: Most beneficial time of day	9	0	1	10	0.10%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	1	0	0	1	0.01%
O: Examiner presented using MCE or ASL	1	0	0	1	0.01%
Q: Used a calculator	4	0	0	4	0.04%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	5	0	1	6	0.06%
Y: Leave blank	2	0	0	2	0.02%
Z: Examiner read test questions aloud	11	1	2	14	0.14%
Accom. or Mod. is in Section 504 plan	1	0	0	1	0.01%
Accom. or Mod. is in IEP	48	3	4	55	0.56%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	49	3	4	56	0.57%
No Accom., Mod., or EL Variation	7,510	728	1,503	9,741	99.43%

Table 2.D.27 Special Services Summary for Integrated/Coordinated Science 2

Special Services Summary for Integrated/Coordinated Science 2					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	1	0	1	0.03%
C: Dictated responses to a scribe	0	0	1	1	0.03%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	1	1	0.03%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	29	8	37	1.08%
L: Most beneficial time of day	0	0	1	1	0.03%
M: Administered at home or in a hospital	0	1	0	1	0.03%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	6	6	0.18%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	4	1	11	16	0.47%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	1	2	1	4	0.12%
Accom. or Mod. is in Section 504 plan	0	0	1	1	0.03%
Accom. or Mod. is in IEP	5	26	22	53	1.55%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	10	10	0.29%
English Learner Test Variation D	0	0	10	10	0.29%
Any Accom., Mod., or EL Variation	5	32	34	71	2.08%
No Accom., Mod., or EL Variation	1,137	1,278	932	3,347	97.92%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0.00%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	1	0	1	0.03%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Integrated/Coordinated Science 2					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	1	1	0.03%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	1	1	0.03%
Accom. or Mod. is in IEP	0	0	0	0	0.00%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	10	10	0.33%
English Learner Test Variation D	0	0	10	10	0.33%
Any Accom., Mod., or EL Variation	0	1	11	12	0.39%
No Accom., Mod., or EL Variation	1,079	1,132	831	3,042	99.61%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	1	0	1	0.27%
C: Dictated responses to a scribe	0	0	1	1	0.27%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	1	1	0.27%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	29	8	37	10.16%
L: Most beneficial time of day	0	0	1	1	0.27%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	6	6	1.65%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	4	1	10	15	4.12%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	1	2	1	4	1.10%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	5	26	22	53	14.56%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	5	31	23	59	16.21%
No Accom., Mod., or EL Variation	58	146	101	305	83.79%

Special Services Summary for Integrated/Coordinated Science 2					
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	1	0	1	0.06%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	1	1	0.06%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	10	5	15	0.91%
L: Most beneficial time of day	0	0	1	1	0.06%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	2	2	0.12%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	4	1	6	11	0.66%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	1	2	1	4	0.24%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	5	12	13	30	1.81%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	5	12	14	31	1.87%
No Accom., Mod., or EL Variation	710	420	494	1,624	98.13%
Initially Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	1	1	0.33%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0.00%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	1	1	0.33%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Integrated/Coordinated Science 2					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	1	1	0.33%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	2	2	0.67%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	2	2	0.67%
No Accom., Mod., or EL Variation	143	101	53	297	99.33%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	17	2	19	3.34%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	2	2	0.35%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	3	3	0.53%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	12	5	17	2.99%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	10	10	1.76%
English Learner Test Variation D	0	0	10	10	1.76%
Any Accom., Mod., or EL Variation	0	17	15	32	5.62%
No Accom., Mod., or EL Variation	130	219	188	537	94.38%

Special Services Summary for Integrated/Coordinated Science 2					
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	2	1	3	0.34%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	1	0	1	0.11%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	1	1	0.11%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	2	2	4	0.45%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	3	2	5	0.56%
No Accom., Mod., or EL Variation	150	538	197	885	99.44%

Table 2.D.28 Special Services Summary for Integrated/Coordinated Science 3

Special Services Summary for Integrated/Coordinated Science 3					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. Of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	9	9	1.04%
K: Had supervised breaks	1	1	26	28	3.22%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	11	11	1.27%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	1	1	0.12%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	1	2	3	0.35%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	1	2	39	42	4.83%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	1	5	1	7	0.81%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	2	7	41	50	5.75%
No Accom., Mod., or EL Variation	32	128	659	819	94.25%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. Of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	1	1	0.15%
K: Had supervised breaks	0	0	2	2	0.30%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Integrated/Coordinated Science 3					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	2	2	0.30%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	3	1	4	0.59%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	3	3	6	0.89%
No Accom., Mod., or EL Variation	30	104	533	667	99.11%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. Of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	8	8	4.12%
K: Had supervised breaks	1	1	24	26	13.40%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	11	11	5.67%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	1	1	0.52%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	1	2	3	1.55%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	1	2	37	40	20.62%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	1	2	0	3	1.55%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	2	4	38	44	22.68%
No Accom., Mod., or EL Variation	2	22	126	150	77.32%

Special Services Summary for Integrated/Coordinated Science 3					
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. Of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	6	6	1.16%
K: Had supervised breaks	1	1	15	17	3.29%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	4	4	0.77%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	1	1	0.19%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	2	2	0.39%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	1	1	21	23	4.45%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	1	1	22	24	4.64%
No Accom., Mod., or EL Variation	30	75	388	493	95.36%
Initially Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. Of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0.00%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Integrated/Coordinated Science 3					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	0	0	0.00%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	0	0	0.00%
No Accom., Mod., or EL Variation	1	8	35	44	100.00%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. Of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	3	3	2.05%
K: Had supervised breaks	0	0	10	10	6.85%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	7	7	4.79%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	1	0	1	0.68%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	1	17	18	12.33%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	1	5	1	7	4.79%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	1	6	18	25	17.12%
No Accom., Mod., or EL Variation	0	19	102	121	82.88%

Special Services Summary for Integrated/Coordinated Science 3					
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. Of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0.00%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	0	0	0.00%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	0	0	0.00%
No Accom., Mod., or EL Variation	1	26	131	158	100.00%

Table 2.D.29 Special Services Summary for Integrated/Coordinated Science 4

Special Services Summary for Integrated/Coordinated Science 4					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0.00%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	0	0	0.00%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	0	0	0.00%
No Accom., Mod., or EL Variation	29	13	15	57	100.00%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0.00%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Integrated/Coordinated Science 4					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	0	0	0.00%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	0	0	0.00%
No Accom., Mod., or EL Variation	13	10	12	35	100.00%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0.00%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	0	0	0.00%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	0	0	0.00%
No Accom., Mod., or EL Variation	16	3	3	22	100.00%

Special Services Summary for Integrated/Coordinated Science 4					
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0.00%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	0	0	0.00%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	0	0	0.00%
No Accom., Mod., or EL Variation	13	11	11	35	100.00%
Initially Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0.00%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%

Special Services Summary for Integrated/Coordinated Science 4					
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	0	0	0.00%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	0	0	0.00%
No Accom., Mod., or EL Variation	1	0	0	1	100.00%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0.00%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	0	0	0.00%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	0	0	0.00%
No Accom., Mod., or EL Variation	12	1	1	14	100.00%

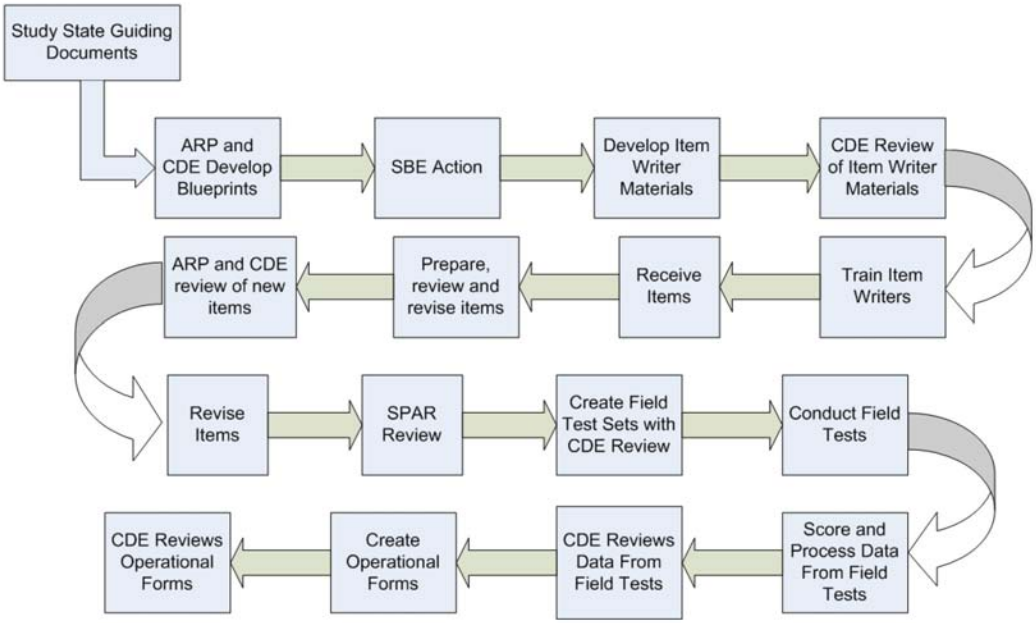
Special Services Summary for Integrated/Coordinated Science 4					
Reclassified Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked responses in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used noninterfering assistive device	0	0	0	0	0.00%
G: Used braille version of test	0	0	0	0	0.00%
H: Used large-print version of test	0	0	0	0	0.00%
J: Tested during more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0.00%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	0	0	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented using MCE or ASL	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	0	0.00%
R: Used an arithmetic table	0	0	0	0	0.00%
S: Used math manipulatives	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	0	0	0	0	0.00%
Y: Leave blank	0	0	0	0	0.00%
Z: Examiner read test questions aloud	0	0	0	0	0.00%
Accom. or Mod. is in Section 504 plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	0	0	0.00%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	0	0	0	0.00%
No Accom., Mod., or EL Variation	3	1	3	7	100.00%

Chapter 3: Item Development

Test forms from previous STAR administrations from different years were reused during the 2013 administration to facilitate QTR. This reuse permitted score conversion tables from the previous administration to be used to look up student scores and performance levels, making individual student results available within approximately two weeks of processing the school district's scorable testing materials. There was no new item development for the 2013 forms.

The CST items are developed to measure California's content standards and designed to conform to principles of item writing defined by ETS (ETS, 2002). Each CST item on the tests reused in 2013 went through a comprehensive development cycle as is described in Figure 3.1, below.

Figure 3.1 The ETS Item Development Process for the STAR Program



Rules for Item Development

ETS maintains item development specifications for each CST and developed an item utilization plan to guide the development of the items for each content area. Item writing emphasis is determined in consultation with the CDE.

Item Specifications

The item specifications describe the characteristics of the items that should be written to measure each content standard. The item specifications helped ensure that the items on the CSTs measured the content standards. To achieve this, the item specifications provided detailed information to item writers who developed items for the CSTs. The specifications include the following:

- A full statement of each academic content standard, as defined by the SBE (CDE, 2009)
- A description of each content strand
- The expected depth of knowledge (DOK) measured by items written for each standard (coded as 1, 2, 3, or 4; items assigned a DOK of 1 are the least cognitively complex,

items assigned a DOK of 3 are the most cognitively complex, and the code of 4 applies only to some writing tasks)

- The homogeneity of the construct measured by each standard
- A description of the kinds of item stems appropriate for multiple-choice items used to assess each standard
- A description of the kinds of distractors that are appropriate for multiple-choice items assessing each standard
- A description of appropriate data representations (such as charts, tables, graphs, or other illustrations) for mathematics, science, and history–social science items
- The content limits for the standard (such as one or two variables, maximum place values of numbers) for mathematics, science, and history–social science items
- A description of appropriate reading passages, if applicable, for ELA items
- A description of specific kinds of items to be avoided, if any (for example, items with any negative expressions in the stem, e.g., “Which of the following is NOT. . .”)

In addition, the ELA item specifications contain guidelines for passages used to assess reading comprehension and writing. These guidelines include the following:

- The acceptable ranges for passage length
- The expected distribution of passages by genre
- Guidelines for readability and cognitive load, using standards agreed to by the CDE and ETS
- Expected use of illustrations
- The target number of items that should follow each reading passage and each writing passage
- Appropriate readability levels for writing passages
- A list of topics to be avoided

Expected Item Ratio

ETS prepared the item utilization plan for the development of CST items. The plan includes strategies for developing items that permitted coverage of all appropriate standards for all tests in each content area and at each grade level. ETS test development staff used this plan to determine the number of items to develop for each content area. Because item development has been halted, the item utilization plan is no longer necessary.

The item utilization plan assumes that each year, 35 percent of items on an operational form would be refreshed (replaced); these items would remain in the item bank for future use. The plan also declares that an additional five percent of the operational items are likely to become unusable because of normal attrition and notes that there is a need to focus development on “critical” standards, which are standards that are difficult to measure well or for which there are few usable items.

For all content areas except science, it is assumed that at least 75 percent of all field-tested items are expected to have acceptable field-test statistics and become candidates for use in operational tests. For science, it is expected that 60 percent of the items achieve this status.

For the 2013 CST administration, field-test items were repeated as a part of the intact reused form.

Selection of Item Writers

Criteria for Selecting Item Writers

The items for each CST were written by individual item writers with a thorough understanding of the California content standards. Applicants for item writing were screened by senior ETS content staff. Only those with strong content and teaching backgrounds were approved for inclusion in the training program for item writers. Because most of the participants were current or former California educators, they were particularly knowledgeable about the standards assessed by the CSTs. All item writers met the following minimum qualifications:

- Possession of a Bachelor's degree in the relevant content area or in the field of education with special focus on a particular content of interest; an advanced degree in the relevant content area is desirable
- Previous experience in writing items for standards-based assessments, including knowledge of the many considerations that are important when developing items to match state-specific standards
- Previous experience in writing items in the content areas covered by CST grades and/or courses
- Familiarity, understanding, and support of the California content standards
- Current or previous teaching experience in California, when possible

Item Review Process

The items selected for each CST underwent an extensive item review process that was designed to provide the best standards-based tests possible. This section summarizes the various reviews performed that ensure the quality of the CST items and test forms—currently being reused—at the time the items and forms were developed. See Table 8.4 on page 374 for the dates of the previous administrations and Table 8.6 on page 382 for any items that were replaced in the form due to security breaches on social media Web sites.

Contractor Review

Once the items were written, ETS employed a series of internal reviews. The reviews established the criteria used to judge the quality of the item content and were designed to ensure that each item measured what it was intended to measure. The internal reviews also examined the overall quality of the test items before they were prepared for presentation to the CDE and the Assessment Review Panels (ARPs). Because of the complexities involved in producing defensible items for high-stakes programs such as the STAR Program, it was essential that many experienced individuals reviewed each item before it was brought to the CDE, the ARPs, and Statewide Pupil Assessment Review (SPAR) panels.

The ETS review process for the CSTs included the following:

1. Internal content review
2. Internal editorial review
3. Internal sensitivity review

Throughout this multistep item review process, the lead content-area assessment specialists and development team members continually evaluated the adherence to the rules for item development.

1. Internal Content Review

Test items and materials underwent two reviews by the content-area assessment specialists. These assessment specialists made sure that the test items and related materials were in compliance with ETS's written guidelines for clarity, style, accuracy, and appropriateness for California students as well as in compliance with the approved item specifications. Assessment specialists reviewed each item in terms of the following characteristics:

- Relevance of each item to the purpose of the test
- Match of each item to the item specifications, including DOK
- Match of each item to the principles of quality item writing
- Match of each item to the identified standard or standards
- Difficulty of the item
- Accuracy of the content of the item
- Readability of the item or passage
- Grade-level appropriateness of the item
- Appropriateness of any illustrations, graphs, or figures

Each item was classified with a code for the standard it was intended to measure. The assessment specialists checked all items against their classification codes, both to evaluate the correctness of the classification and to ensure that the task posed by the item was relevant to the outcome it was intended to measure. The reviewers could accept the item and classification as written, suggest revisions, or recommend that the item be discarded. These steps occurred prior to the CDE's review.

2. Internal Editorial Review

After the content-area assessment specialists reviewed each item, a group of specially trained editors reviewed each item in preparation for review by the CDE and the ARPs. The editors checked items for clarity, correctness of language, appropriateness of language for the grade level assessed, adherence to the style guidelines, and conformity with accepted item-writing practices.

3. Internal Sensitivity Review

ETS assessment specialists who are specially trained to identify and eliminate questions that contain content or wording that could be construed to be offensive to or biased against members of specific ethnic, racial, or gender groups, conducted the next level of review. These trained staff members reviewed every item before the CDE and ARP reviews.

The review process promotes a general awareness of and responsiveness to the following:

- Cultural diversity
- Diversity of background, cultural tradition, and viewpoints to be found in the test-taking populations
- Changing roles and attitudes toward various groups
- Role of language in setting and changing attitudes toward various groups
- Contributions of diverse groups (including ethnic and minority groups, individuals with disabilities, and women) to the history and culture of the United States and the achievements of individuals within these groups
- Item accessibility for English-language learners

Content Expert Reviews

Assessment Review Panels

ETS was responsible for working with ARPs as items were developed for the CSTs. The ARPs are advisory panels to the CDE and ETS and provided guidance on matters related to item development for the CSTs. The ARPs were responsible for reviewing all newly developed items for alignment to the California content standards. The ARPs also reviewed the items for accuracy of content, clarity of phrasing, and quality. In their examination of test items, the ARPs could raise concerns related to age/grade appropriateness and gender, racial, ethnic, and/or socioeconomic bias.

Composition of ARPs

The ARPs comprised current and former teachers, resource specialists, administrators, curricular experts, and other education professionals. Current school staff members met minimum qualifications to serve on the CST ARPs, including:

- Three or more years of general teaching experience in grades kindergarten through twelve and in the relevant content areas (ELA, history–social science, mathematics, or science);
- Bachelor's or higher degree in a grade or content area related to ELA, history–social science, mathematics, or science; and
- Knowledge and experience with the California content standards in ELA, history–social science, mathematics, or science.

School administrators, district/county content/program specialists, or university educators serving on the CST ARPs met the following qualifications:

- Three or more years of experience as a school administrator, district/county content/program specialist, or university instructor in a grade-specific area or area related to ELA, history–social science, mathematics, or science;
- Bachelor's or higher degree in a grade-specific or subject area related to ELA, history–social science, mathematics, or science; and
- Knowledge of and experience with the California content standards in ELA, history–social science, mathematics, or science.

Every effort was made to ensure that ARP committees included representation of genders and of the geographic regions and ethnic groups in California. Efforts were also made to ensure representation by members with experience serving California's diverse special education population.

ARP members were recruited through an application process. Recommendations were solicited from school districts and county offices of education as well as from CDE and SBE staff. Applications were reviewed by the ETS assessment directors, who confirmed that the applicant's qualifications met the specified criteria. Applications that met the criteria were forwarded to CDE and SBE staff for further review and agreement on ARP membership.

ARP members were employed as teachers, program specialists, university personnel, and district personnel, had a minimum of a bachelor's degree, and had experience teaching students, whether in a classroom setting or one-on-one.

ARP Meetings for Review of CST Items

ETS content-area assessment specialists facilitated the CST ARP meetings. Each meeting began with a brief training session on how to review items. ETS provided this training, which consisted of the following topics:

- Overview of the purpose and scope of the CSTs
- Overview of the CSTs' test design specifications and blueprints
- Analysis of the CSTs' item specifications
- Overview of criteria for evaluating multiple-choice test items and for reviewing constructed response writing tasks
- Review and evaluation of items for bias and sensitivity issues

The criteria for evaluating multiple-choice items and constructed-response writing tasks included the following:

- Overall technical quality
- Match to the California content standards
- Match to the construct being assessed by the standard
- Difficulty range
- Clarity
- Correctness of the answer
- Plausibility of the distractors
- Bias and sensitivity factors

Criteria also included more global factors, including—for ELA—the appropriateness, difficulty, and readability of reading passages. The ARPs also were trained on how to make recommendations for revising items.

Guidelines for reviewing items were provided by ETS and approved by the CDE. The set of guidelines for reviewing items is summarized below.

Does the item:

- Have one and only one clearly correct answer?
- Measure the content standard?
- Match the test item specifications?
- Align with the construct being measured?
- Test worthwhile concepts or information?
- Reflect good and current teaching practices?
- Have a stem that gives the student a full sense of what the item is asking?
- Avoid unnecessary wordiness?
- Use response options that relate to the stem in the same way?
- Use response options that are plausible and have reasonable misconceptions and errors?
- Avoid having one response option that is markedly different from the others?

- Avoid clues to students, such as absolutes or words repeated in both the stem and options?
- Reflect content that is free of bias against any person or group?

Is the stimulus, if any, for the item:

- Required in order to answer the item?
- Likely to be interesting to students?
- Clearly and correctly labeled?
- Providing all the information needed to answer the item?

As the first step of the item review process, ARP members reviewed a set of items independently and recorded their individual comments. The next step in the review process was for the group to discuss each item; the content-area assessment specialists facilitated the discussion and recorded all recommendations in a master item review booklet. Item review binders and other item evaluation materials also identified potential bias and sensitivity factors for the ARP to consider as a part of its item reviews.

Depending on CDE approval and the numbers of items still to be reviewed, some ARPs were divided further into smaller groups. The science ARP, for example, divided into content-area and grade-level groups. These smaller groups were also facilitated by the content-area assessment specialists.

ETS staff maintained the minutes summarizing the review process and then forwarded copies of the minutes to the CDE, emphasizing in particular the recommendations of the panel members.

Statewide Pupil Assessment Review Panel

The SPAR panel is responsible for reviewing and approving all achievement test items to be used statewide for the testing of students in California public schools, grades two through eleven. At the SPAR panel meetings, all new items were presented in binders for review. The SPAR panel representatives ensured that the test items conformed to the requirements of *EC* Section 60602. The constructed-response writing tasks were also presented for review. If the SPAR panel rejected specific items and/or constructed-response writing tasks, the items and/or tasks were marked for rejection in the item bank and excluded from use on field tests. For the SPAR panel meeting, the item development coordinator was available by telephone to respond to any questions during the course of the meeting.

Field Testing

The primary purposes of field testing are to obtain information about item performance and to obtain statistics that can be used to assemble operational forms. However, for the CSTs, because the previous forms are being reused with the field-test items intact for the 2013 STAR administration, data were not analyzed for current field-test items.

Stand-alone Field Testing

For each new CST launched, a pool of items was initially constructed by administering the newly developed items in a stand-alone field test. In stand-alone field testing, examinees are recruited to take tests outside of the usual testing circumstances, and the test results are typically not used for instructional or accountability purposes (Schmeiser & Welch, 2006).

In the case of writing prompts administered as part of the grades four and seven CSTs for ELA, due to time constraints, field-testing was conducted only as stand-alone event.

The writing prompts for the 2013 administration of grades four and seven CSTs for ELA were selected from the writing prompts field-tested by ETS in 2011. Before the field test, a task force was convened to provide an opportunity for representatives from the field and other specialists to recommend possible changes to the writing test that could be incorporated into the field tests. Ten prompts were field-tested for grade four, and twelve prompts were field-tested for grade seven to determine which of the modifications in format and directions recommended by the Writing Test Task Force were most helpful to students. These new writing prompts with modified formats and directions were field-tested with thousands of California students.

Following reviews of field-test results by the CDE, ETS, and the ELA ARP, two grade-four and two grade-seven prompts were selected for the subsequent administrations.

Embedded Field-test Items

Although a stand-alone field test is useful for developing a new test because it can produce a large pool of quality items, embedded field testing is generally preferred because the items being field-tested are seeded throughout the operational test. Variables such as test-taker motivation and test security are the same in embedded field testing as they will be when the field-tested items are later administered operationally. Such field testing involves distributing the items being field-tested within an operational test form. Different forms contain the same operational items and different field-test items. While the original field-test items remained in their original positions in the reused forms, data were not analyzed for field-test items. The numbers of embedded field test items for the CSTs are not presented because for the 2013 administration, field-test items were repeated as a part of the intact reused forms and there was no new item development.

Allocation of Students to Forms

The test forms for a given CST were spiraled among students in the state so that a large representative sample of test-takers responded to the field-test items embedded in these forms. The spiraling design ensured that a diverse sample of students took each field-test item. The students did not know which items were field-test items and which items were operational items; therefore, their motivation was not expected to vary over the two types of items (Patrick & Way, 2008).

CDE Data Review

Once items were field-tested, ETS prepared the items and the associated statistics for review by the CDE. ETS provided items with their statistical data, along with annotated comment sheets, for the CDE to use in its review. ETS conducted an introductory training to highlight any new issues and serve as a statistical refresher. CDE consultants then made decisions about which items should be included in the item bank. ETS psychometric and content staff were available to CDE consultants throughout this process.

Item Banking

Once the ARP new item review was complete, the items were placed in the item bank along with their corresponding review information. Items that were accepted by the ARP, SPAR, and CDE were updated to a “field-test ready” status; items that were rejected were updated to a “rejected before use” status. ETS then delivered the items to the CDE by means of a delivery of the California electronic item bank. Subsequent updates to items were based on

field-test and operational use of the items. However, only the latest content of the item is in the bank at any given time, along with the administration data from every administration that included the item.

After field-test or operational use, items that did not meet statistical specifications might be rejected; such items were updated with a status of “rejected for statistical reasons” and remain unavailable in the bank. These statistics were obtained by the psychometrics group at ETS, which carefully evaluated each item for its level of difficulty and discrimination as well as conformance to the IRT Rasch model. Psychometricians also determined if the item functioned similarly for various subgroups of interest.

Items that were released are marked “released.” They are not available for further use and remain unavailable in the bank. All unavailable items are marked with an availability indicator of “Unavailable,” a reason for rejection as described above, and cause alerts so they are not inadvertently included on subsequent test forms. Statuses and availability were updated programmatically as items were presented for review, accepted or rejected, placed on a form for field-testing, presented for statistical review, used operationally, and released. All rejection and release indications were monitored and controlled through ETS’s assessment development processes.

ETS currently provides and maintains the electronic item banks for several of the California assessments, including the California High School Exit Examination (CAHSEE), the California English Language Development Test (CELDT), and STAR (CSTs, CMA, CAPA, and STS). CAHSEE and STAR are currently consolidated in the California item banking system. ETS works with the CDE to obtain the data for assessments, such as the CELDT, under contract with other vendors for inclusion into the item bank. ETS provides the item banking application using the LAN architecture and the relational database management system, SQL 2008, already deployed. ETS provides updated versions of the item bank to the CDE on an ongoing basis and works with the CDE to determine the optimum process if a change in databases is desired.

References

California Department of Education. (2009). *California content standards*. Sacramento, CA. Downloaded from http://www.cde.ca.gov/be/st/ss/

Educational Testing Service. (2002). *ETS standards for quality and fairness*. Princeton, NJ: Author.

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Chapter 4: Test Assembly

The CSTs are constructed to measure students' performance relative to California's content standards approved by the SBE. They are also constructed to meet professional standards for validity and reliability. For each CST, the content standards and desired psychometric attributes are used as the basis for assembling the test forms.

Test Length

The number of items in each CST blueprint, adopted by the SBE in 2002, was determined by considering the construct that the test is intended to measure and the level of psychometric quality desired. Test length is closely related to the complexity of content to be measured by each test; this content is defined by the California content standards for each grade level and content area. Also considered is the goal that the test be short enough so that most of the students complete it in a reasonable amount of time.

The number of operational items on each CST varies by content area and grade. There are 65 operational items on the CSTs for ELA in grades two and three and 75 operational items in grades four through eleven. In addition, a writing test (essay) is administered in association with the CST for ELA in grades four and seven. The CST grade-level and end-of-course mathematics tests comprise 65 operational items and the CST grade-level and end-of-course science tests comprise 60 operational items each. The CST for History–Social Science (Grade 8) comprises 75 operational items while the CST for U.S. History administered in grade eleven and the end-of-course CST for World History comprise 60 operational items each.

The total number of items also varies. There are 71 items on ELA in grades two and three and all mathematics CSTs, and 66 items on all science CSTs and the history–social science for grade eleven and World History CSTs. There are 81 items on ELA in grades four through eleven and the grade eight history–social science CSTs.

In addition to operational items, six items on each test are field-test items. For more details on the distribution of items, see Appendix 2.A—CST Items and Estimated Time Chart starting on page 24.

Rules for Item Selection

Test Blueprint

All test items on CST forms were selected to conform to the SBE-approved California content standards and test blueprints. The content blueprints for the CSTs can be found on the CDE STAR CST Blueprints Web page at http://www.cde.ca.gov/ta/tg/sr/blueprints.asp.

Although the test blueprints call for the number of items at the individual standard level, scores for the CST items are grouped into subcontent areas (reporting clusters). For each CST reporting cluster, the percentage of questions correctly answered is reported on a student's score report. A list of the CST reporting clusters by test and the number of items in the cluster that appear in each test are provided in Appendix 2.B—Reporting Clusters, which starts on page 26.

Content Rules and Item Selection

Test forms from previous STAR administrations from different years were reused during the 2013 administration to facilitate quick-turnaround reporting. Prior to the 2013 administration, test developers followed a number of rules when developing a new test form for a given

grade and content area. First and foremost, they selected items that met the blueprint for that grade level and content area. Using an electronic item bank, assessment specialists began by identifying a number of linking items. These are items that appeared in the previous year's operational administration and are used to equate the test forms administered each year. Linking items are selected to proportionally represent the full blueprint. For example, if 25 percent of all of the items in a test are in the first reporting cluster, then 25 percent of the linking items should come from that cluster. The selected linking items are also reviewed by psychometricians to ensure that specific psychometric criteria are met.

After the linking items were approved, assessment specialists populated the rest of the test form. Their first consideration was the strength of the content and the match of each item to a specified content standard. In selecting items, team members also tried to ensure that they included a variety of formats and content and that at least some of the items included graphics for visual interest.

Another consideration was the difficulty of each item. Test developers strived to ensure that there were some easy and some hard items and that there were a number of items in the middle range of difficulty. If items did not meet all content and psychometric criteria, staff reviewed the other available items to determine if there were other selections that could improve the match of the test to all of the requirements. If such a match was not attainable, the content team worked in conjunction with psychometricians and the CDE to determine which combination of items would best serve the needs of the students taking the test. Chapter 3, starting on page 181, contains further information about this process.

Replacement Items

During the 2012 STAR administration, certain test items were exposed on social media Web sites. Although there was no evidence these exposures had any measurable effect on 2012 test results, the most cautious approach called for replacing these items on the test forms in the 2013 administration.

Before replacing items, ETS considered whether the form with an exposed item could be exchanged with a form from a different previous STAR administration that contained no exposures. If there were no appropriate forms available, ETS sought to replace exposed items with previously used or field-tested items that best met the psychometric criteria and statistical targets described in the next sections. As CSTs would be pre-equated, ETS assessment development staff also considered minimizing the position difference between the replacement items and the exposed items in order to reduce the context effect.

Psychometric Criteria

The three goals of CST test development are as follows:

1. The test must have desired precision of measurement at all ability levels.
2. The test score must be valid and reliable for the intended population and for the various subgroups of test-takers.
3. The test forms must be comparable across years of administration to ensure the generalizability of scores over time.

In order to achieve these goals, a set of rules that outlines the desired psychometric properties of each CST was developed. These rules are referred to as statistical targets.

Two types of assembly targets were developed for each CST: the total test target and (reporting) cluster targets. These targets were provided to test developers before a test

construction cycle began. The test developers and psychometricians worked together to design the tests to these targets.

Primary Statistical Targets

The total test targets, or primary statistical targets, used for assembling the CST forms for the 2013 administration were the test information function (TIF) and an average point-biserial correlation.

The TIF is the sum of the item information function based on the item response theory (IRT) item parameters. When using an IRT model, the target TIF makes it possible to choose items to produce a test that has the desired precision of measurement at all ability levels.

The graphs for the total test are presented in Figure 4.A.1 through Figure 4.A.4, starting on page 200, for the ELA, history–social science, mathematics, and science tests, respectively. These curves present the target TIF and the projected TIF for the total test.

Due to the unique characteristics of the Rasch IRT model, the information curve conditional on each ability level is determined by item difficulty (*b*-values) alone. In this case, the TIF would, therefore, suffice as the target for conditional test difficulty. Although additional item difficulty targets are not imperative when the target TIF is used for form construction, the target mean and standard deviation of item difficulty (*b*-values) consistent with the TIF were still provided to test development staff to help with the test construction process. The target *b*-value range approximates a minimum proportion-correct value (*p*-value) of 0.20 and a maximum *p*-value of 0.95 for each test.

The point-biserial correlation describes the relationship between student performance on a dichotomously-scored item and student performance on the test as a whole. It is used as a measure of how well an item discriminates among test-takers who differ in their ability, and it is related to the overall reliability of the test.

The minimum target value for an item point biserial was set at 0.14 for each test. This value approximates a biserial correlation of 0.20.

Assembly Targets

The target values for the CSTs are presented in Table 4.1. These specifications were developed from the analyses of test forms administered in the years 2001 through 2007. Because the items included in the CSTs for Integrated Mathematics and Integrated/ Coordinated Science were drawn from other tests, targets for their *b*-value range and mean point biserial were not defined.

Table 4.1 Statistical Targets for CST Test Assembly

Content Area	CST *	Target Mean *b*	Target SD *b*	Min *p*-value	Max *p*-value	Mean Point Biserial	Min Point Biserial
English–Language Arts	2	–0.15	0.69	0.20	0.95	> 0.37	0.14
	3	–0.34	0.75	0.20	0.95	> 0.37	0.14
	4	–0.01	0.69	0.20	0.95	> 0.37	0.14
	5	–0.16	0.82	0.20	0.95	> 0.37	0.14
	6	–0.05	0.77	0.20	0.95	> 0.37	0.14
	7	0.16	0.64	0.20	0.95	> 0.37	0.14
	8	–0.14	0.71	0.20	0.95	> 0.37	0.14
	9	–0.04	0.69	0.20	0.95	> 0.37	0.14
	10	–0.21	0.64	0.20	0.95	> 0.37	0.14
	11	–0.23	0.67	0.20	0.95	> 0.37	0.14

Content Area	CST *	Target Mean *b*	Target SD *b*	Min *p*-value	Max *p*-value	Mean Point Biserial	Min Point Biserial
History–Social Science	8	–0.17	0.53	0.20	0.95	0.33–0.37	0.14
	World History	–0.20	0.52	0.20	0.95	0.33–0.37	0.14
	11	–0.25	0.60	0.20	0.95	0.33–0.37	0.14
Mathematics	2	–0.87	0.93	0.20	0.95	0.39–0.45	0.14
	3	–0.75	0.98	0.20	0.95	0.39–0.45	0.14
	4	–0.66	0.83	0.20	0.95	0.39–0.45	0.14
	5	–0.17	0.95	0.20	0.95	0.39–0.45	0.14
	6	–0.25	0.78	0.20	0.95	0.39–0.45	0.14
	7	–0.07	0.58	0.20	0.95	0.39–0.45	0.14
	General Mathematics	0.10	0.79	0.20	0.95	0.33–0.37	0.14
	Algebra I	–0.07	0.72	0.20	0.95	0.33–0.37	0.14
	Geometry	–0.77	0.72	0.20	0.95	0.33–0.37	0.14
	Algebra II	–0.41	0.90	0.20	0.95	0.33–0.37	0.14
	Summative High School Mathematics	–0.83	0.64	0.20	0.95	0.33–0.37	0.14
	Integrated Mathematics 1	N/A	N/A	0.20	0.95	N/A	0.14
	Integrated Mathematics 2	N/A	N/A	0.20	0.95	N/A	0.14
	Integrated Mathematics 3	N/A	N/A	0.20	0.95	N/A	0.14
Science	5	–0.67	0.57	0.20	0.95	> 0.34	0.14
	8	–0.40	0.74	0.20	0.95	> 0.34	0.14
	10 Life Science	–0.29	0.72	0.20	0.95	> 0.34	0.14
	Biology	–0.41	0.61	0.20	0.95	> 0.34	0.14
	Chemistry	–0.42	0.53	0.20	0.95	> 0.34	0.14
	Earth Science	–0.10	0.47	0.20	0.95	> 0.34	0.14
	Physics	–0.18	0.51	0.20	0.95	> 0.34	0.14
	Integrated/Coordinated Science 1	N/A	N/A	0.20	0.95	N/A	0.14
	Integrated/Coordinated Science 2	N/A	N/A	0.20	0.95	N/A	0.14
	Integrated/Coordinated Science 3	N/A	N/A	0.20	0.95	N/A	0.14
	Integrated/Coordinated Science 4	N/A	N/A	0.20	0.95	N/A	0.14

* Numbers indicate grade-level tests.

Note: The 2013 CSTs for Integrated Mathematics and Integrated/Coordinated Science were assembled using the items from other operational CSTs which have different testing populations and *b*-values on different scales. Therefore, statistical targets for these tests include minimum and maximum *p*-values and minimum point biserial values only.

Since the Integrated Mathematics and Integrated/Coordinated Science tests are built of components from multiple tests, analyses that compare the information curves are not applicable for those integrated tests. Refer to the section "Scaling the CSTs for Integrated/Coordinated Science" in Chapter 2 on page 20 for more information on this procedure.

Target information functions are also used to evaluate the items selected to measure each subscore in the interest of maintaining some consistency in the accuracy of cluster scores across years. Because the clusters include fewer items than the total test, there is always more variability between the target and the information curves constructed for the new form clusters than there is for the total test.

Figure 4.B.1 through Figure 4.B.31 starting on page 207 present the target and projected information curves for the clusters in the ELA, history–social science, mathematics, and science tests, respectively.

Projected Psychometric Properties of the Assembled Tests

Prior to the 2013 administration, ETS psychometricians performed a preliminary review of the technical characteristics of the assembled tests. The expected or projected performance of examinees and the overall score reliability were estimated using the item-level statistics

available in the California item bank for the selected items. The test reliability was based on Gulliksen's formula (Gulliksen, 1987) for estimating test reliability (r_{xx}) from item *p*-values and item point-biserial correlations:

$$r_{xx} = \left(\frac{K}{K-1}\right)\left(1 - \frac{\sum_{g=1}^{K} s_g^{\,2}}{\left(\sum_{g=1}^{K} r_{xg} s_g\right)^2}\right), \tag{4.1}$$

where,

K is the number of items in the test,

$s_g^{\,2}$ is the estimated item variances, i.e., $p_g(1-p_g)$, where p_g is the item *p*-value for item *g,*

r_{xg} is the item point-biserial correlation for item *g,* and

$r_{xg}s_g$ is the item reliability index.

In addition, estimated test raw score means were calculated by summing the item *p*-values, and estimated test raw score standard deviations were calculated by summing the item reliability indices. Table 4.A.1 on page 198 presents these summary values by content area and grade. Since Integrated Mathematics and Integrated/Coordinated Science tests are built from other test components, these analyses are not applicable for those tests.

It should be noted that the projected reliabilities in Table 4.A.1 were based on item *p*-values and point-biserial correlations that, for some of the items, were based on external field-testing using samples of students that were not fully representative of the state. Chapter 8 presents item *p*-values, point-biserial correlations, and test reliability estimates based on the data from the 2013 CST administration.

Table 4.A.2 on page 199 shows the mean observed statistics of the items for each CST based on the item-level statistics from the year the form was previously administered except for the replacement items—for these, the item bank values from the most recent administration were used. See Table 8.4 on page 374 for the dates of the original administrations. These values can be compared to the target values in Table 4.1.

Rules for Item Sequence and Layout

The items on test forms are organized and sequenced differently according to the requirements of the content area.

- ELA—Because the ELA test forms are primarily passage-dependent, items are sequenced with their associated reading passages. Passages are sequenced according to genre and interest level; test developers work to place high-interest pieces (typically narrative selections) near lower-interest pieces (typically functional or technical writing). Stand-alone items are placed throughout the form, where appropriate.
- History–Social Science—The items in the history–social science test forms are sequenced chronologically.
- Mathematics—The mathematics test forms are sequenced mostly according to reporting cluster; that is, all items from a single reporting cluster are presented together and then all of the items from the next reporting cluster are presented. The exceptions are

reporting clusters 1 and 2 for grades two through seven and General Mathematics, and reporting clusters 3 and 4 for grade seven and General Mathematics. The reporting clusters 1 and 2 for grades two through seven and General Mathematics both test Number Sense; items for these clusters are intertwined and administered together at the beginning of the test, followed by items for reporting clusters 3, 4, and 5, respectively. Reporting clusters 3 and 4 for grade seven and General Mathematics both test Algebra and Functions; items for these clusters may be intertwined as well.

- Science—The science test forms are sequenced according to reporting cluster; that is, all items from a single reporting cluster are presented together and then all of the items from the next reporting cluster are presented. Items from the Investigation and Experimentation reporting cluster are the exception to this rule: these items assess aspects of practical knowledge in various clusters; they are presented with their associated clusters and then aggregated for reporting purposes as an Investigation and Experimentation cluster.

Reference

Gulliksen, H. (1987). *Theory of mental tests*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Appendix 4.A—Technical Characteristics

Table 4.A.1 Summary of 2013 CST Projected Raw Score Statistics

Content Area	CST *	Number of Op. Items	Mean Raw Score	Std. Dev. of Raw Scores	Reliability
English–Language Arts	2	65	41.88	13.20	0.94
	3	65	41.93	12.57	0.93
	4	75	48.77	14.99	0.94
	5	75	47.15	14.29	0.93
	6	75	46.56	14.15	0.93
	7	75	47.79	14.31	0.93
	8	75	44.05	14.42	0.93
	9	75	45.37	14.38	0.93
	10	75	47.15	15.22	0.94
	11	75	43.82	15.29	0.94
History–Social Science	8	75	46.51	14.52	0.93
	World History	60	37.68	12.03	0.92
	11	60	36.23	11.49	0.91
Mathematics	2	65	48.31	11.18	0.93
	3	65	48.59	11.81	0.94
	4	65	50.70	11.74	0.94
	5	65	40.70	13.07	0.93
	6	65	39.79	13.40	0.93
	7	65	39.17	12.85	0.93
	General Mathematics	65	32.90	12.16	0.91
	Algebra I	65	31.47	12.04	0.91
	Geometry	65	36.83	12.24	0.92
	Algebra II	65	34.66	11.05	0.90
	Summative H.S. Math	65	47.07	11.73	0.93
	Integrated Mathematics 1 †	65	N/A	N/A	N/A
	Integrated Mathematics 2 †	65	N/A	N/A	N/A
	Integrated Mathematics 3 †	65	N/A	N/A	N/A
Science	5	60	37.94	11.26	0.91
	8	60	38.07	11.57	0.92
	10 Life Science	60	35.04	12.72	0.93
	Biology	60	34.67	12.02	0.92
	Chemistry	60	36.54	11.28	0.91
	Earth Science	60	32.26	11.23	0.90
	Physics	60	36.51	11.63	0.91
	Int/Coord Science 1 †	60	N/A	N/A	N/A
	Int/Coord Science 2 †	60	N/A	N/A	N/A
	Int/Coord Science 3 †	60	N/A	N/A	N/A
	Int/Coord Science 4 †	60	N/A	N/A	N/A

* Numbers indicate grade-level tests.

† These tests were constructed using items from other operational CSTs; therefore, the projected mean and standard deviation of raw scores and the projected reliability are not provided for these tests.

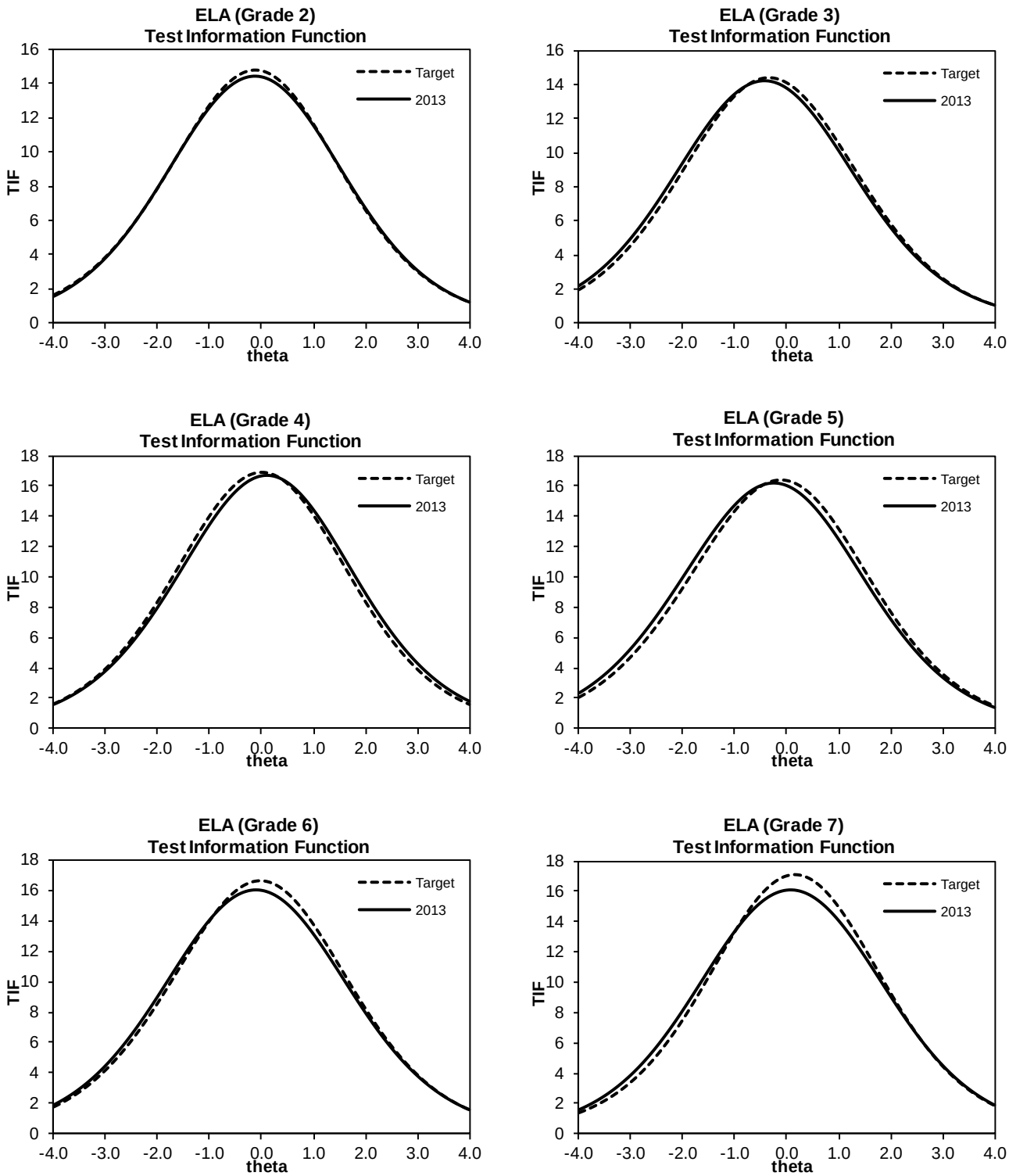
Table 4.A.2 Summary of 2013 CST Projected Item Statistics

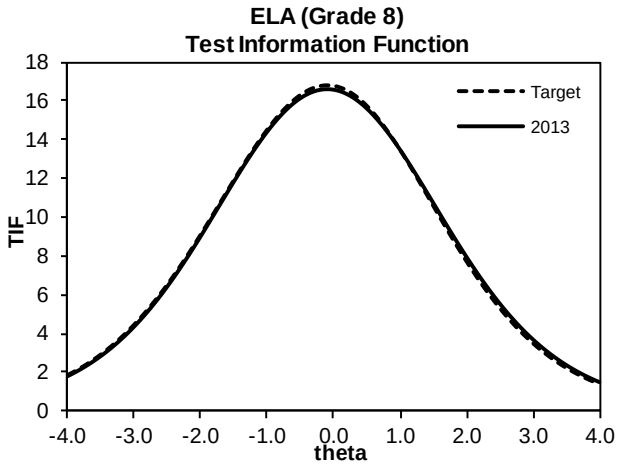
Content Area	CST *	Mean b	SD b	Mean *p*–value	Min *p*–value	Max *p*–value	Mean Point Biserial	Min Point Biserial
English–Language Arts	2	–0.15	0.72	0.67	0.42	0.88	0.46	0.30
	3	–0.44	0.75	0.68	0.32	0.88	0.43	0.30
	4	0.08	0.73	0.67	0.37	0.92	0.45	0.20
	5	–0.29	0.85	0.68	0.26	0.93	0.43	0.29
	6	–0.09	0.81	0.66	0.30	0.91	0.41	0.25
	7	0.09	0.83	0.67	0.31	0.91	0.41	0.24
	8	–0.09	0.73	0.62	0.32	0.87	0.42	0.24
	9	–0.07	0.75	0.64	0.28	0.87	0.42	0.19
	10	–0.28	0.67	0.66	0.37	0.89	0.44	0.27
	11	–0.24	0.63	0.61	0.28	0.87	0.44	0.12
History–Social Science	8	–0.09	0.62	0.64	0.37	0.87	0.43	0.22
	World History	–0.18	0.58	0.63	0.31	0.84	0.43	0.25
	11	–0.28	0.71	0.62	0.36	0.90	0.43	0.22
Mathematics	2	–0.88	0.91	0.76	0.35	0.95	0.44	0.18
	3	–0.73	1.05	0.78	0.35	0.95	0.45	0.22
	4	–0.67	0.84	0.80	0.36	0.93	0.46	0.31
	5	–0.23	0.90	0.67	0.27	0.88	0.46	0.32
	6	–0.30	0.76	0.66	0.34	0.91	0.45	0.23
	7	–0.05	0.65	0.62	0.38	0.83	0.42	0.24
	General Mathematics	0.19	0.59	0.50	0.29	0.78	0.39	0.20
	Algebra I	–0.06	0.65	0.48	0.24	0.78	0.40	0.15
	Geometry	–0.78	0.71	0.53	0.18	0.81	0.43	0.22
	Algebra II	–0.42	0.82	0.52	0.25	0.84	0.39	0.21
	Summative H.S. Math	–0.82	0.68	0.73	0.40	0.90	0.42	0.17
	Integrated Mathematics 1 †	N/A	N/A	N/A	0.13	0.77	N/A	0.13
	Integrated Mathematics 2 †	N/A	N/A	N/A	0.16	0.76	N/A	0.14
	Integrated Mathematics 3 †	N/A	N/A	N/A	0.23	0.87	N/A	0.18
Science	5	–0.61	0.61	0.67	0.45	0.84	0.42	0.29
	8	–0.36	0.67	0.66	0.36	0.85	0.44	0.30
	10 Life Science	–0.27	0.68	0.61	0.38	0.84	0.46	0.30
	Biology	–0.30	0.63	0.59	0.35	0.85	0.44	0.31
	Chemistry	–0.38	0.62	0.63	0.35	0.92	0.40	0.19
	Earth Science	0.01	0.48	0.55	0.34	0.73	0.40	0.24
	Physics	–0.18	0.56	0.64	0.39	0.87	0.42	0.27
	Int/Coord Science 1 †	N/A	N/A	N/A	0.27	0.82	N/A	0.12
	Int/Coord Science 2 †	N/A	N/A	N/A	0.28	0.86	N/A	0.11
	Int/Coord Science 3 †	N/A	N/A	N/A	0.25	0.79	N/A	0.11
	Int/Coord Science 4 †	N/A	N/A	N/A	0.18	0.67	N/A	–0.04

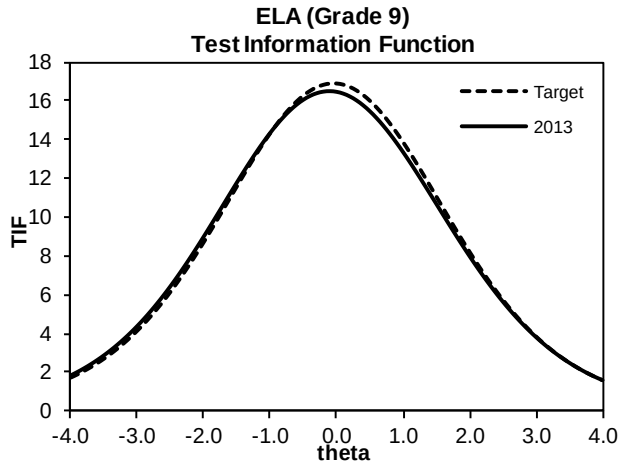
* Numbers indicate grade-level tests.

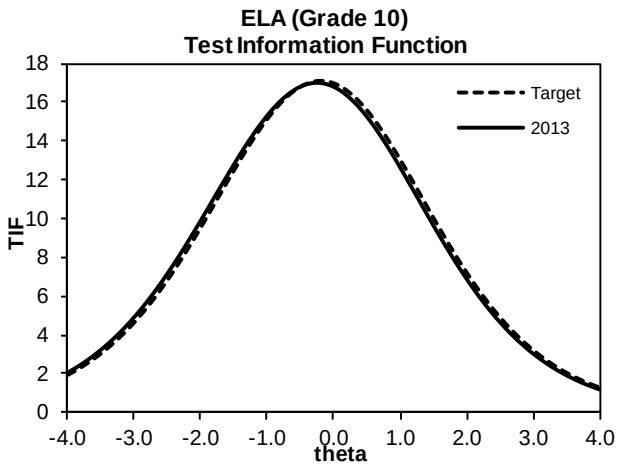
† These tests were constructed using items from other operational CSTs; therefore, only the minimum and maximum *p*-value and the minimum point biserial value are provided for these tests.

Figure 4.A.1 Plots of Target Information Function and Projected Information for Total Test for English–Language Arts




ELA (Grade 8)
Test Information Function
TIF
theta
Target
2013


ELA (Grade 9)
Test Information Function
TIF
theta
Target
2013


ELA (Grade 10)
Test Information Function
TIF
theta
Target
2013

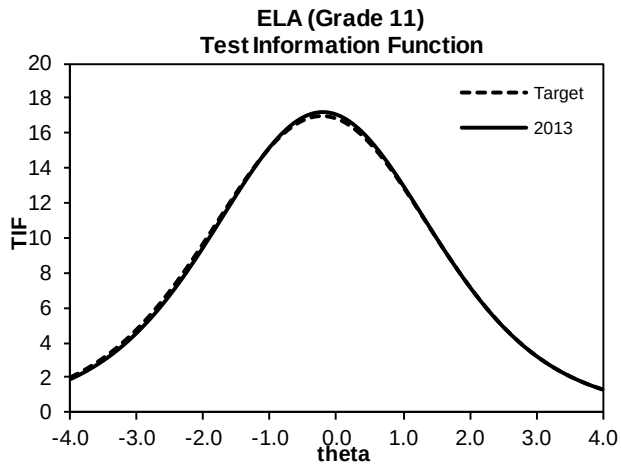
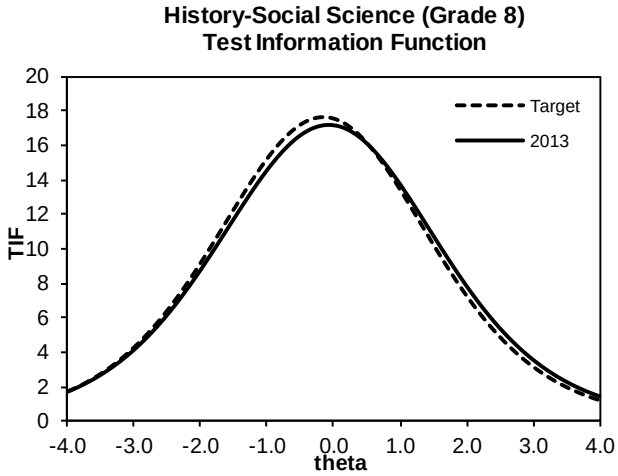
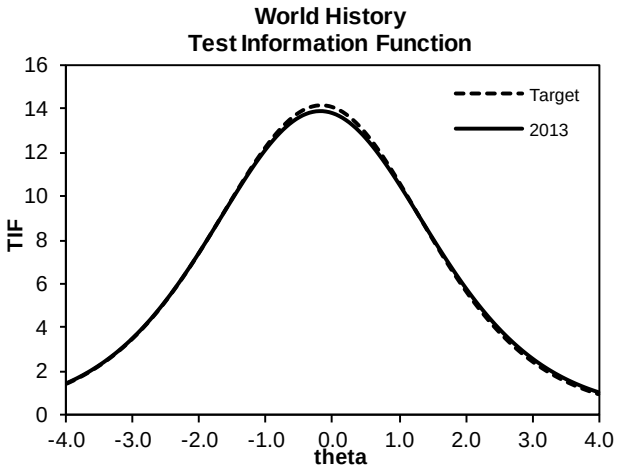

ELA (Grade 11)
Test Information Function
TIF
theta
Target
2013

Figure 4.A.2 Plots of Target Information Function and Projected Information for Total Test for History–Social Science





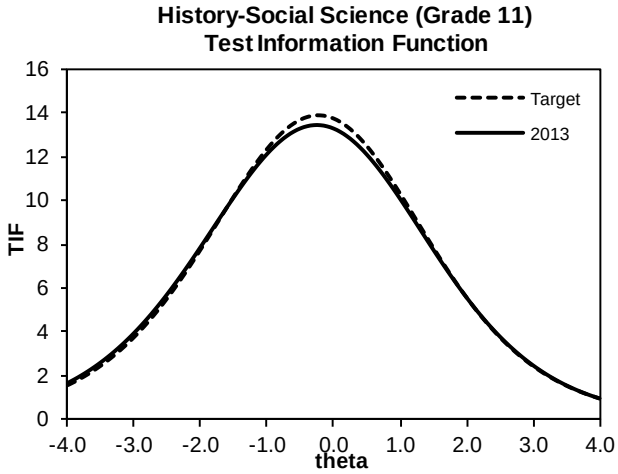
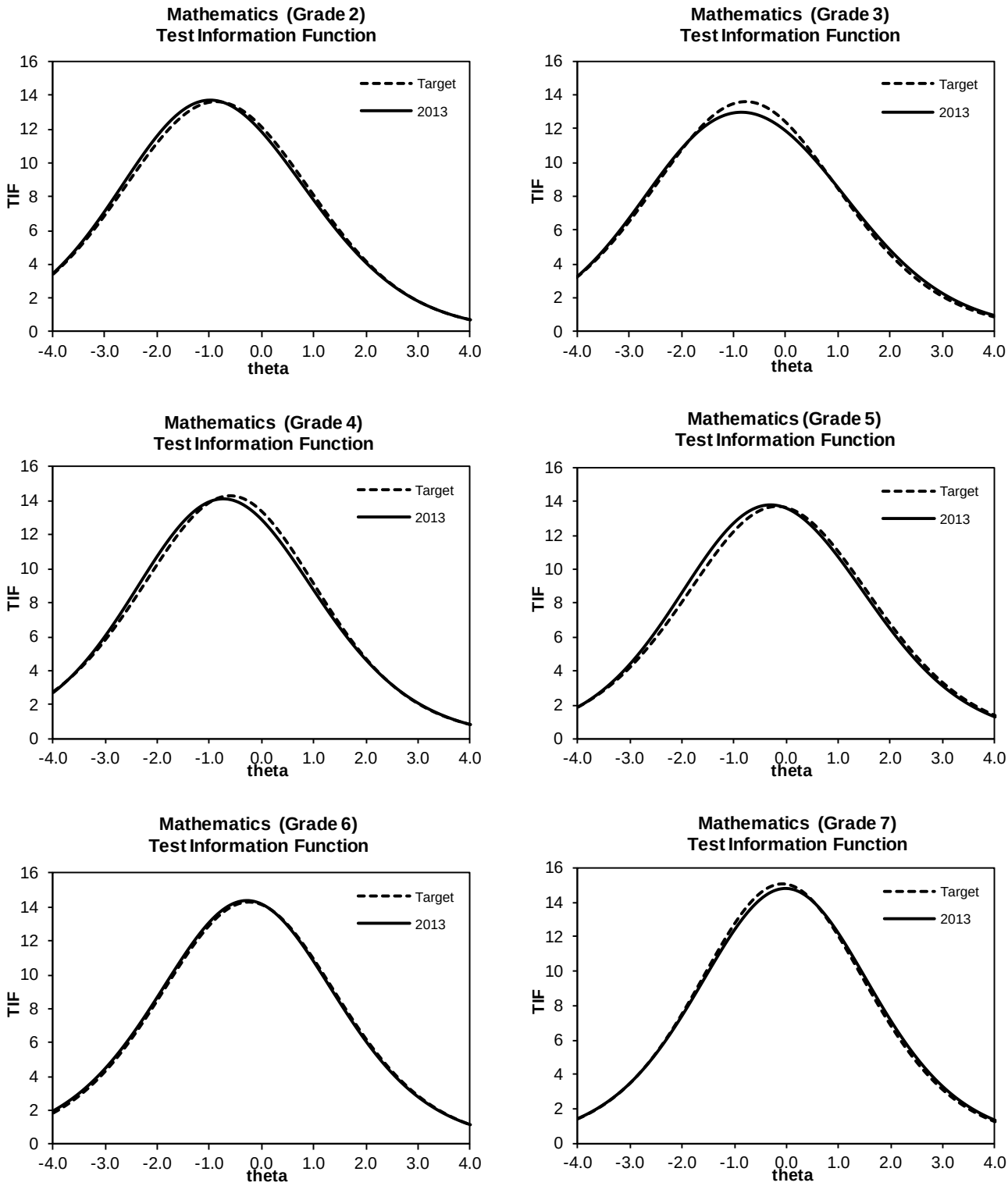
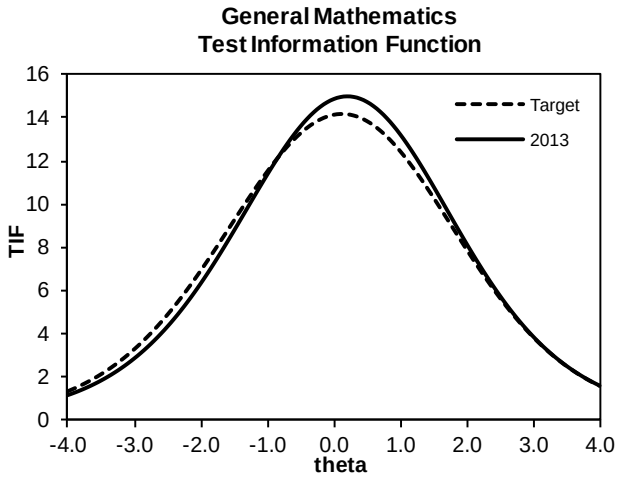
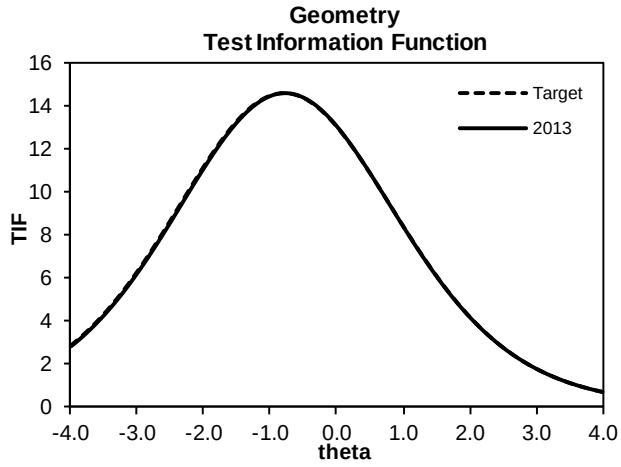
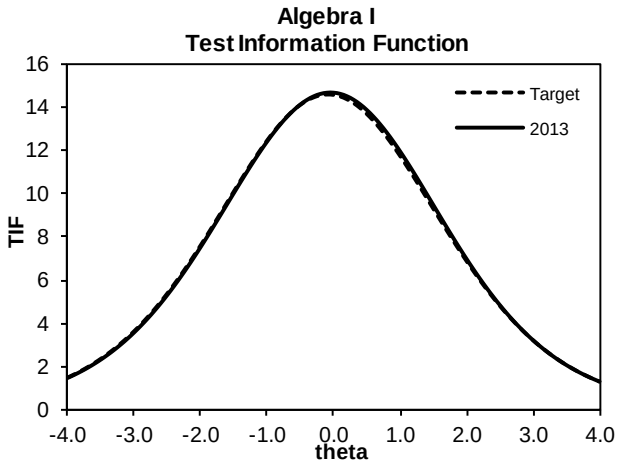


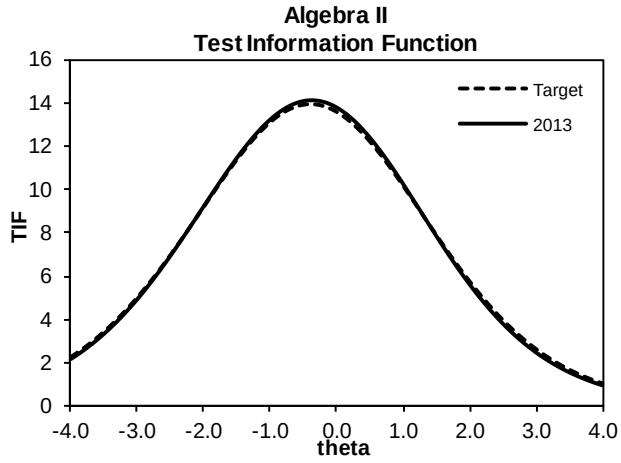
Figure 4.A.3 Plots of Target Information Function and Projected Information for Total Test for Mathematics




General Mathematics
Test Information Function
TIF
theta
Target
2013


Geometry
Test Information Function
TIF
theta
Target
2013


Algebra I
Test Information Function
TIF
theta
Target
2013


Algebra II
Test Information Function
TIF
theta
Target
2013

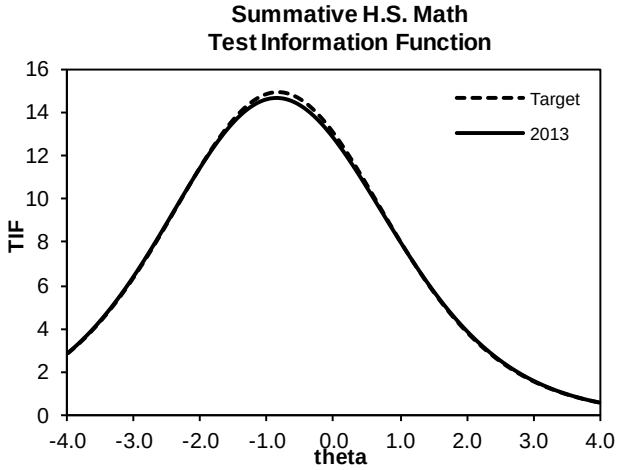
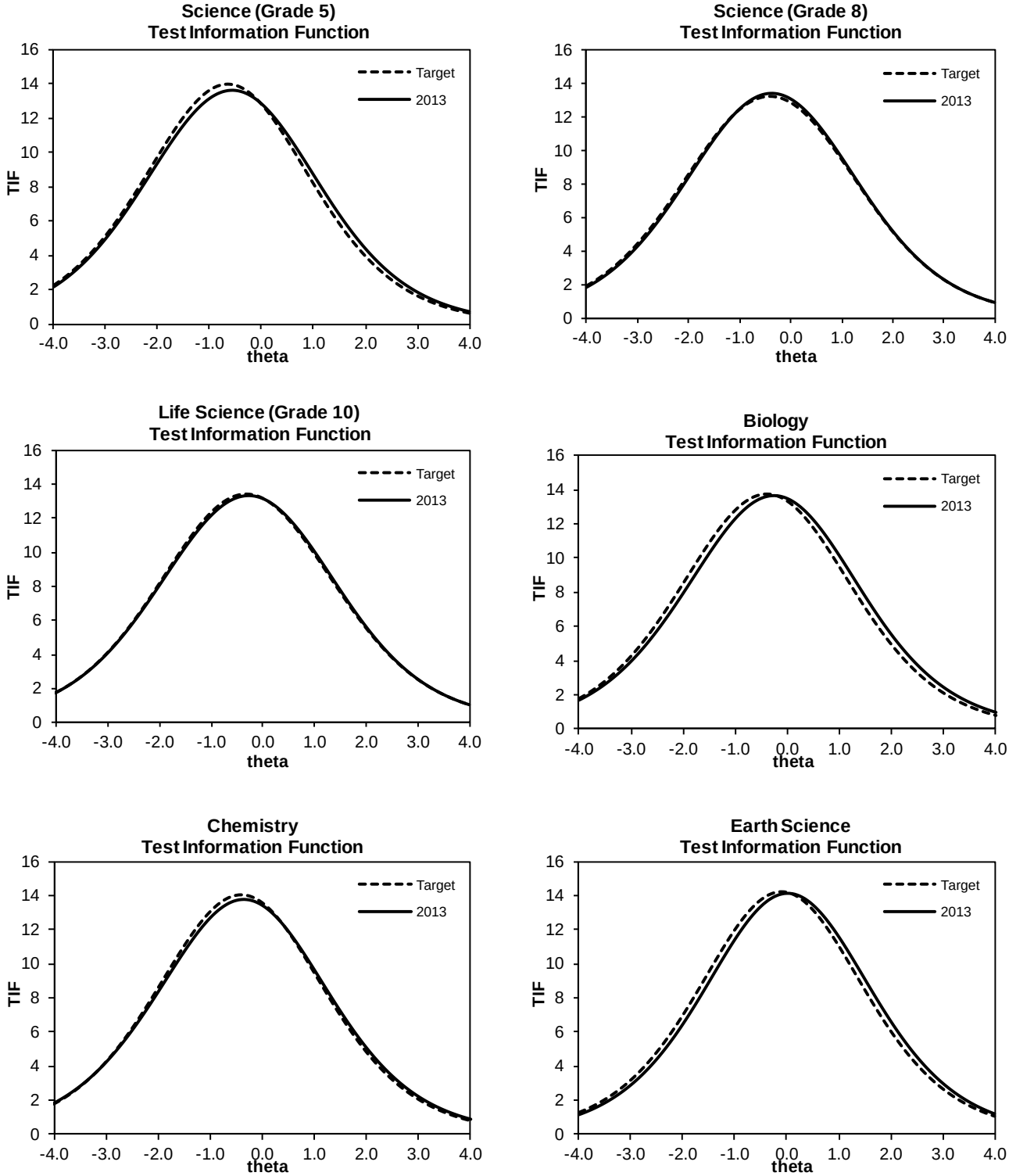
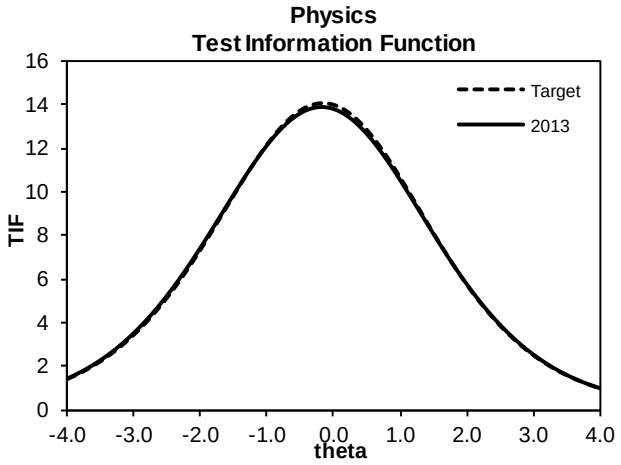

Summative H.S. Math
Test Information Function
TIF
theta
Target
2013

Figure 4.A.4 Plots of Target Information Function and Projected Information for Total Test for Science




Physics
Test Information Function
Target
2013
TIF
theta
16
14
12
10
8
6
4
2
0
-4.0
-3.0
-2.0
-1.0
0.0
1.0
2.0
3.0
4.0

Appendix 4.B—Cluster Targets

Figure 4.B.1 Plots of Target Information Functions and Projected Information for Clusters for ELA, Grade Two

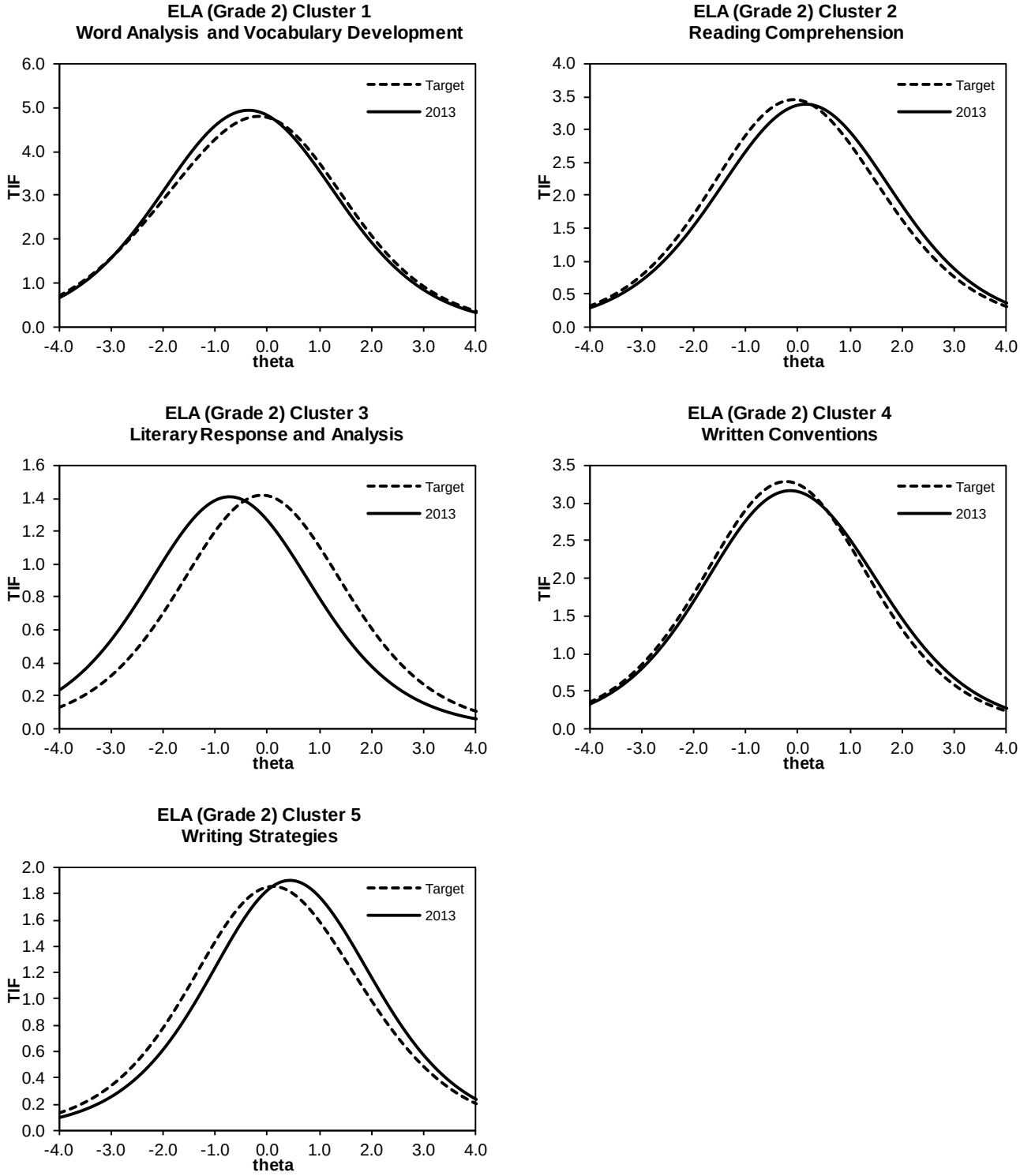


Figure 4.B.2 Plots of Target Information Functions and Projected Information for Clusters for ELA, Grade Three

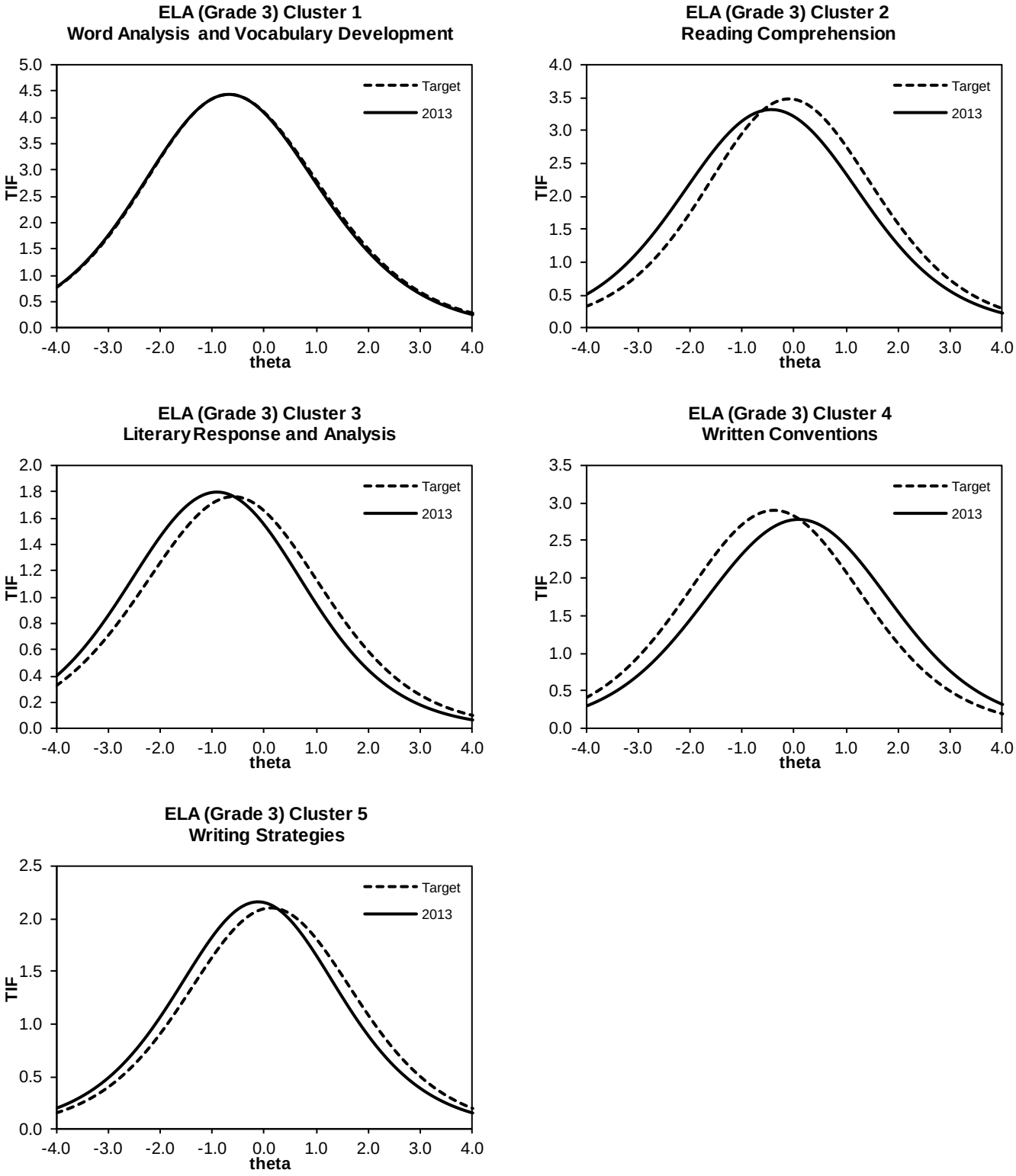


Figure 4.B.3 Plots of Target Information Functions and Projected Information for Clusters for ELA, Grade Four

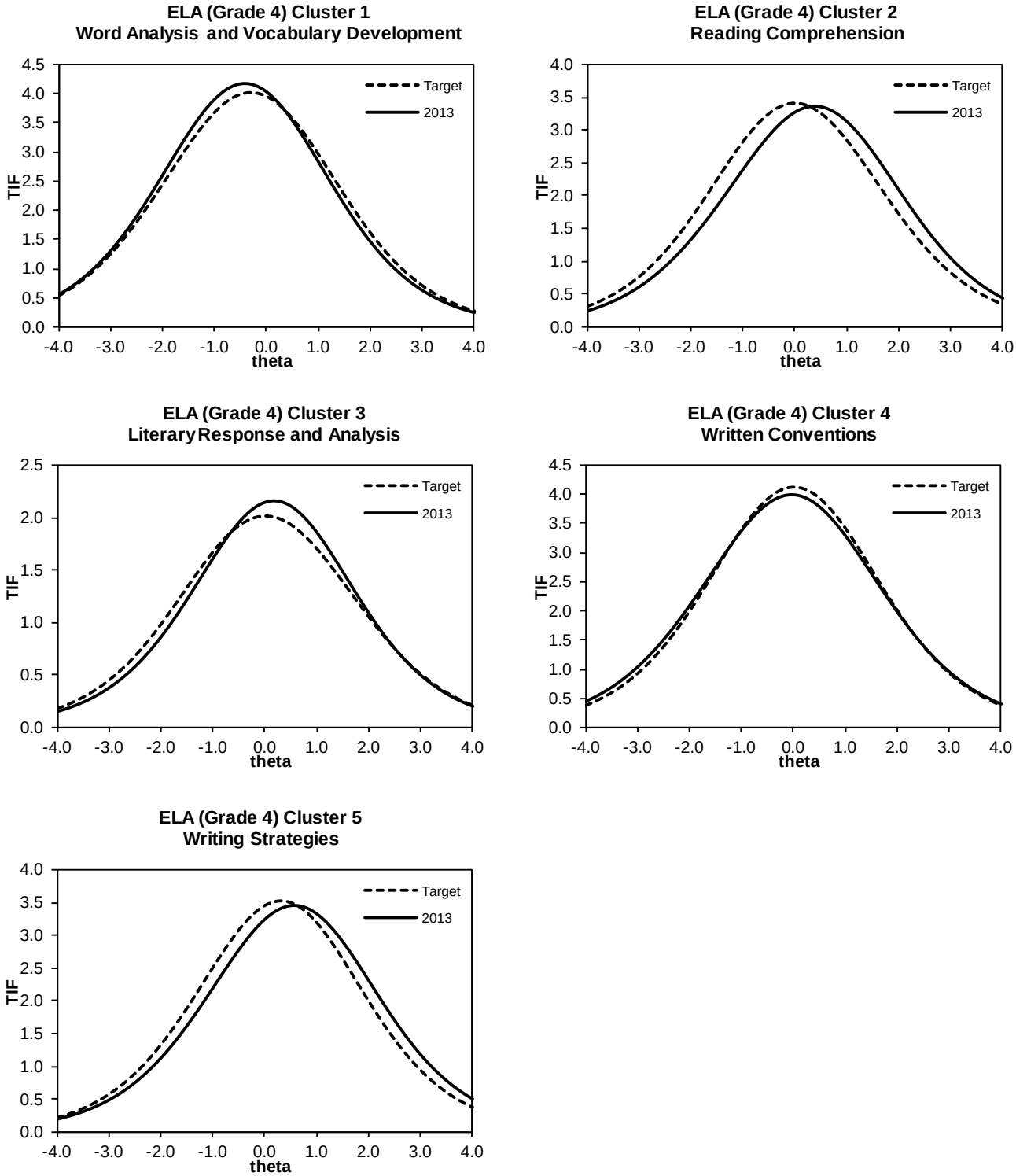


Figure 4.B.4 Plots of Target Information Functions and Projected Information for Clusters for ELA, Grade Five

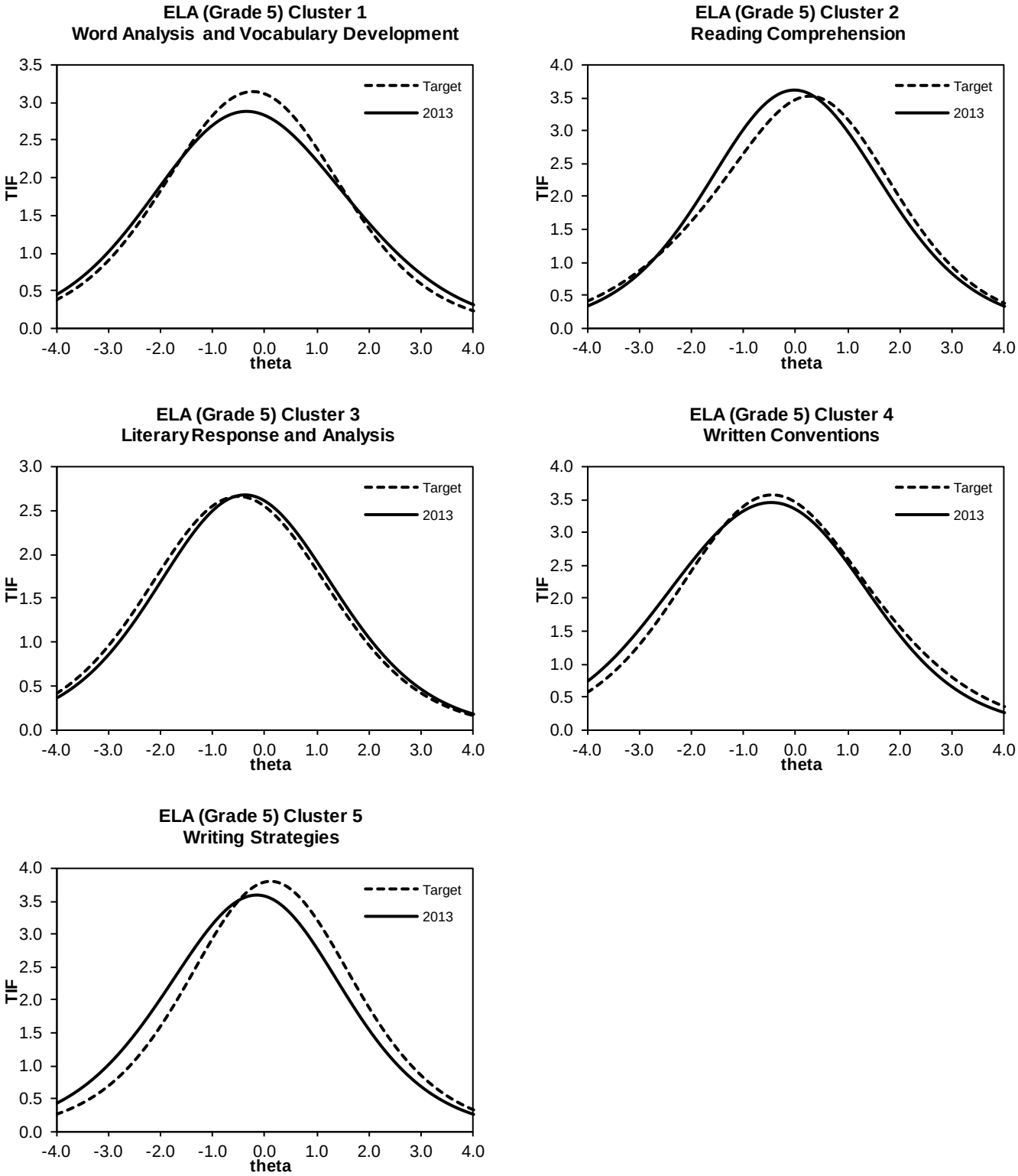


Figure 4.B.5 Plots of Target Information Functions and Projected Information for Clusters for ELA, Grade Six

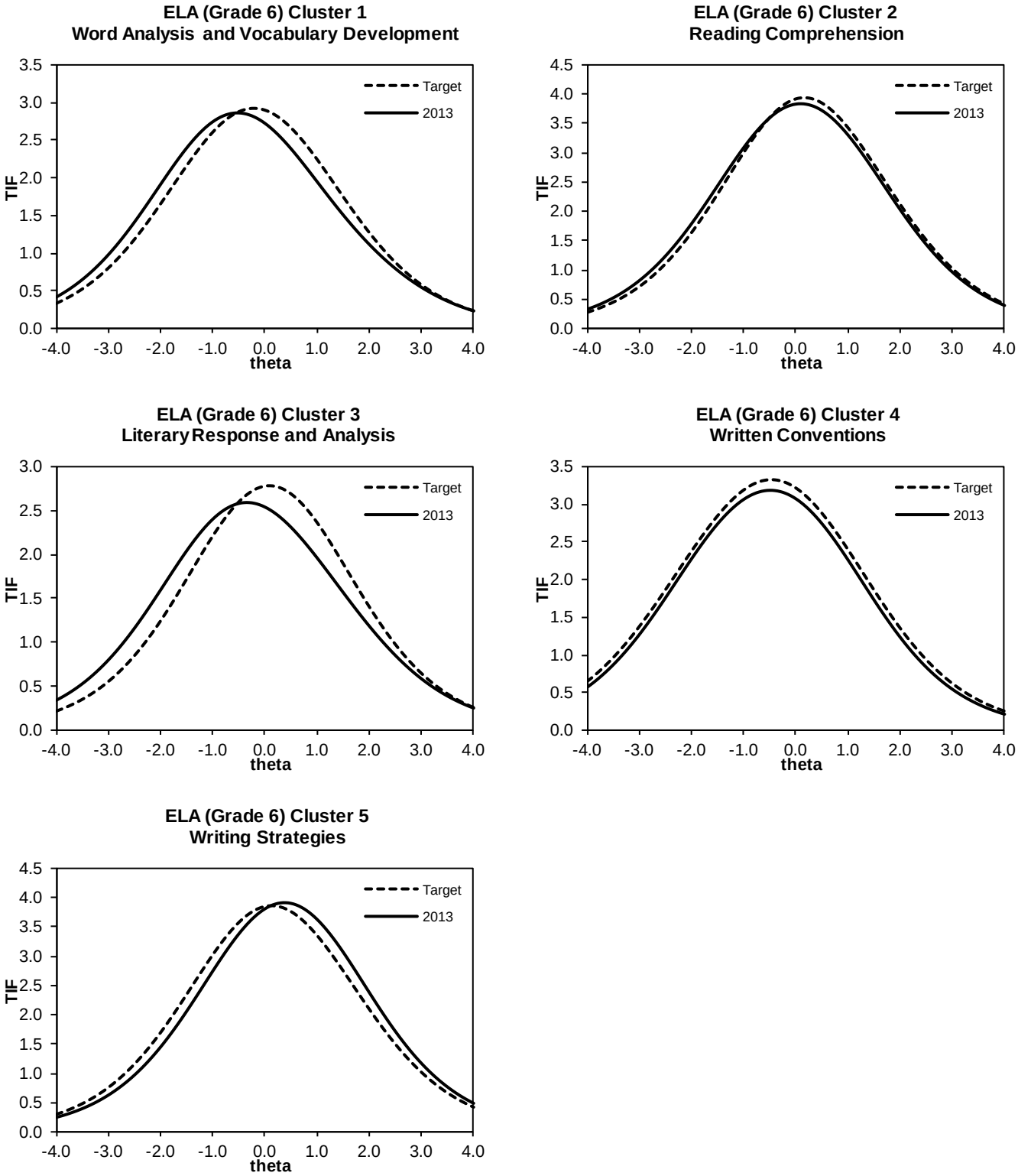


Figure 4.B.6 Plots of Target Information Functions and Projected Information for Clusters for ELA, Grade Seven

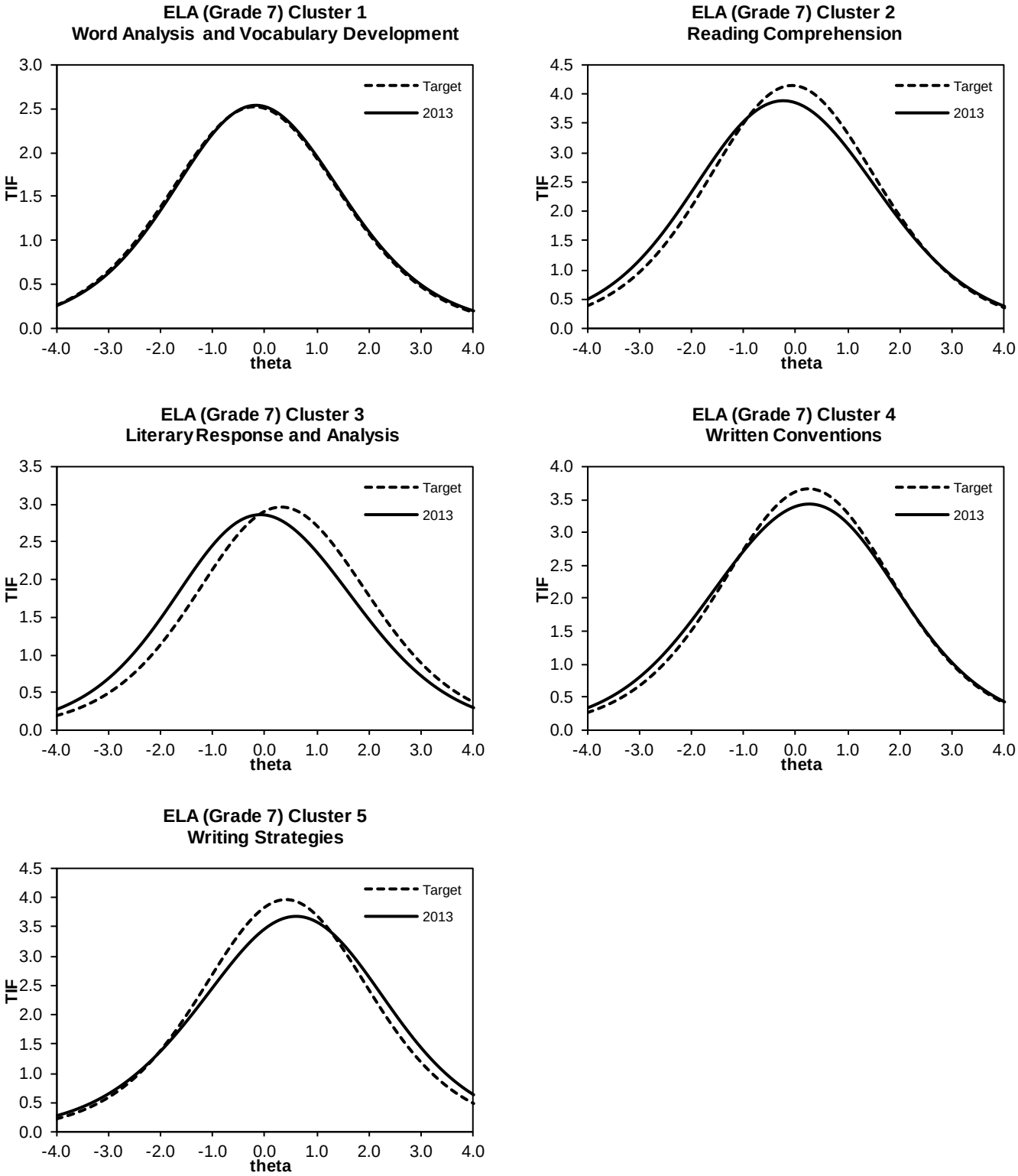


Figure 4.B.7 Plots of Target Information Functions and Projected Information for Clusters for ELA, Grade Eight

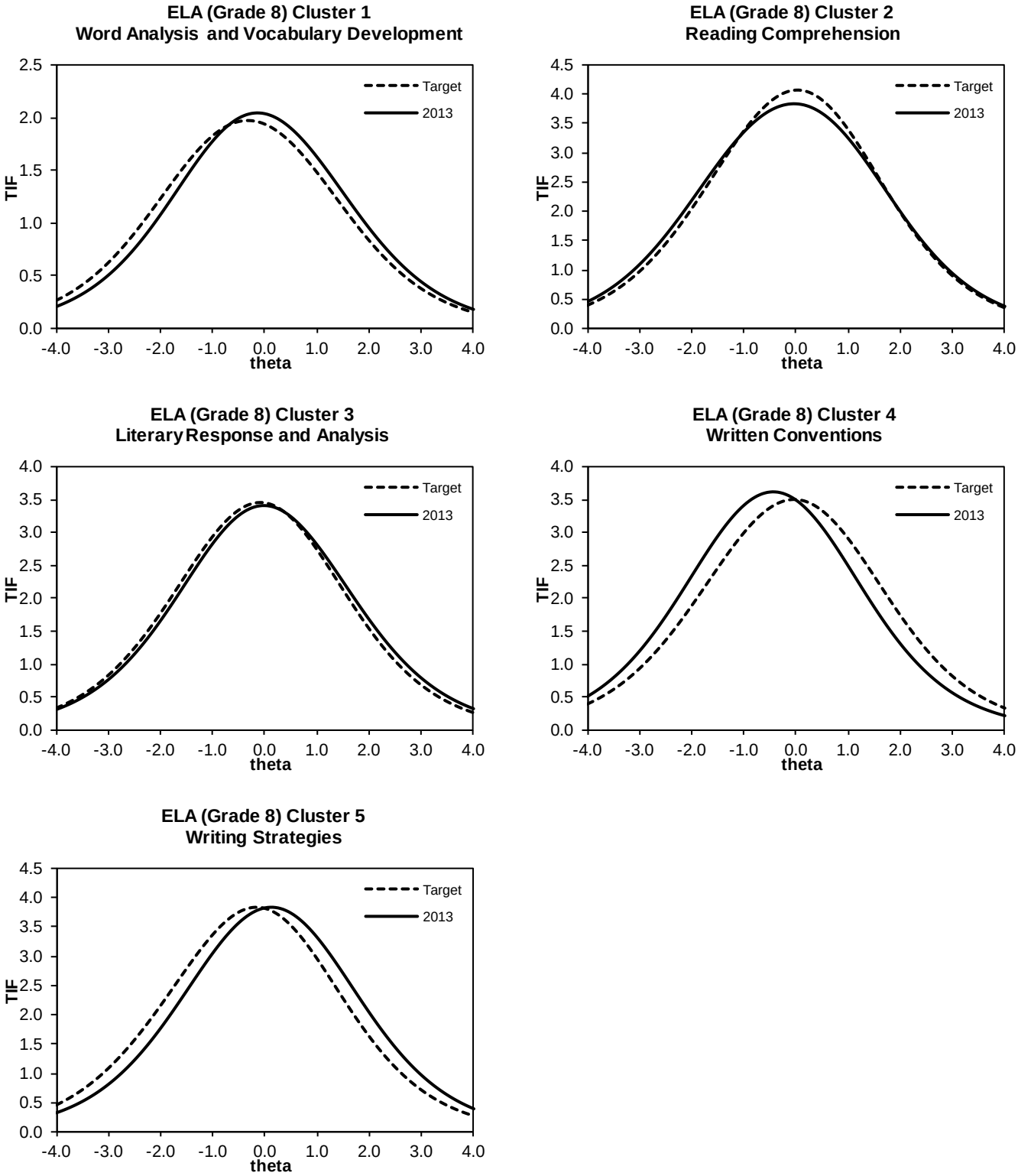


Figure 4.B.8 Plots of Target Information Functions and Projected Information for Clusters for ELA, Grade Nine

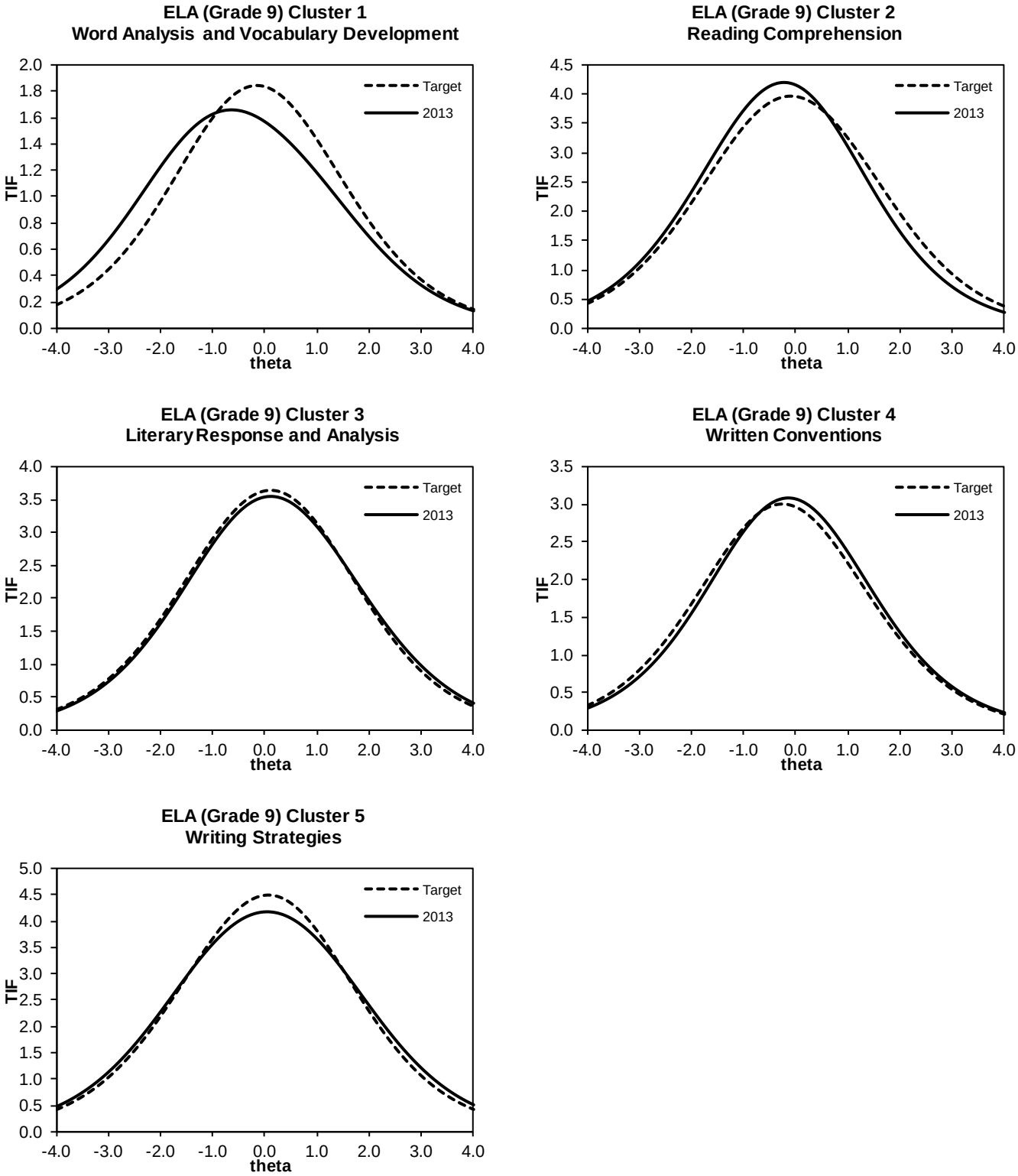


Figure 4.B.9 Plots of Target Information Functions and Projected Information for Clusters for ELA, Grade Ten

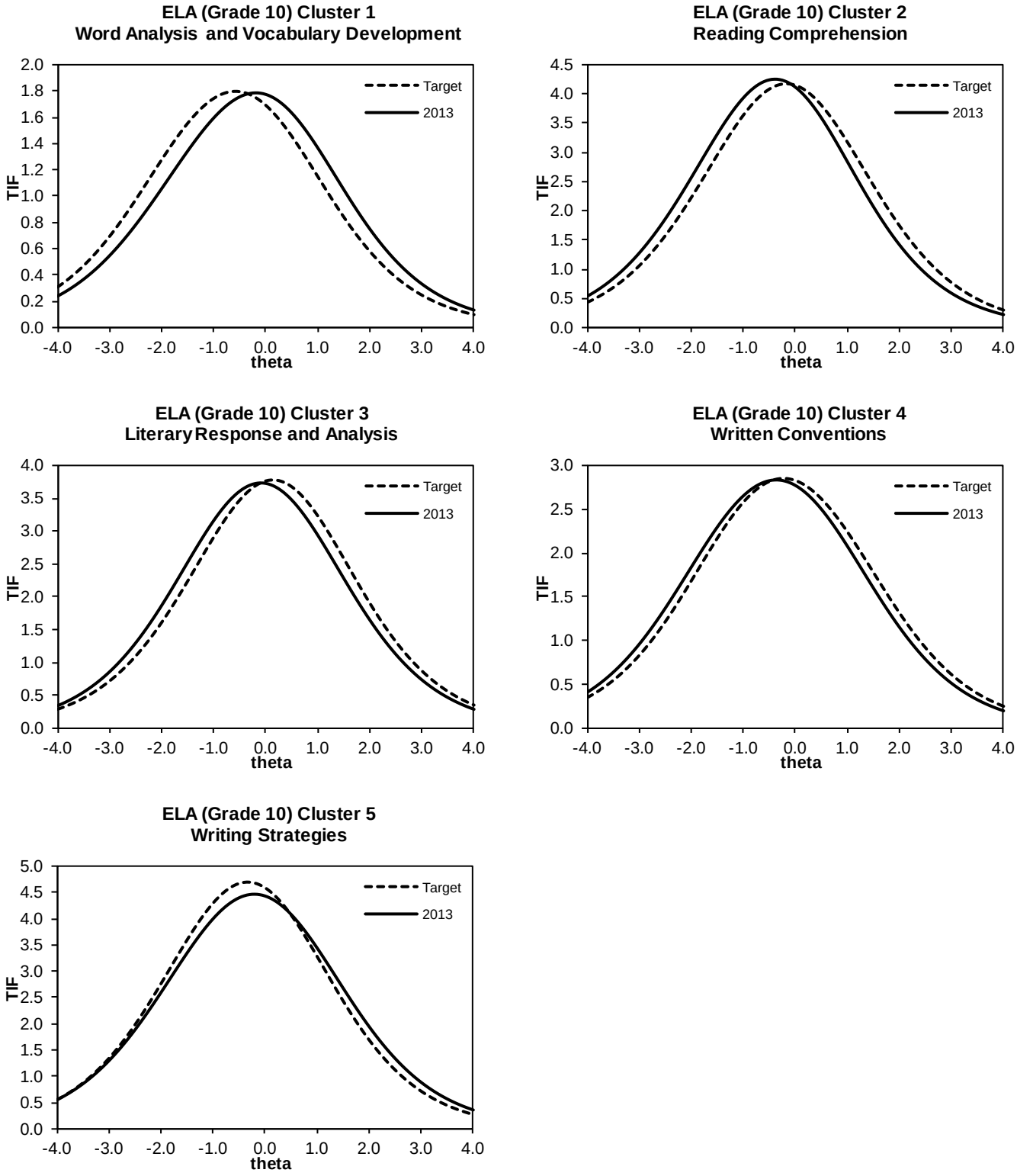


Figure 4.B.10 Plots of Target Information Functions and Projected Information for Clusters for ELA, Grade Eleven

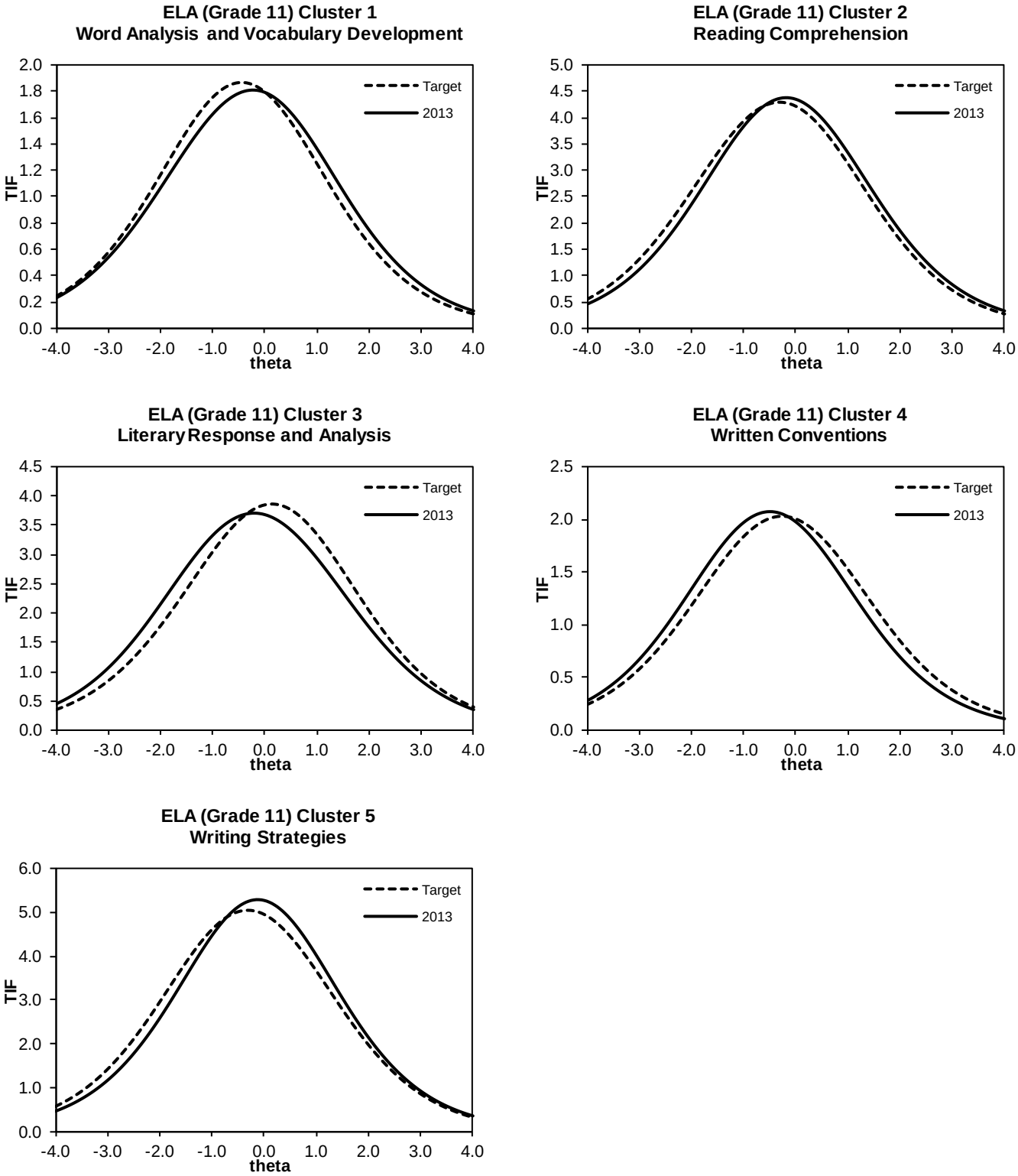


Figure 4.B.11 Plots of Target Information Functions and Projected Information for Clusters for History–Social Science, Grade Eight

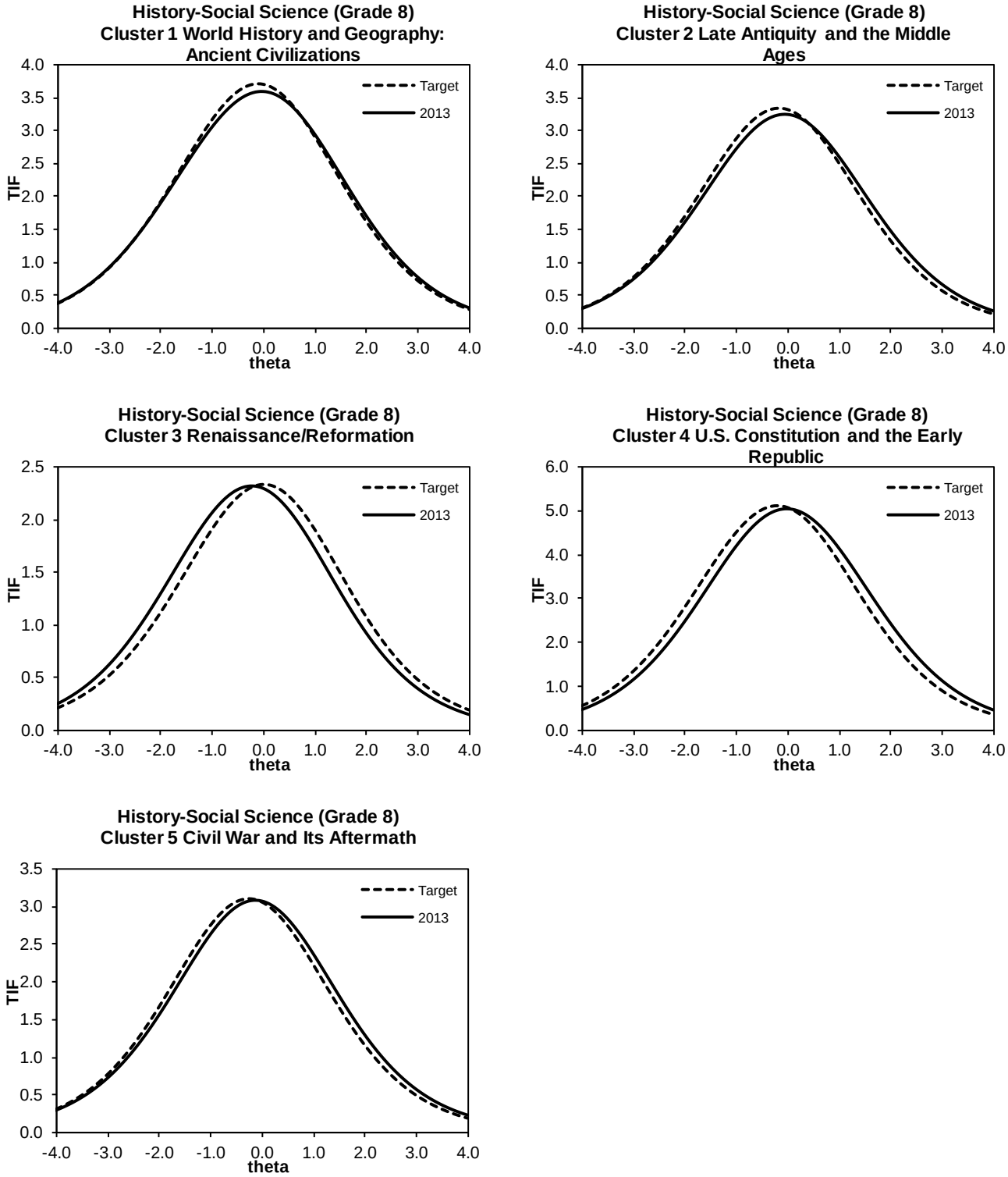


Figure 4.B.12 Plots of Target Information Functions and Projected Information for Clusters for World History

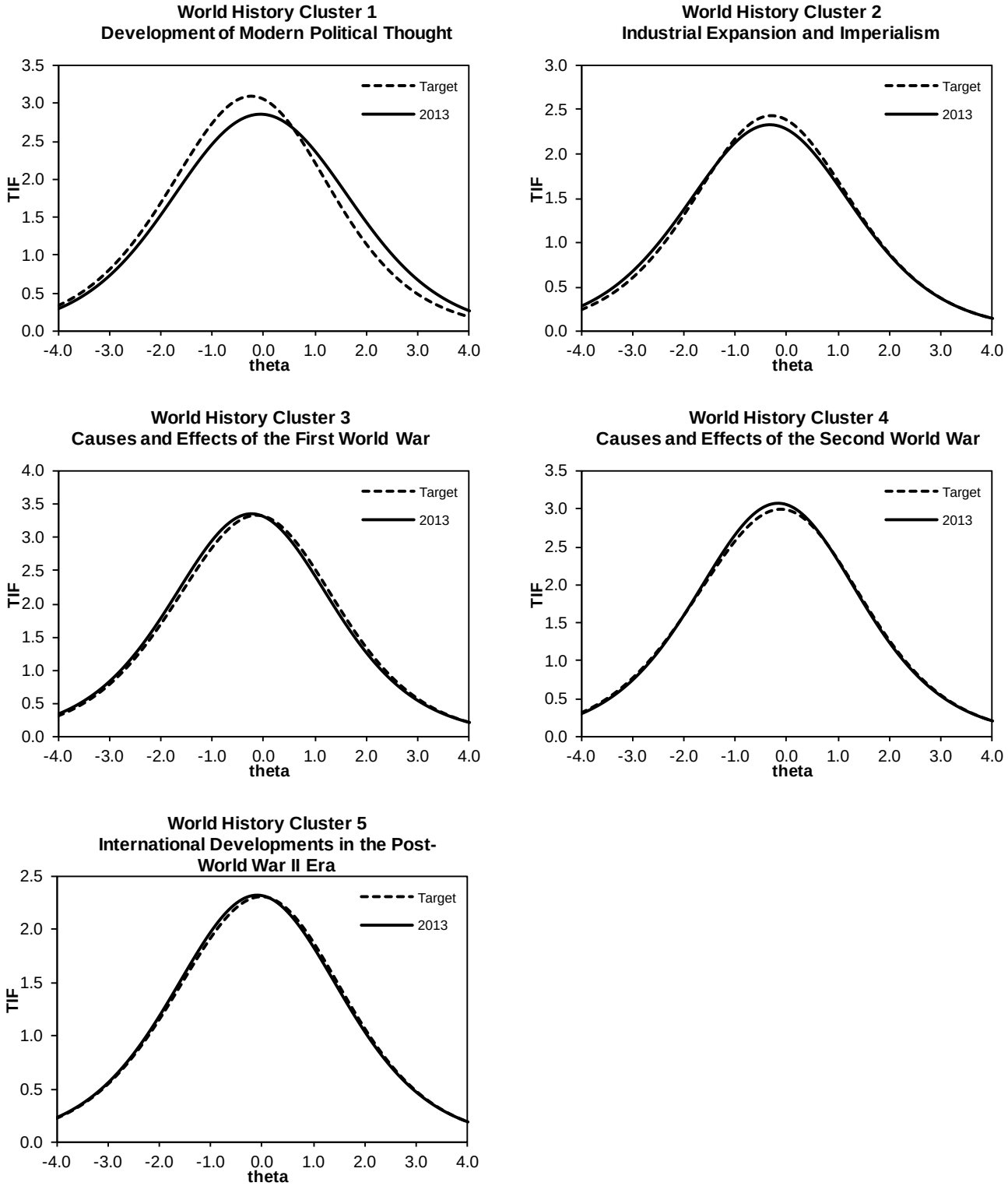


Figure 4.B.13 Plots of Target Information Functions and Projected Information for Clusters for U.S. History, Grade Eleven

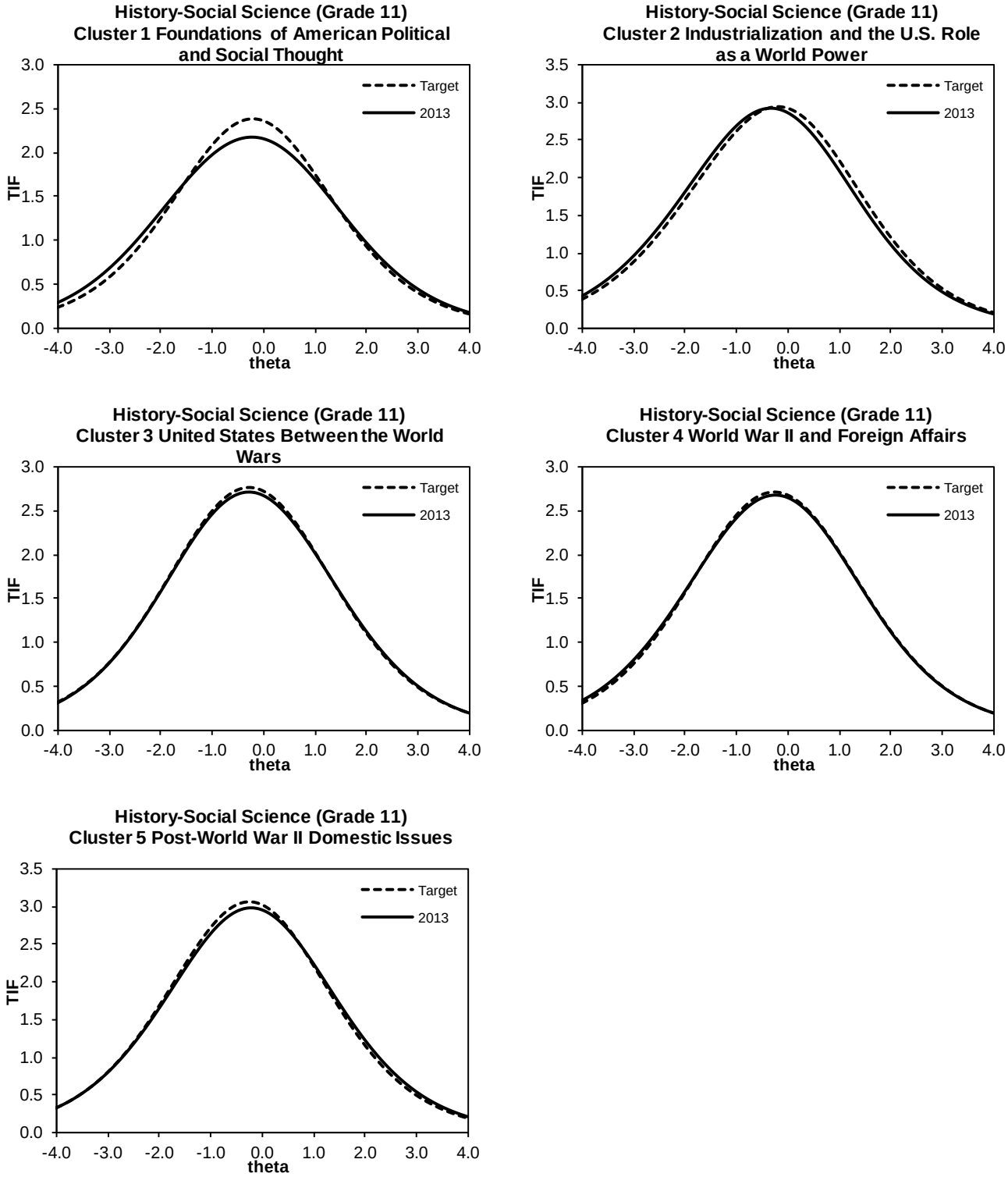


Figure 4.B.14 Plots of Target Information Functions and Projected Information for Clusters for Mathematics, Grade Two

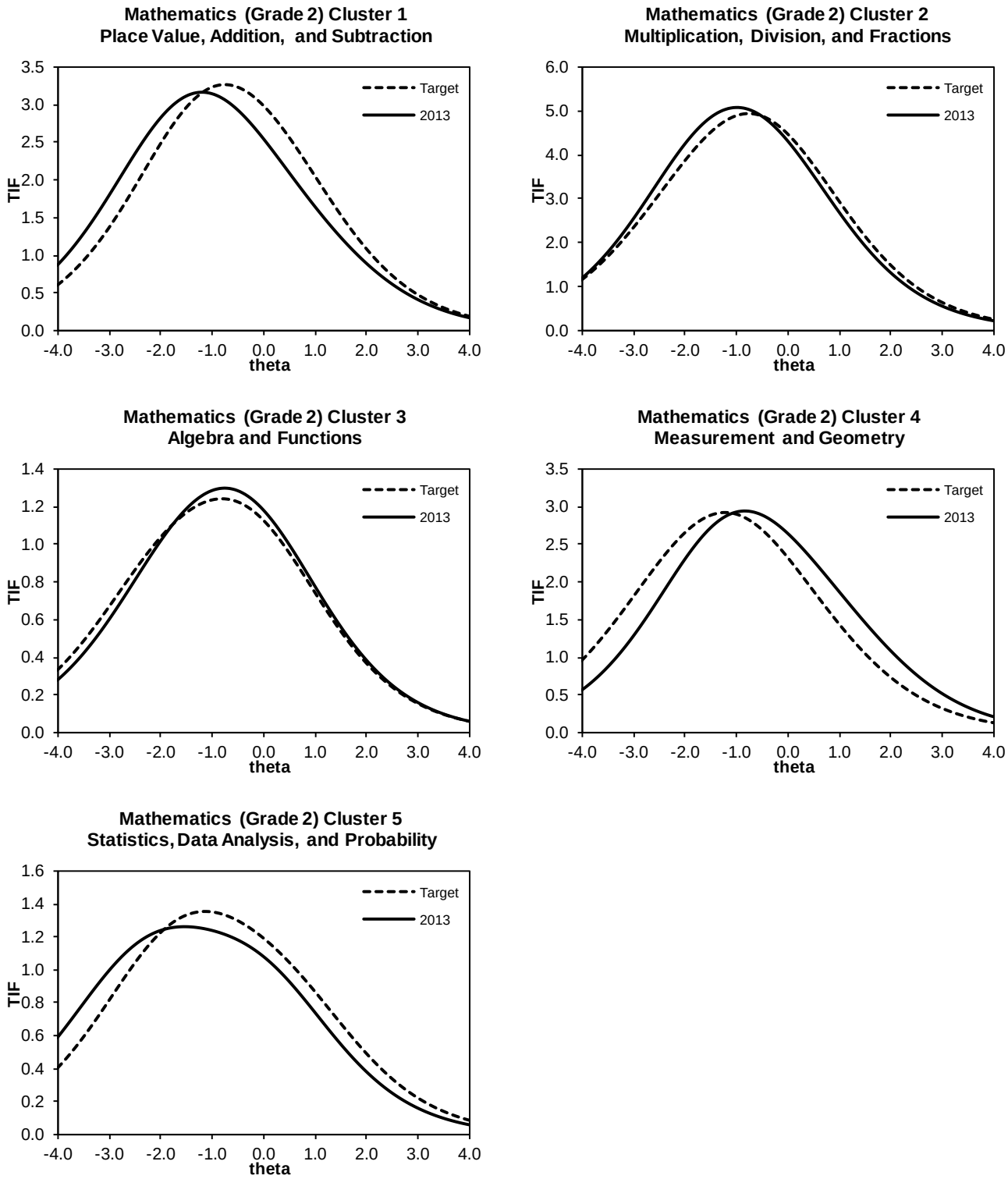


Figure 4.B.15 Plots of Target Information Functions and Projected Information for Clusters for Mathematics, Grade Three

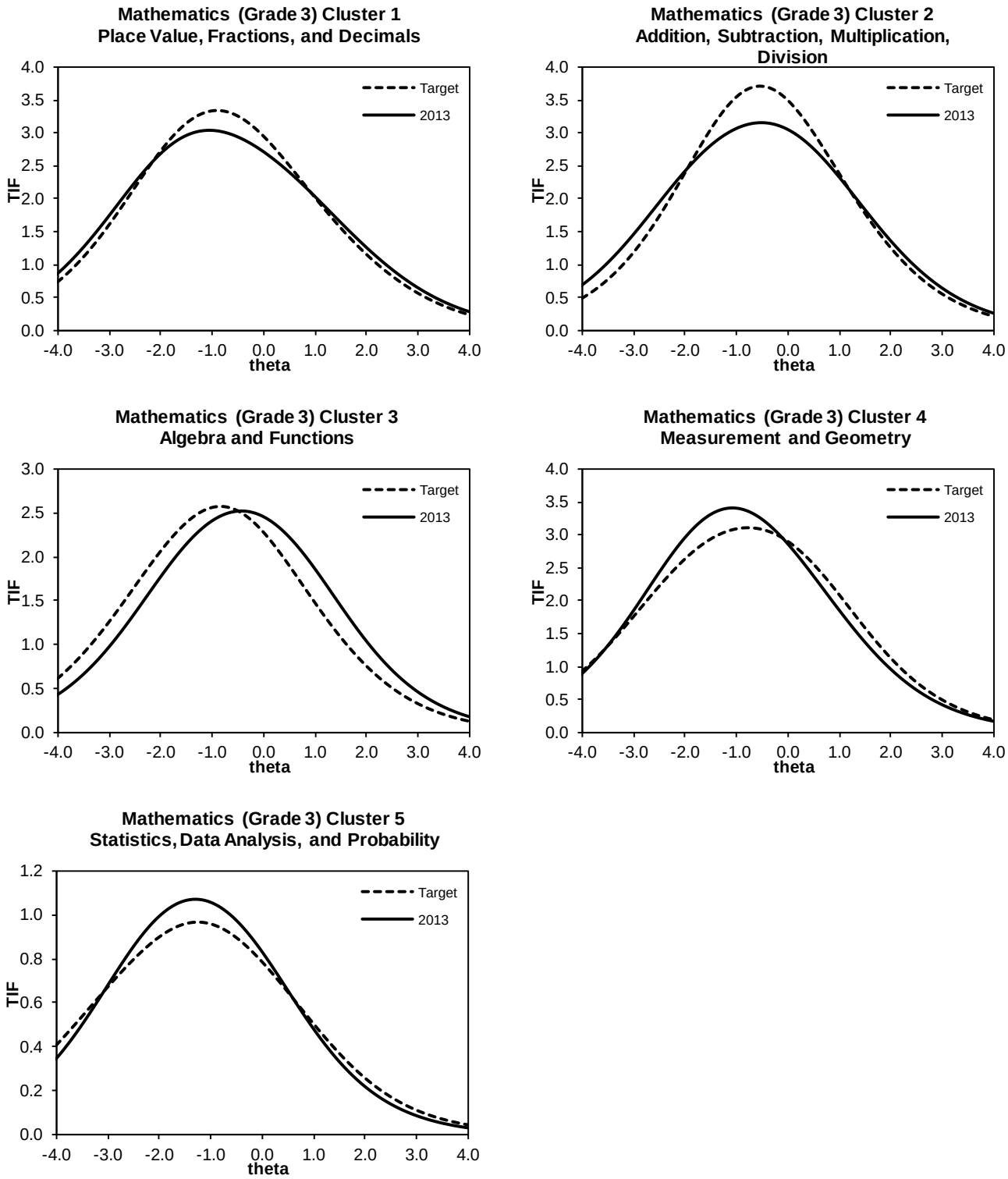


Figure 4.B.16 Plots of Target Information Functions and Projected Information for Clusters for Mathematics, Grade Four

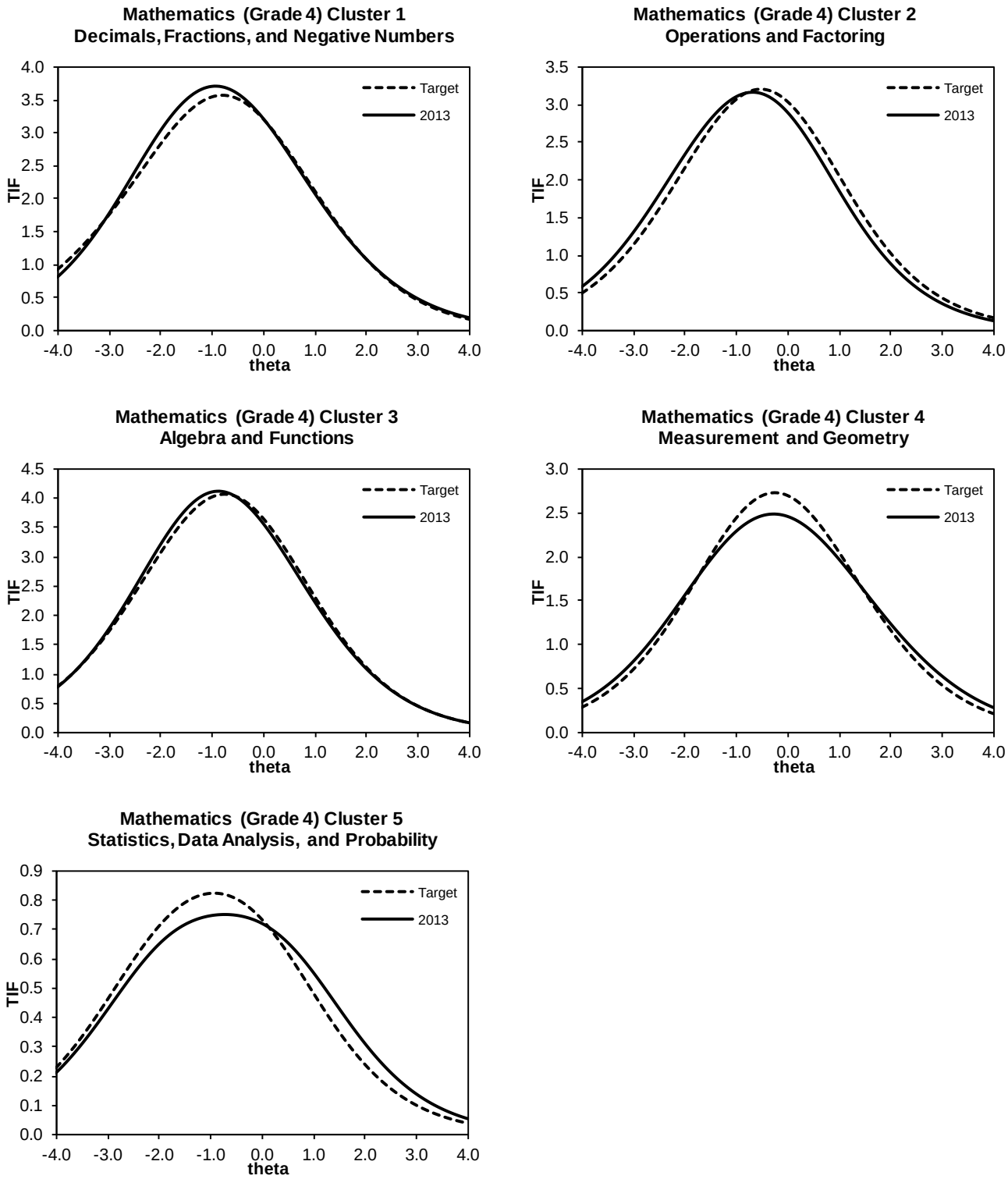


Figure 4.B.17 Plots of Target Information Functions and Projected Information for Clusters for Mathematics, Grade Five

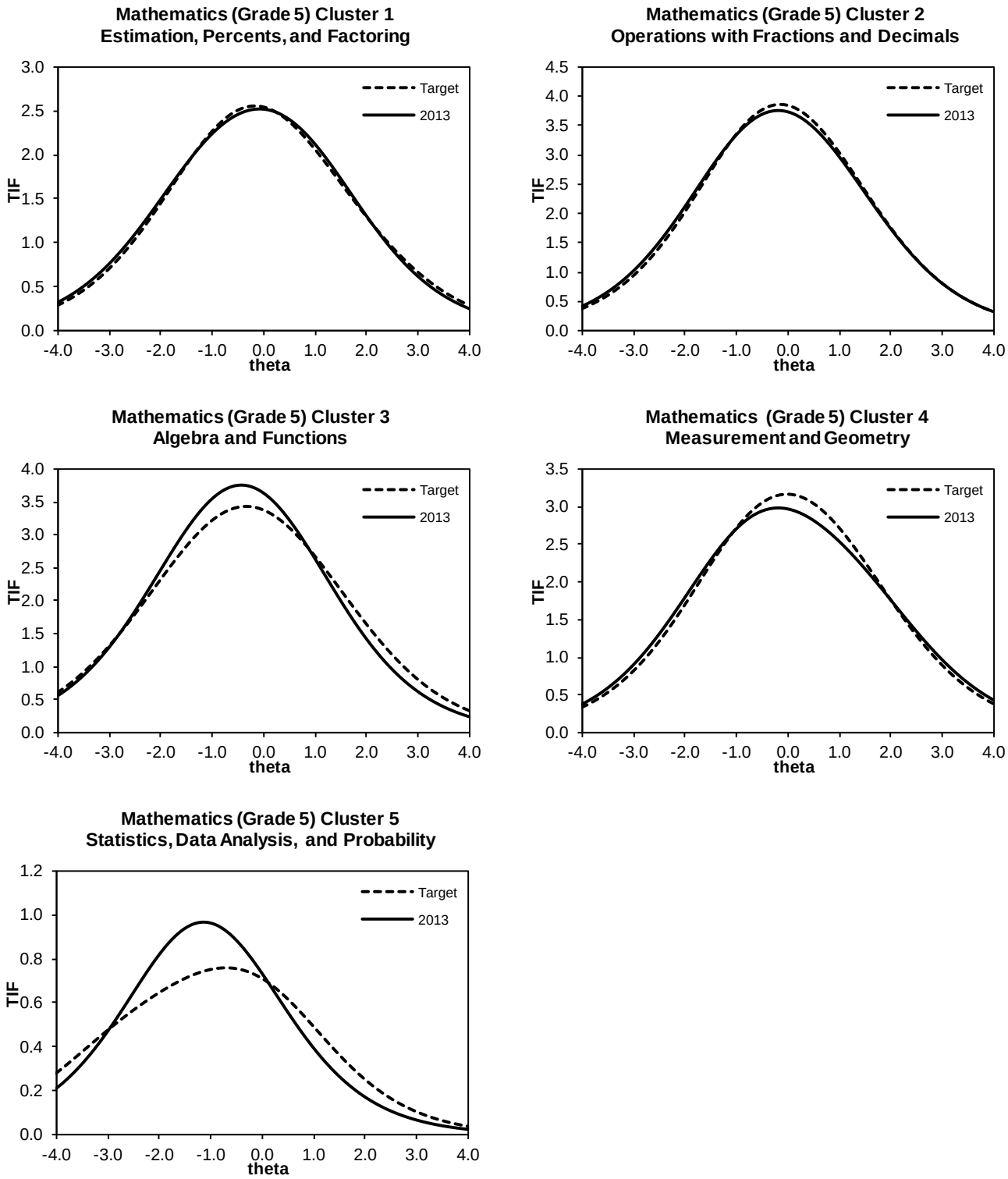


Figure 4.B.18 Plots of Target Information Functions and Projected Information for Clusters for Mathematics, Grade Six

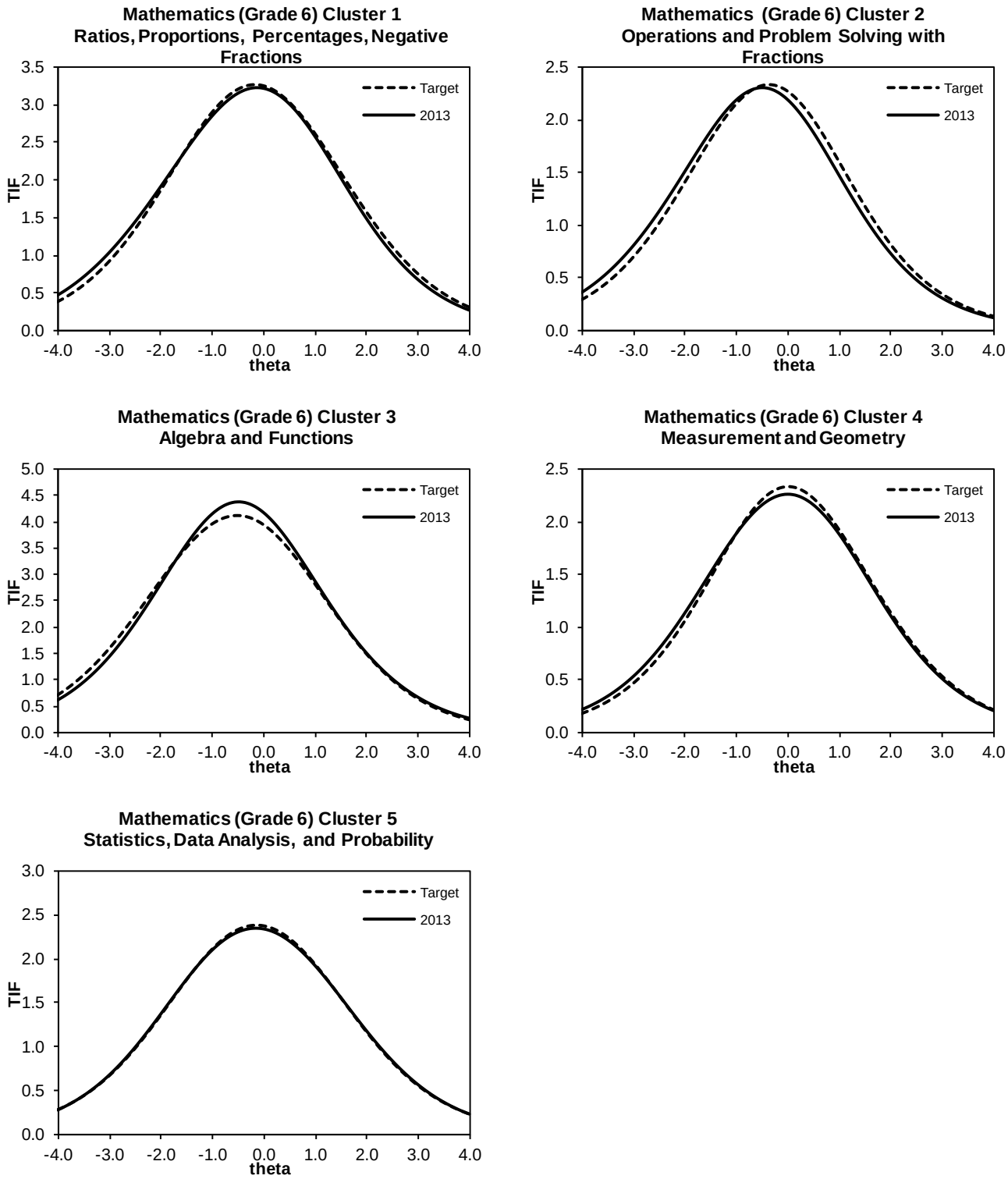


Figure 4.B.19 Plots of Target Information Functions and Projected Information for Clusters for Mathematics, Grade Seven

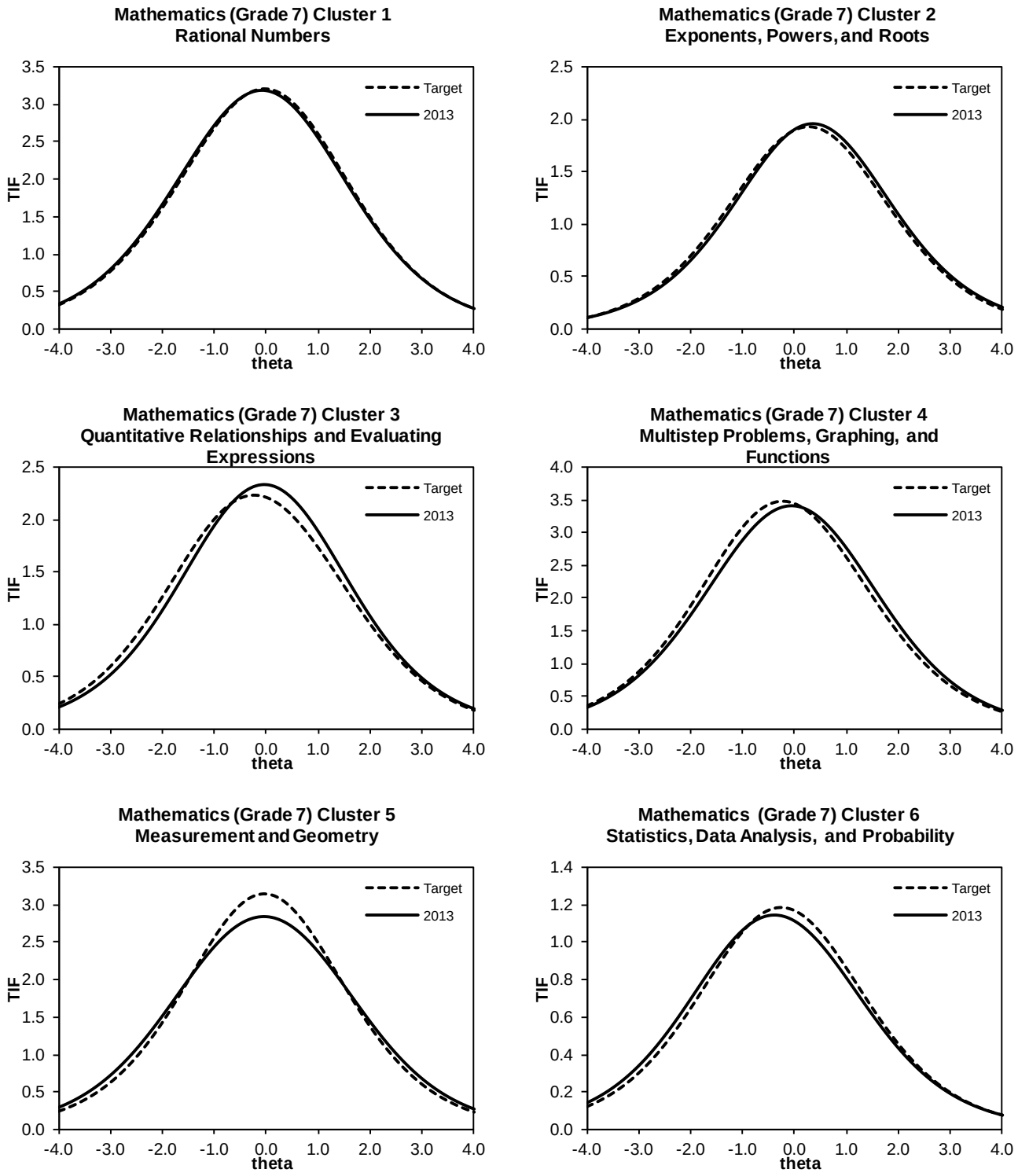


Figure 4.B.20 Plots of Target Information Functions and Projected Information for Clusters for General Mathematics

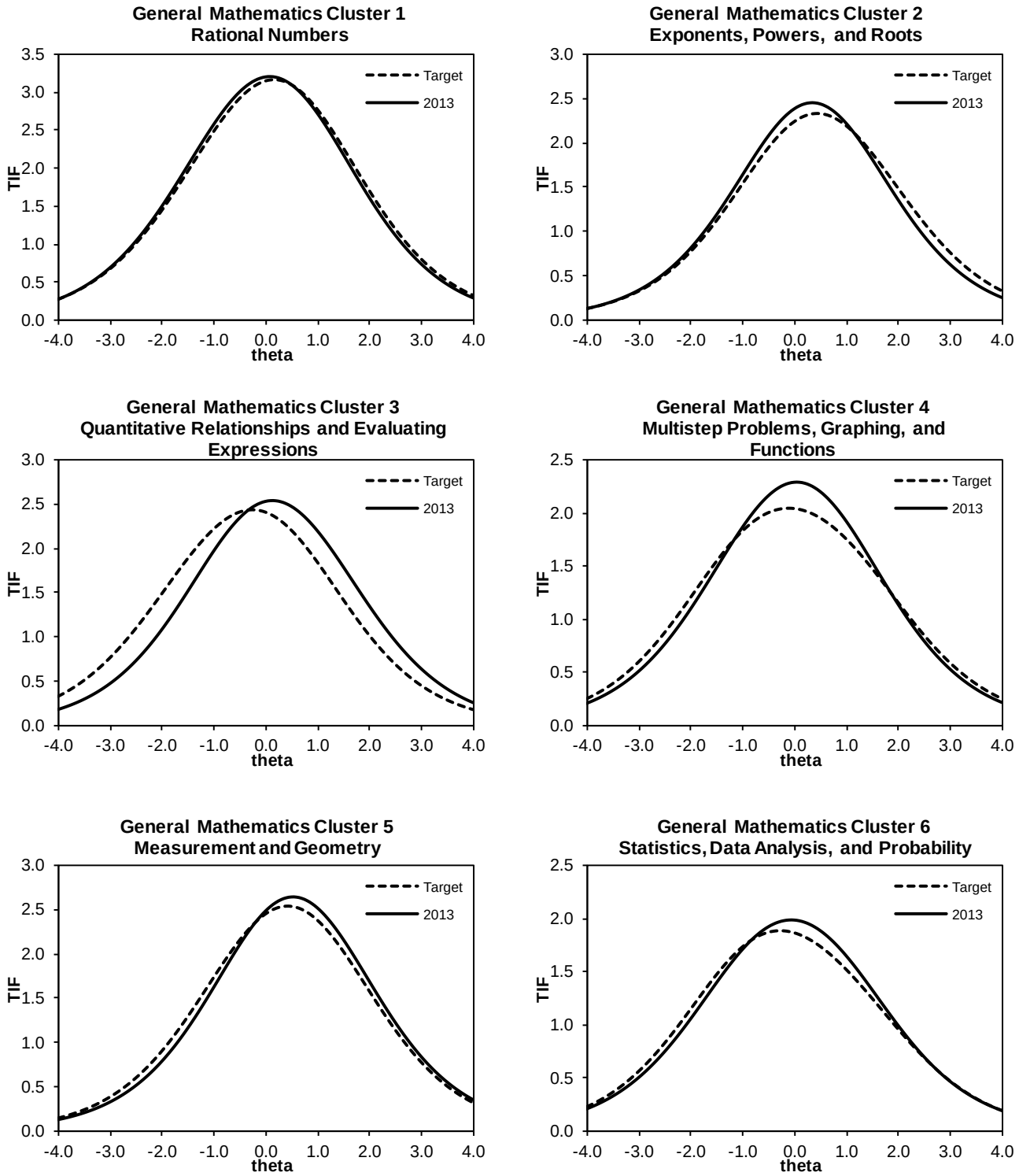


Figure 4.B.21 Plots of Target Information Functions and Projected Information for Clusters for Algebra I

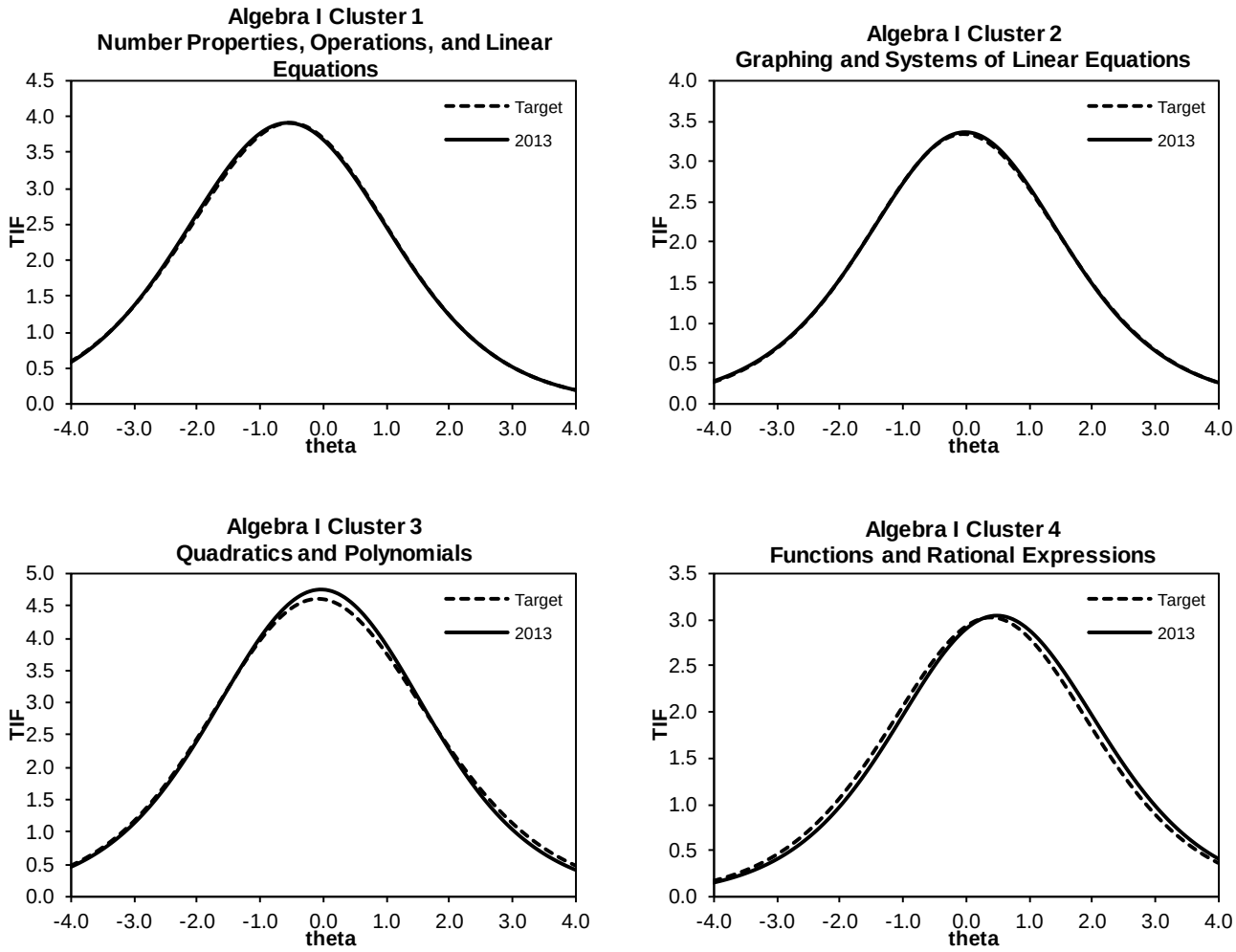


Figure 4.B.22 Plots of Target Information Functions and Projected Information for Clusters for Geometry

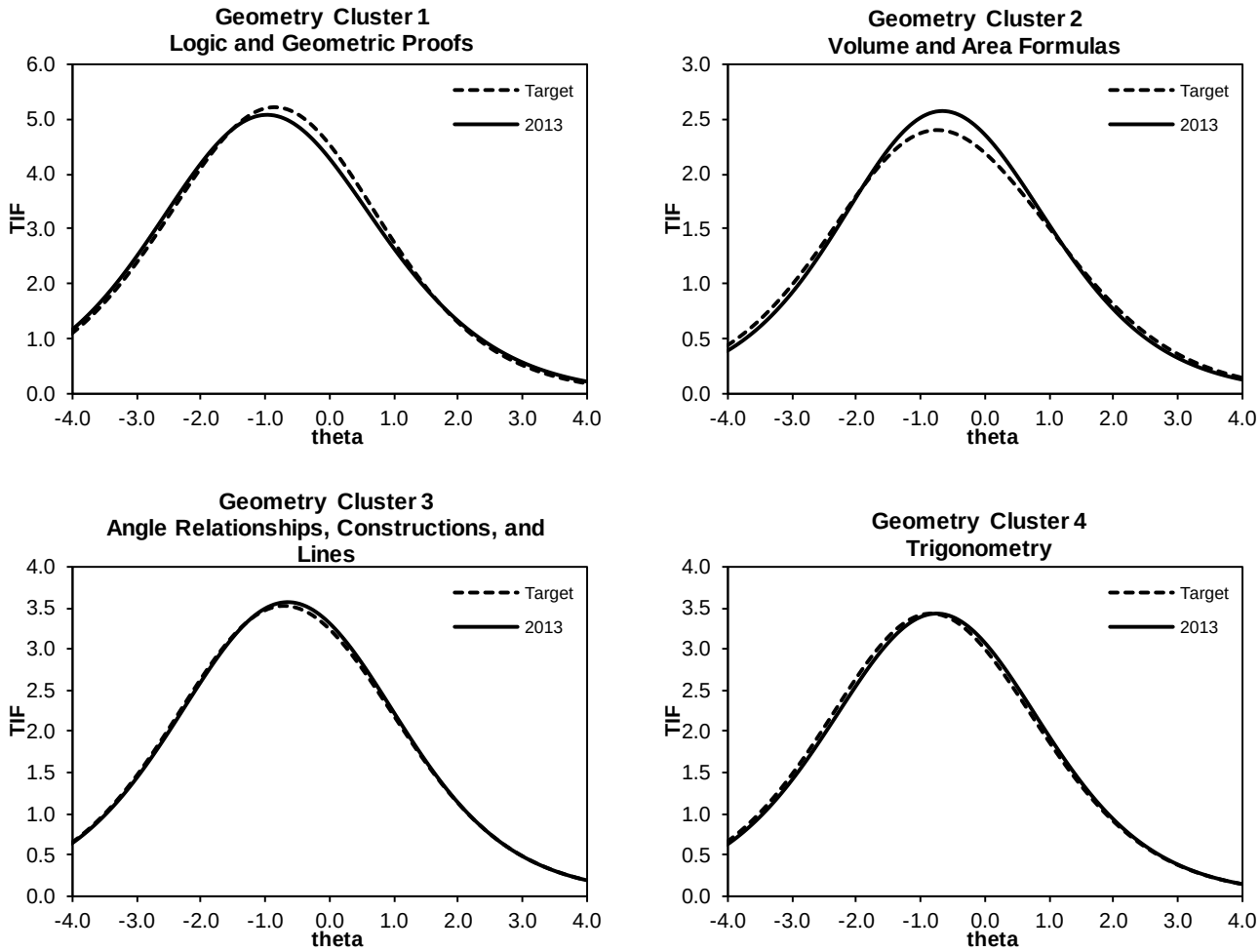


Figure 4.B.23 Plots of Target Information Functions and Projected Information for Clusters for Algebra II

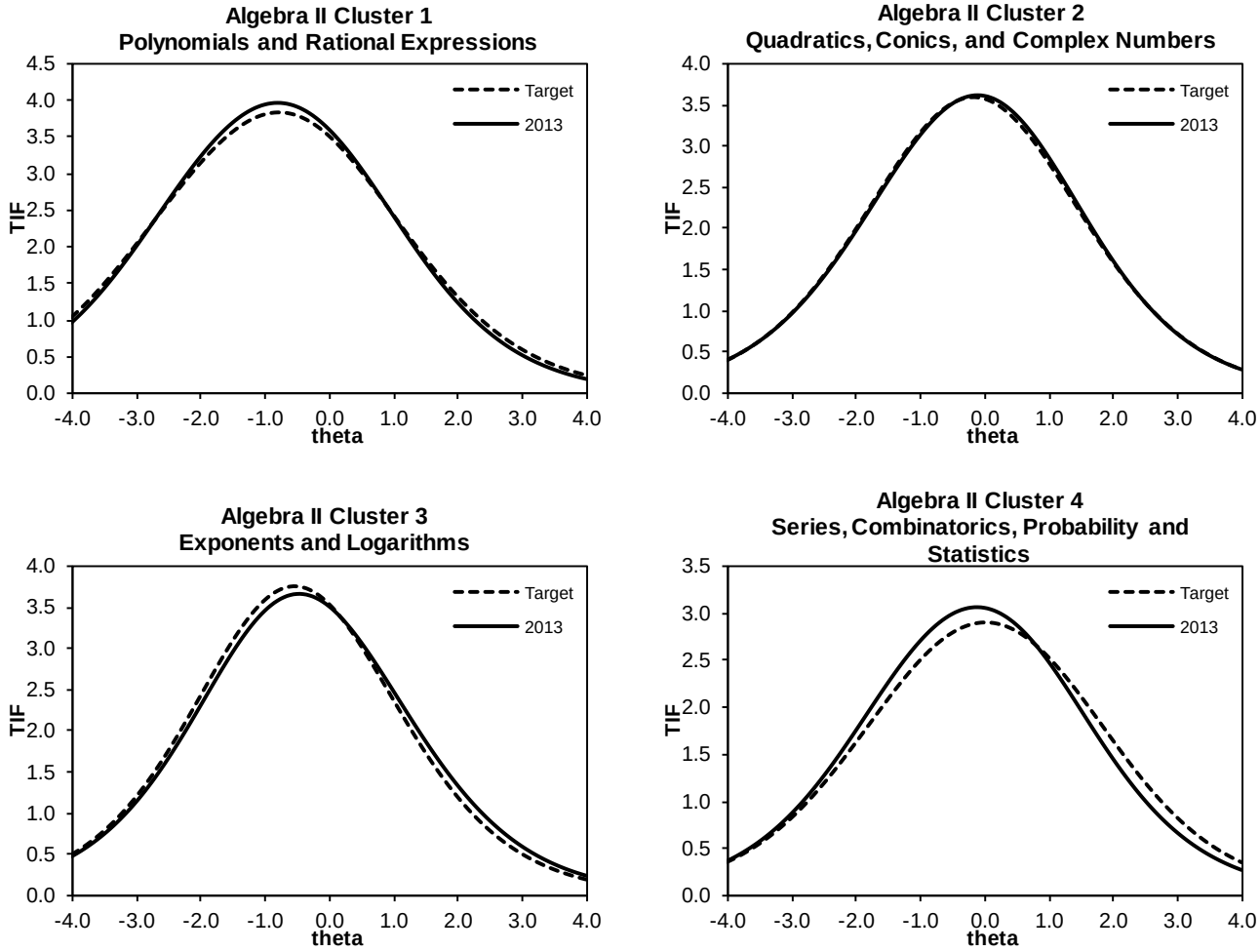


Figure 4.B.24 Plots of Target Information Functions and Projected Information for Clusters for Summative High School Mathematics

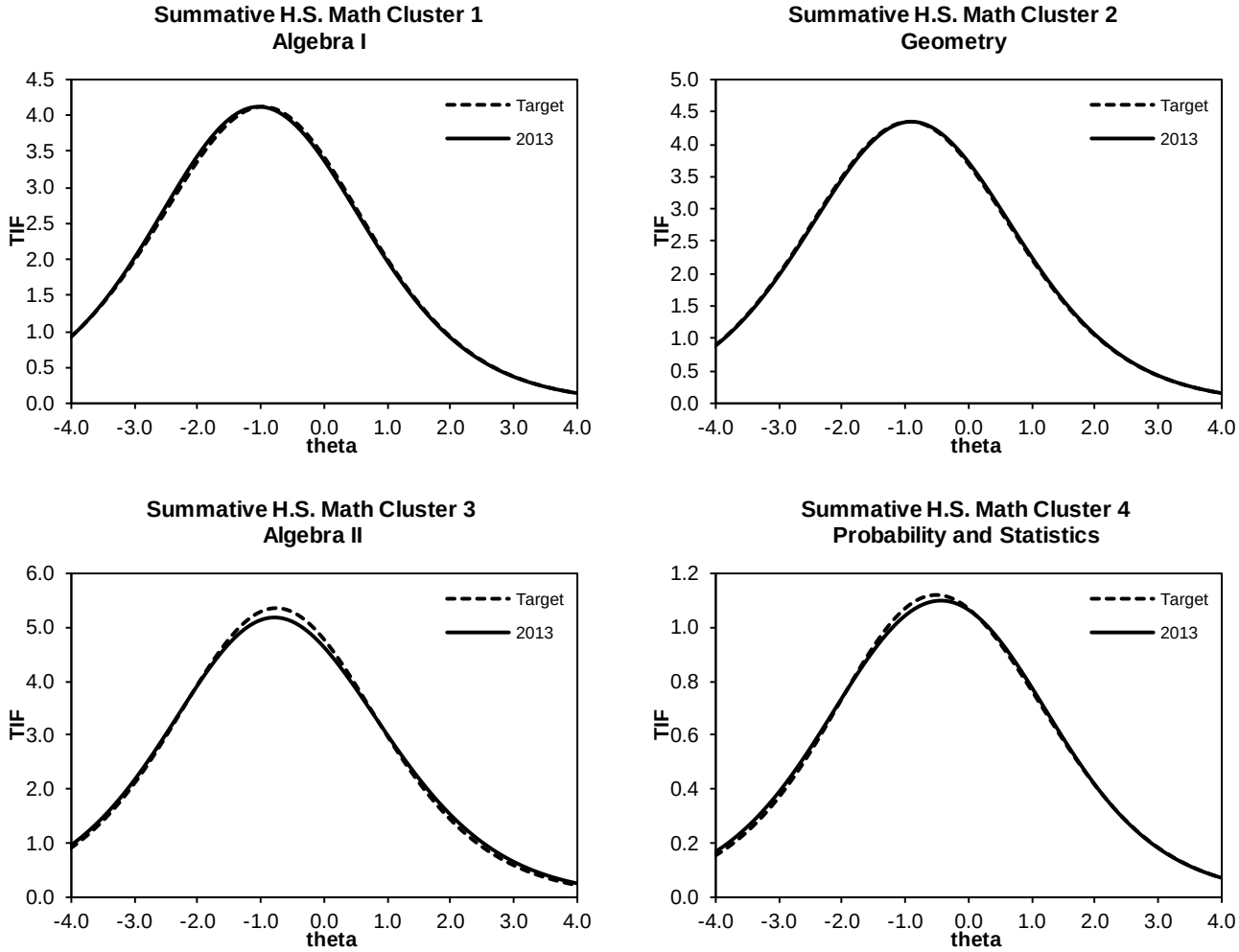


Figure 4.B.25 Plots of Target Information Functions and Projected Information for Clusters for Science, Grade Five

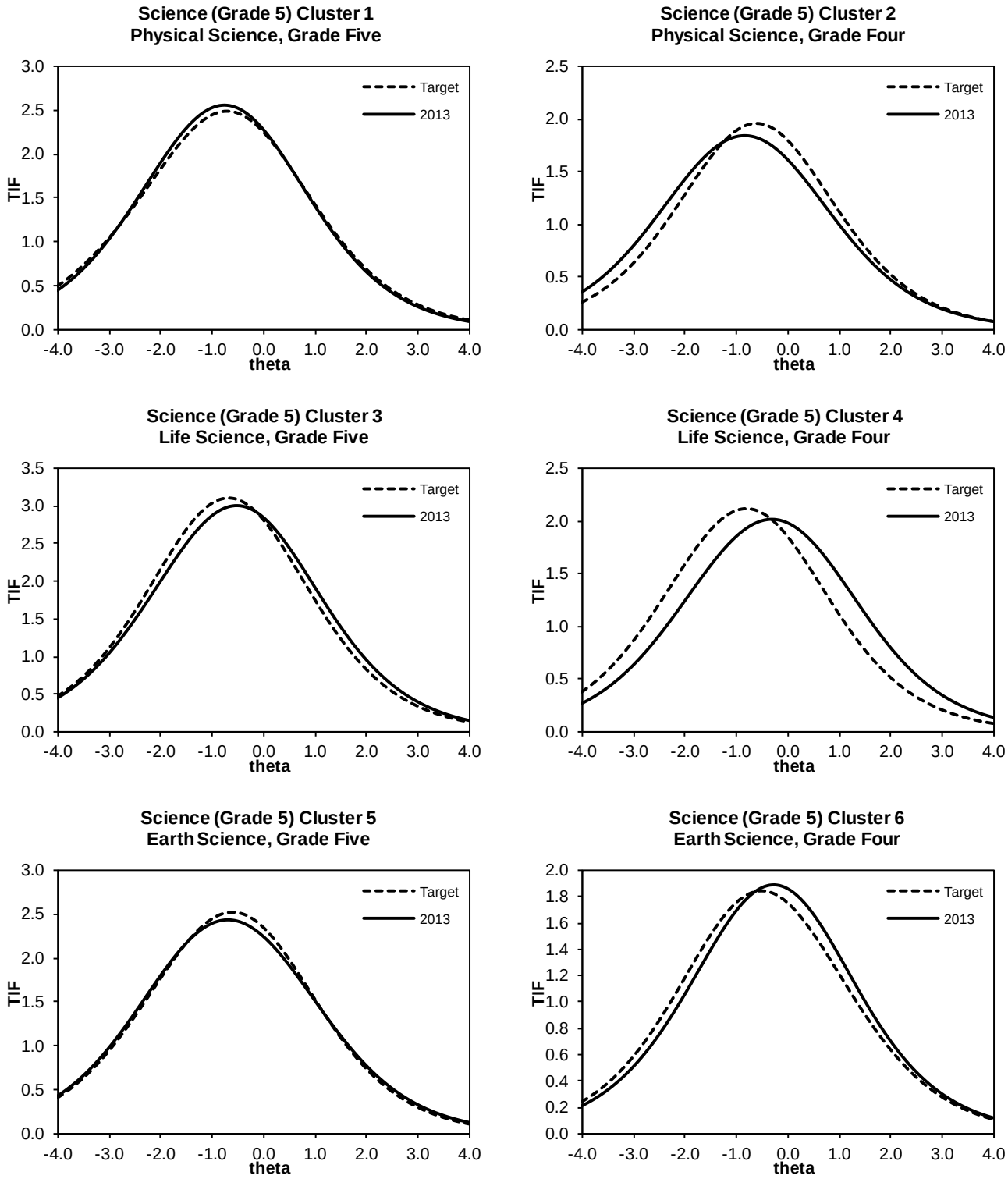


Figure 4.B.26 Plots of Target Information Functions and Projected Information for Clusters for Science, Grade Eight

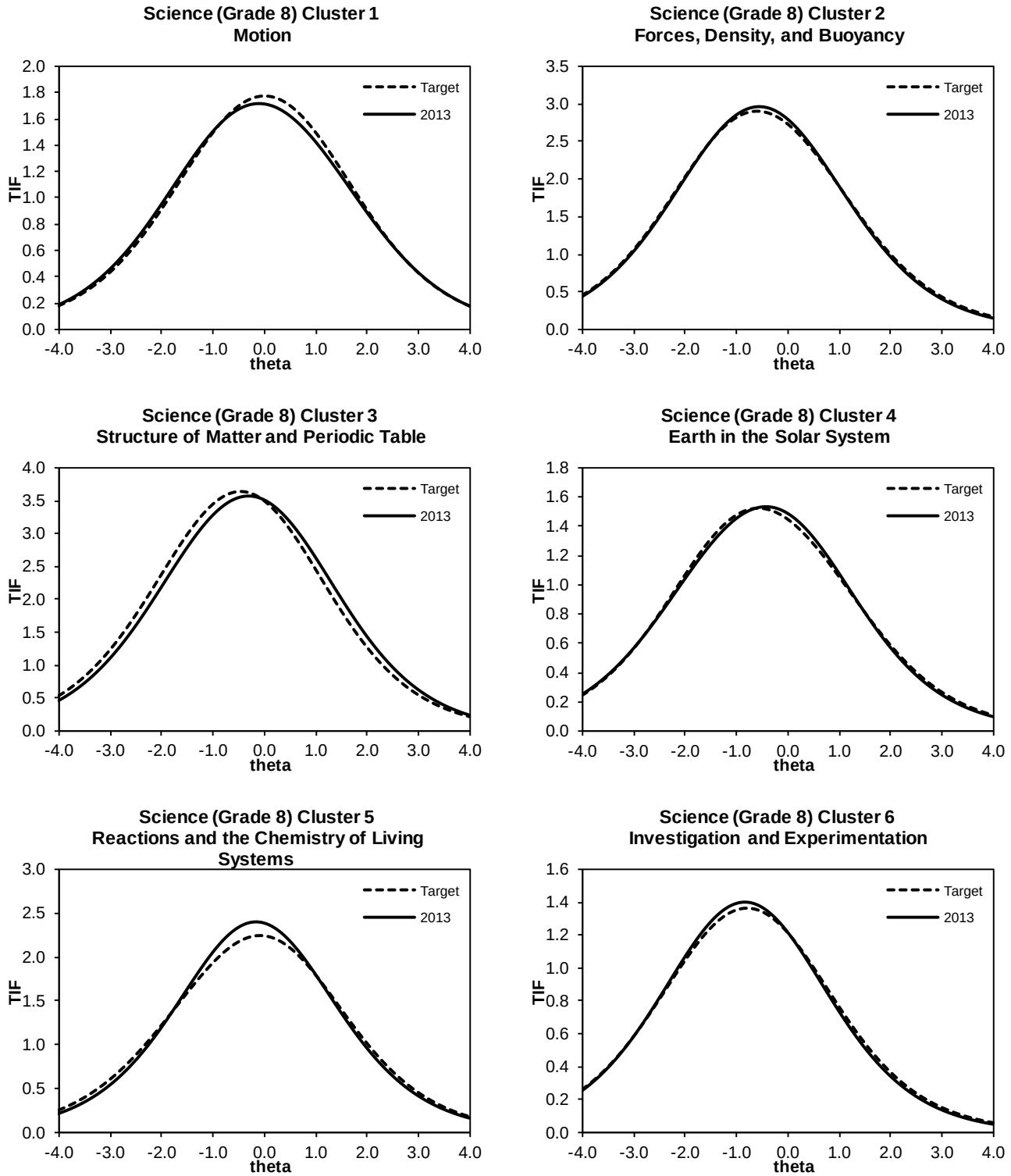


Figure 4.B.27 Plots of Target Information Functions and Projected Information for Clusters for Life Science, Grade Ten

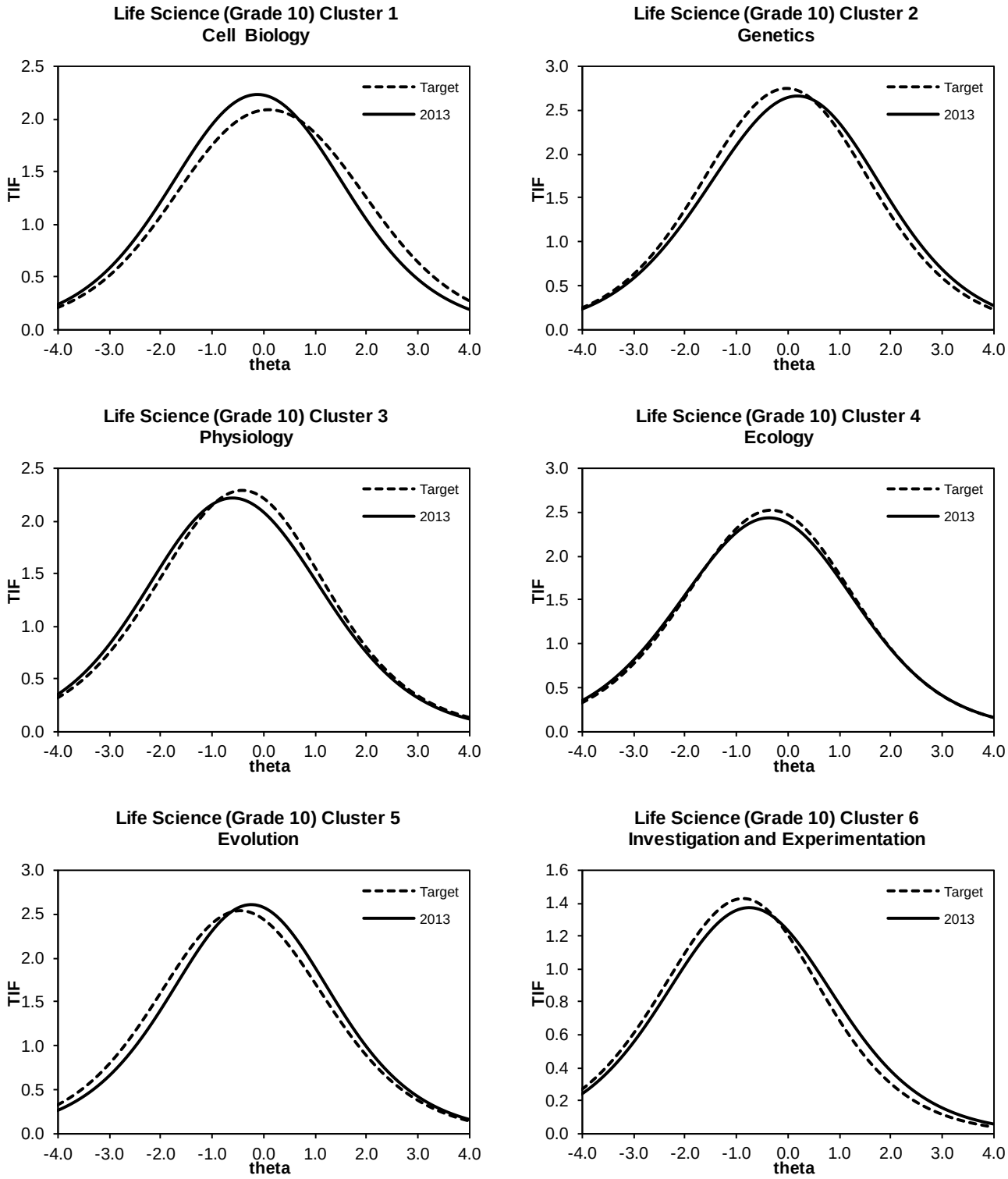


Figure 4.B.28 Plots of Target Information Functions and Projected Information for Clusters for Biology

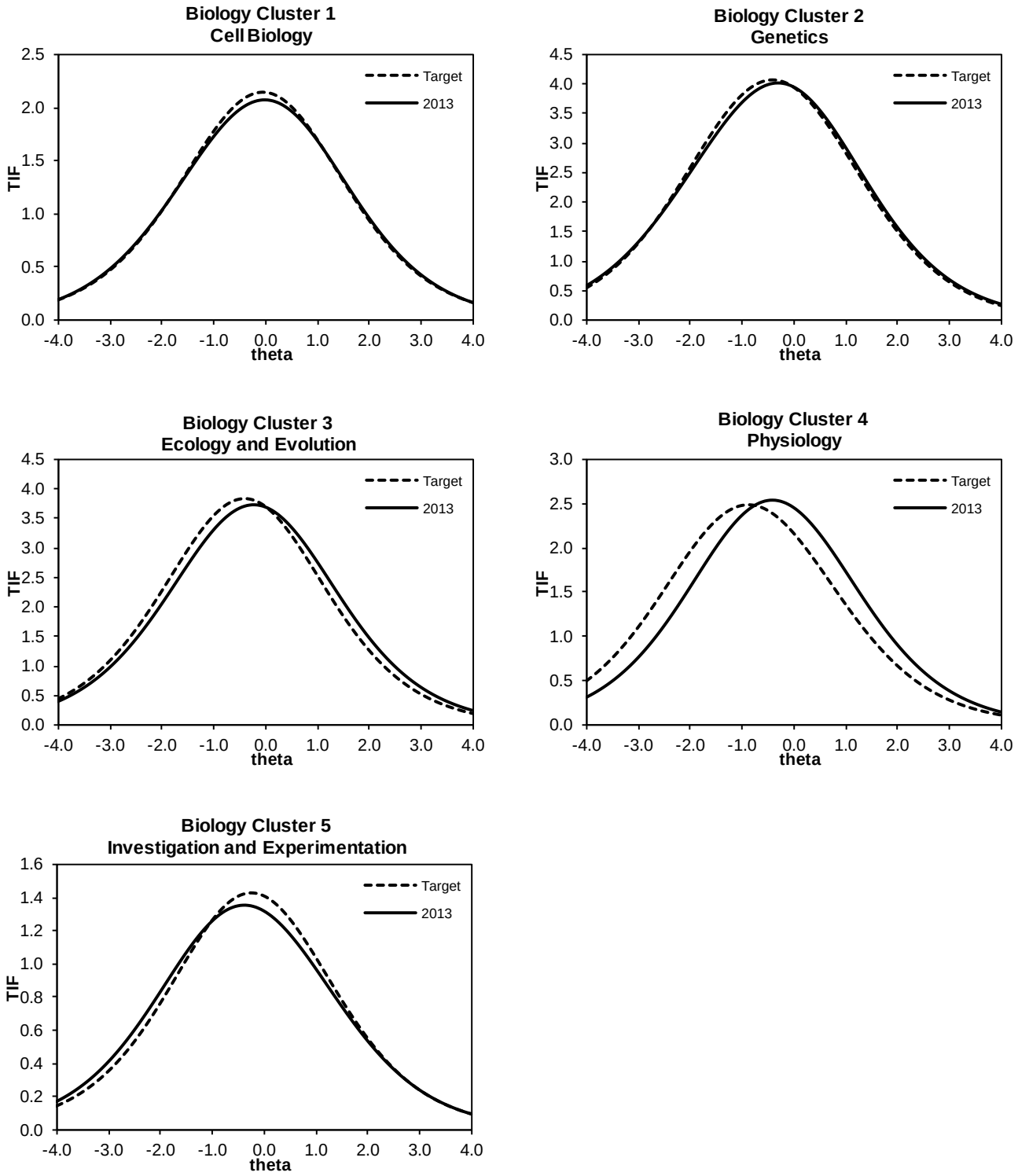


Figure 4.B.29 Plots of Target Information Functions and Projected Information for Clusters for Chemistry

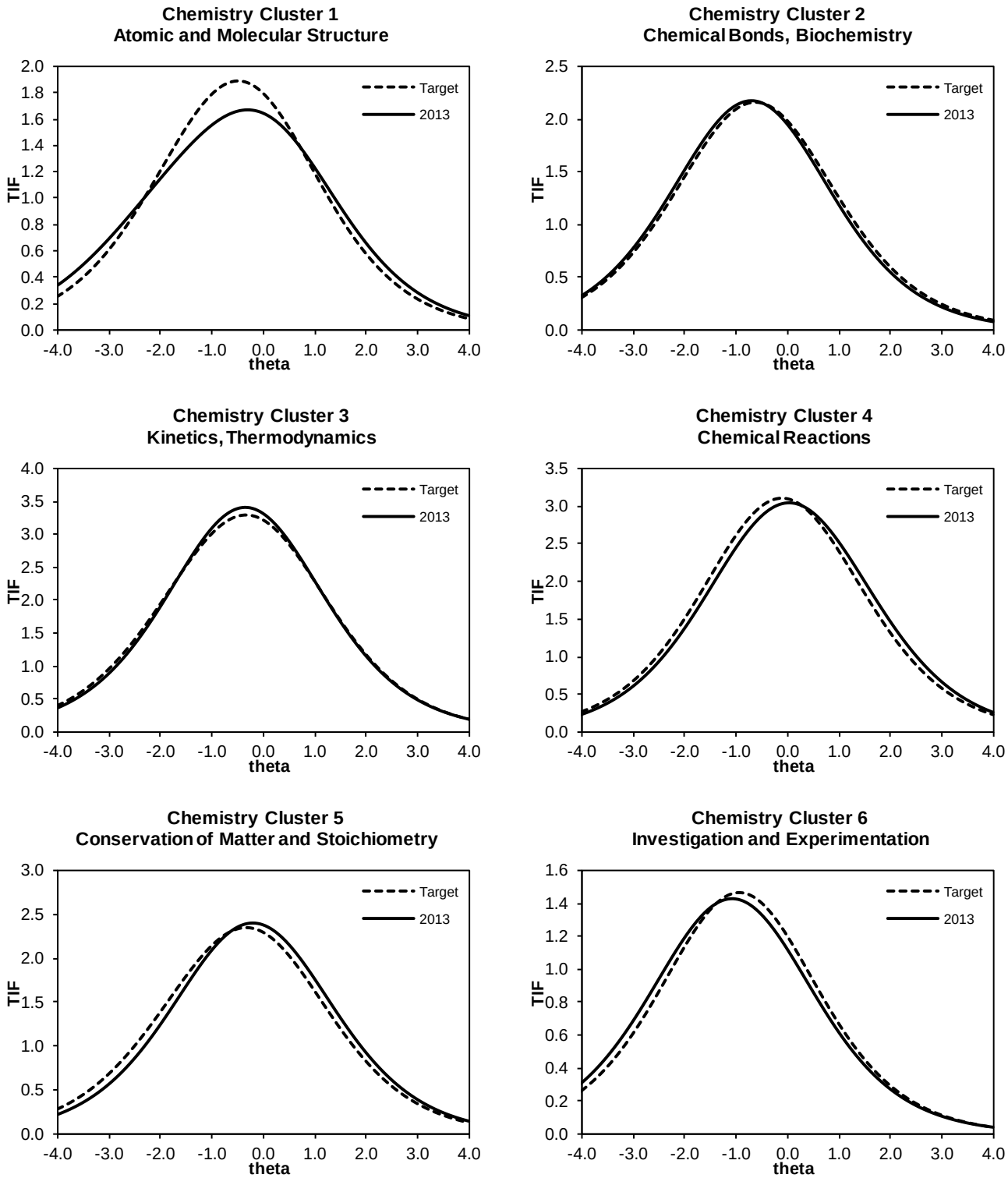


Figure 4.B.30 Plots of Target Information Functions and Projected Information for Clusters for Earth Science

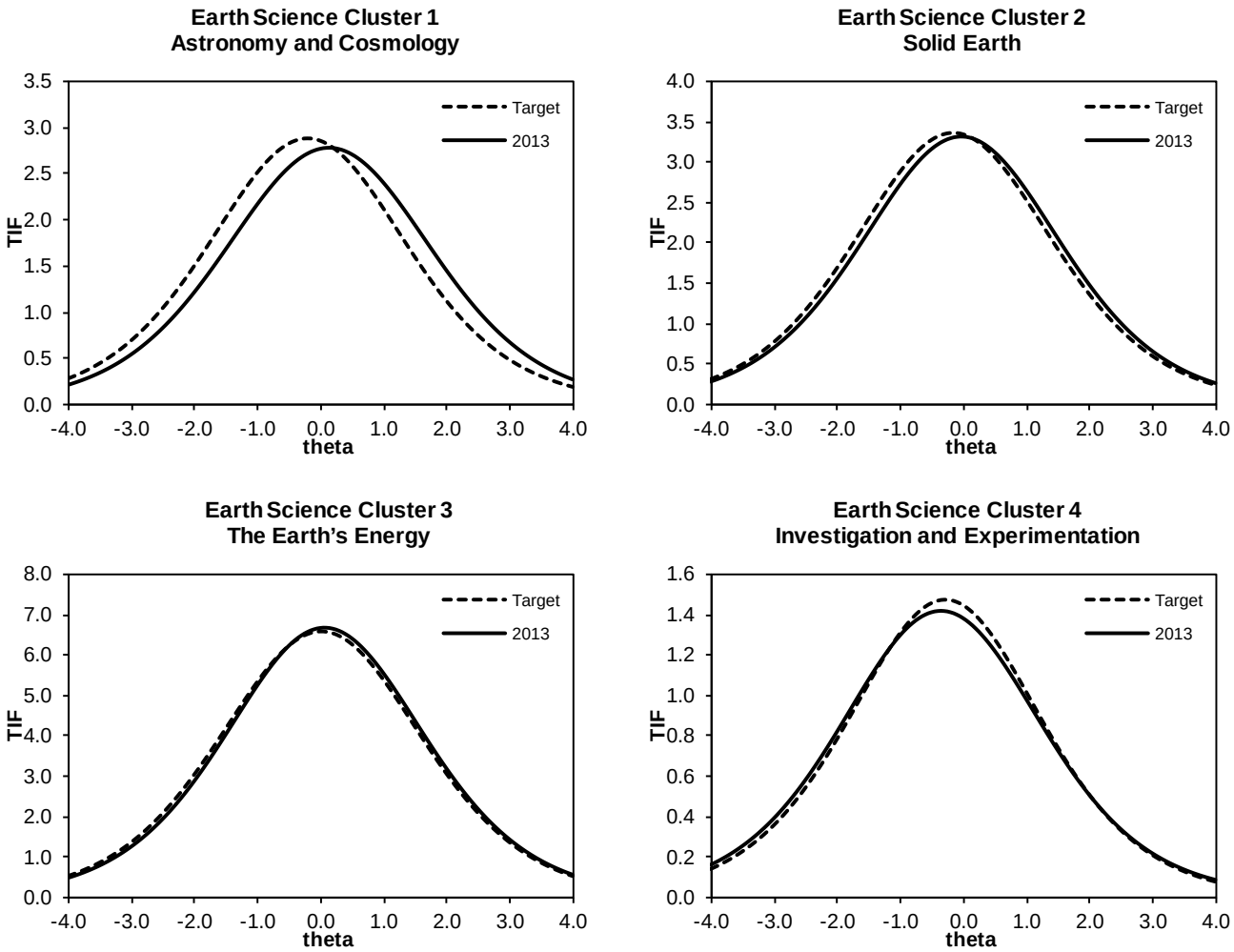
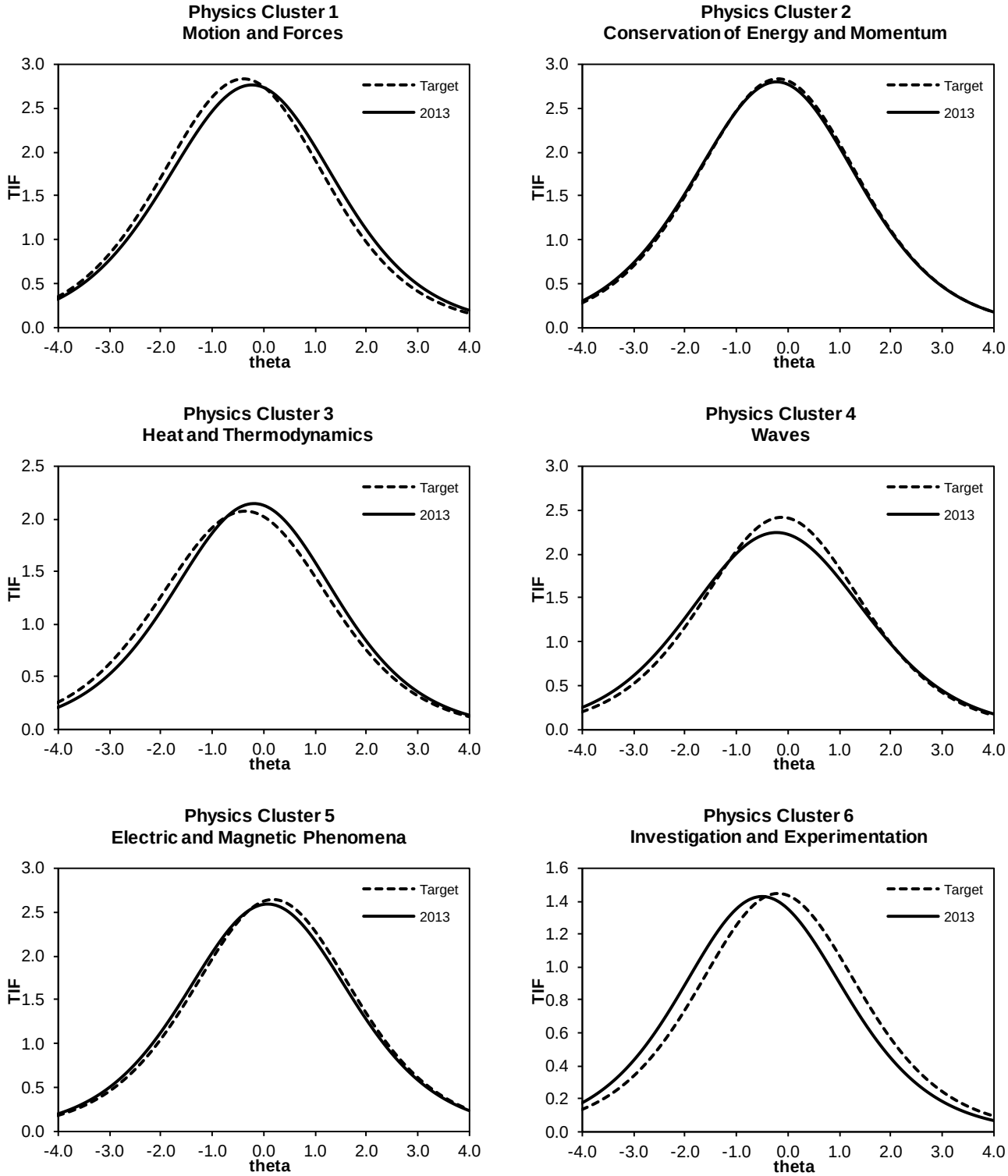


Figure 4.B.31 Plots of Target Information Functions and Projected Information for Clusters for Physics



Chapter 5: Test Administration

Test Security and Confidentiality

All tests within the STAR Program are secure documents. For the CST administration, every person having access to testing materials maintains the security and confidentiality of the tests. ETS's Code of Ethics requires that all test information, including tangible materials (such as test booklets), confidential files, processes, and activities are kept secure. ETS has systems in place that maintain tight security for test questions and test results, as well as for student data. To ensure security for all the tests that ETS develops or handles, ETS maintains an Office of Testing Integrity (OTI), which is described in the next section.

ETS's Office of Testing Integrity

The OTI is a division of ETS that provides quality assurance services for all testing programs administered by ETS and resides in the ETS legal department. The Office of Professional Standards Compliance at ETS publishes and maintains *ETS Standards for Quality and Fairness,* which supports the OTI's goals and activities. The purposes of the *ETS Standards for Quality and Fairness* are to help ETS design, develop, and deliver technically sound, fair, and useful products and services, and to help the public and auditors evaluate those products and services.

The OTI's mission is to

- Minimize any testing security violations that can impact the fairness of testing
- Minimize and investigate any security breach
- Report on security activities

The OTI helps prevent misconduct on the part of test-takers and administrators, detects potential misconduct through empirically established indicators, and resolves situations in a fair and balanced way that reflects the laws and professional standards governing the integrity of testing. In its pursuit of enforcing secure practices, ETS, through the OTI, strives to safeguard the various processes involved in a test development and administration cycle. These practices are discussed in detail in the next sections.

Test Development

During the test development process, ETS staff members consistently adhere to the following established security procedures:

- Only authorized individuals have access to test content at any step during the test development, item review, and data analysis processes.
- Test developers keep all hard-copy test content, computer disk copies, art, film, proofs, and plates in locked storage when not in use.
- ETS shreds working copies of secure content as soon as they are no longer needed during the test development process.
- Test developers take further security measures when test materials are to be shared outside of ETS; this is achieved by using registered and/or secure mail, using express delivery methods, and actively tracking records of dispatch and receipt of the materials.

Item and Data Review

As mentioned in Chapter 3, ARP meetings were not held in 2013 because there was no new item development for the 2013 CST forms. However, before the 2013 administration,

ETS facilitated ARP meetings every year to review all newly developed CST items and associated statistics. ETS enforced security measures at ARP meetings to protect the integrity of meeting materials using the following guidelines:

- Individuals who participate in the ARPs must sign a confidentiality agreement.
- Meeting materials are strictly managed before, during, and after the review meetings.
- Meeting participants are supervised at all times during the meetings.
- Use of electronic devices is prohibited in the meeting rooms.

Item Banking

Once the ARP review was complete, the items were placed in the item bank. ETS then delivered the items to the CDE through the California electronic item bank. Subsequent updates to content and statistics associated with items were based on data collected from field testing and the operational use of the items. The latest version of the item is retained in the bank along with the data from every administration that had included the item.

Security of the electronic item banking system is of critical importance. The measures that ETS takes for assuring the security of electronic files include the following:

- Electronic forms of test content, documentation, and item banks are backed up electronically, with the backups kept off site, to prevent loss from a system breakdown or a natural disaster.
- The offsite backup files are kept in secure storage with access limited to authorized personnel only.
- To prevent unauthorized electronic access to the item bank, state-of-the-art network security measures are used.

ETS routinely maintains many secure electronic systems for both internal and external access. The current electronic item banking application includes a login/password system to provide authorized access to the database or designated portions of the database. In addition, only users authorized to access the specific SQL database are able to use the electronic item banking system. Designated administrators at the CDE and at ETS authorize users to access these electronic systems.

Transfer of Forms and Items to the CDE

ETS shares a secure file transfer protocol (SFTP) site with the CDE. SFTP is a method for reliable and exclusive routing of files. Files reside on a password-protected server that only authorized users may access. On that site, ETS posts Microsoft Word and Excel, Adobe Acrobat PDF, or other document files for the CDE to review. ETS sends a notification e-mail to the CDE to announce that files are posted. Item data are always transmitted in an encrypted format to the SFTP site; test data are never sent via e-mail. The SFTP server is used as a conduit for the transfer of files; secure test data are not stored permanently on the shared SFTP server.

Security of Electronic Files Using a Firewall

A firewall is software that prevents unauthorized entry to files, e-mail, and other organization-specific programs. ETS data exchange and internal e-mail remain within the ETS firewall at all ETS locations, ranging from Princeton, New Jersey, to San Antonio, Texas, to Concord and Sacramento, California.

All electronic applications included in the STAR Management System (CDE, 2013a) remain protected by the ETS firewall software at all times. Due to the sensitive nature of the student

information processed by the STAR Management System, the firewall plays a significant role in maintaining an assurance of confidentiality in the users of this information.

Printing and Publishing

After items and test forms are approved, the files are sent for printing on a CD using a secure courier system. According to the established procedures, the OTI preapproves all printing vendors before they can work on secured confidential and proprietary testing materials. The printing vendor must submit a completed ETS Printing Plan and a Typesetting Facility Security Plan; both plans document security procedures, access to testing materials, a log of work in progress, personnel procedures, and access to the facilities by the employees and visitors. After reviewing the completed plans, representatives of the OTI visit the printing vendor to conduct an onsite inspection. The printing vendor ships printed test booklets to Pearson and other authorized locations. Pearson distributes the booklets to school districts in securely packaged boxes.

Test Administration

Pearson receives testing materials from printers, packages them, and sends them to school districts. After testing, the school districts return materials to Pearson for scoring. During these events, Pearson takes extraordinary measures to protect the testing materials. Pearson's customized Oracle business applications verify that inventory controls are in place, from materials receipt to packaging. The reputable carriers used by Pearson provide a specialized handling and delivery service that maintains test security and meets the STAR program schedule. The carriers provide inside delivery directly to the district STAR coordinators or authorized recipients of the assessment materials.

Test Delivery

Test security requires accounting for all secure materials before, during, and after each test administration. The district STAR coordinators are, therefore, required to keep all testing materials in central locked storage except during actual test administration times. Test site coordinators are responsible for accounting for and returning all secure materials to the district STAR coordinator, who is responsible for returning them to the STAR Scoring and Processing Center. The following measures are in place to ensure security of STAR testing materials:

- District STAR coordinators are required to sign and submit a "STAR Test (Including Field Tests) Security Agreement for District and Test Site Coordinators" form to the STAR Technical Assistance Center before ETS can ship any testing materials to the school district.
- Test site coordinators have to sign and submit a "STAR Test (Including Field Tests) Security Agreement for District and Test Site Coordinators" form to the district STAR coordinator before any testing materials can be delivered to the school/test site.
- Anyone having access to the testing materials must sign and submit a "STAR Test (Including Field Tests) Security Affidavit for Test Examiners, Proctors, Scribes, and Any Other Person Having Access to STAR Tests" form to the test site coordinator before receiving access to any testing materials.
- It is the responsibility of each person participating in the STAR Program to report immediately any violation or suspected violation of test security or confidentiality. The test site coordinator is responsible for immediately reporting any security violation to the district STAR coordinator. The district STAR coordinator must contact the CDE

immediately; the coordinator will be asked to follow up with a written explanation of the violation or suspected violation.

Processing and Scoring

An environment that promotes the security of the test prompts, student responses, data, and employees throughout a project is of utmost concern to Pearson. Pearson requires the following standard safeguards for security at its sites:

- There is controlled access to the facility.
- No test materials may leave the facility during the project without the permission of a person or persons designated by the CDE.
- All scoring personnel must sign a nondisclosure and confidentiality form in which they agree not to use or divulge any information concerning tests, scoring guides, or individual student responses.
- All staff must wear Pearson identification badges at all times in Pearson facilities.

No recording or photographic equipment is allowed in the scoring area without the consent of the CDE.

The completed and scored answer documents are stored in secure warehouses. After they are stored, they will not be handled again unless questions arise about a student's score. For example, a school district may request that a student's test responses be rescored. In such a case, the answer document is removed from storage, copied, and sent securely to the ETS facility in Sacramento, California, for hand scoring, after which the copy is destroyed. School and district personnel are not allowed to look at a completed answer document unless required for transcription or to investigate irregular cases.

All answer documents, test booklets, and other secure testing materials are destroyed after October 31 each year.

Data Management

Pearson provides overall security for assessment materials through its limited-access facilities and through its secure data processing capabilities. Pearson enforces stringent procedures to prevent unauthorized attempts to access its facilities. Entrances are monitored by security personnel and a computerized badge-reading system is utilized. Upon entering a facility, all Pearson employees are required to display identification badges that must be worn at all times while in the facility. Visitors must sign in and out. While they are at the facility, they are assigned a visitor badge and escorted by Pearson personnel. Access to the Data Center is further controlled by the computerized badge-reading system that allows entrance only to those employees who possess the proper authorization.

Data, electronic files, test files, programs (source and object), and all associated tables and parameters are maintained in secure network libraries for all systems developed and maintained in a client-server environment. Only authorized software development employees are given access as needed for development, testing, and implementation in a strictly controlled Configuration Management environment.

For mainframe processes, Pearson utilizes Random Access Control Facility (RACF) to limit and control access to all data files (test and production), source code, object code, databases, and tables. RACF controls who is authorized to alter, update, or even read the files. All attempts to access files on the mainframe by unauthorized users are logged and monitored. In addition, Pearson uses ChangeMan, a mainframe configuration management

tool, to control versions of the software and data files. ChangeMan provides another level of security, combined with RACF, to place the correct tested version of code into production. Unapproved changes are not implemented without prior review and approval.

Transfer of Scores via Secure Data Exchange

After scoring is completed, Pearson sends scored data files to ETS and follows secure data exchange procedures. ETS and Pearson have implemented procedures and systems to provide efficient coordination of secure data exchange. This includes the established SFTP site that is used for secure data transfers between ETS and Pearson. These well-established procedures provide timely, efficient, and secure transfer of data. Access to the STAR data files is limited to appropriate personnel with direct project responsibilities.

Statistical Analysis

The Information Technology (IT) area at ETS retrieves the Pearson data files from the SFTP site and loads them into a database. The Data Quality Services (DQS) area at ETS extracts the data from the database and performs quality control procedures before passing files to the ETS Statistical Analysis group. The Statistical Analysis group keeps the files on secure servers and adheres to the ETS Code of Ethics and the ETS Information Protection Policies to prevent any unauthorized access.

Reporting and Posting Results

After statistical analysis has been completed on student data, the following deliverables are produced:

- Paper reports, some with individual student results and others with summary results
- A file of individual student results—available for download through the QTR module of the STAR Management System—that shows students' scale scores and performance levels
- Encrypted files of summary results (sent to the CDE by means of SFTP) (Any summary results that have fewer than 11 students are not reported.)
- Item-level statistics based on the results, which are entered into the item bank

Student Confidentiality

To meet ESEA and state requirements, school districts must collect demographic data about students. This includes information about students' ethnicity, parent education, disabilities, whether the student qualifies for the National School Lunch Program (NSLP), and so forth (CDE, 2013b). In addition, students may reveal other information about themselves through the essays they write. ETS takes precautions to prevent any of this information from becoming public or being used for anything other than testing purposes. These procedures are applied to all documents in which these student demographic data may appear, including the following:

- Pre-ID files
- Reports
- Essays

Student Test Results

ETS also has security measures for files and reports that show students' scores and performance levels. ETS is committed to safeguarding the information in its possession from unauthorized access, disclosure, modification, or destruction. ETS has strict information security policies in place to protect the confidentiality of ETS and client data. ETS staff

access to production databases is limited to personnel with a business need to access the data. User IDs for production systems must be person-specific or for systems use only.

ETS has implemented network controls for routers, gateways, switches, firewalls, network tier management, and network connectivity. Routers, gateways, and switches represent points of access between networks. However, these do not contain mass storage or represent points of vulnerability, particularly to unauthorized access or denial of service. Routers, switches, firewalls, and gateways may possess little in the way of logical access.

ETS has many facilities and procedures that protect computer files. Facilities, policies, software, and procedures such as firewalls, intrusion detection, and virus control are in place to provide for physical security, data security, and disaster recovery. ETS is certified in the BS 25999-2 standard for business continuity and conducts disaster recovery exercises annually. ETS routinely backs up its data to either disk through deduplication or to tape, both of which are stored off site.

Access to the ETS Computer Processing Center is controlled by employee and visitor identification badges. The Center is secured by doors that can only be unlocked by the badges of personnel who have functional responsibilities within its secure perimeter. Authorized personnel accompany visitors to the Data Center at all times. Extensive smoke detection and alarm systems, as well as a pre-action fire-control system, are installed in the Center.

ETS protects individual student's results on both electronic files and paper reports during the following events:

- Scoring
- Transfer of scores by means of secure data exchange
- Reporting
- Analysis and reporting of erasure marks
- Posting of aggregate data
- Storage

In addition to protecting the confidentiality of testing materials, ETS's Code of Ethics further prohibits ETS employees from financial misuse, conflicts of interest, and unauthorized appropriation of ETS's property and resources. Specific rules are also given to ETS employees and their immediate families who may take a test developed by ETS, such as a STAR examination. The ETS Office of Testing Integrity verifies that these standards are followed throughout ETS. It does this, in part, by conducting periodic onsite security audits of departments, with follow-up reports containing recommendations for improvement.

Procedures to Maintain Standardization

The CST processes are designed so that the tests are administered and scored in a standardized manner. ETS employs personnel who facilitate various processes involved in the standardization of an administration cycle and takes all necessary measures to ensure the standardization of the CSTs, as described in this section.

Test Administrators

The CSTs are administered in conjunction with the other tests that comprise the STAR Program. The responsibilities for district and test site staff members are included in the

STAR District and Test Site Coordinator Manual (CDE, 2013c). This manual is described in the next section.

The staff members centrally involved in the test administration are as follows:

District STAR Coordinator
Each local educational agency (LEA) designates a district STAR coordinator who is responsible for ensuring the proper and consistent administration of the STAR tests. LEAs include public school districts, statewide benefit charter schools, state board–authorized charter schools, county office of education programs, and charter schools testing independently from their home district.

District STAR coordinators are also responsible for securing testing materials upon receipt, distributing testing materials to schools, tracking the materials, training and answering questions from district staff and test site coordinators, reporting any testing irregularities or security breaches to the CDE, receiving scorable and nonscorable materials from schools after an administration, and returning the materials to the STAR contractor for processing.

Test Site Coordinator
The superintendent of the school district or the district STAR coordinator designates a STAR test site coordinator at each test site from among the employees of the school district. (*5 CCR* Section 858 [a])

Test site coordinators are responsible for making sure that the school has the proper testing materials, distributing testing materials within a school, securing materials before, during, and after the administration period, answering questions from test examiners, preparing and packaging materials to be returned to the school district after testing, and returning the materials to the school district. (CDE, 2013c)

Test Examiner
CSTs are administered by test examiners who may be assisted by test proctors and scribes. A test examiner is an employee of a school district or an employee of a nonpublic, nonsectarian school (NPS) who has been trained to administer the tests and has signed a STAR Test Security Affidavit. Test examiners must follow the directions in the *California Standardized Testing and Reporting Directions for Administration* (*DFA*) (CDE, 2013d) exactly.

Test Proctor
A test proctor is an employee of the school district or a person, assigned by an NPS to implement the IEP of a student, who has received training designed to prepare the proctor to assist the test examiner in the administration of tests within the STAR Program (*5 CCR* Section 850 [r]). Test proctors must sign STAR Test Security Affidavits (*5 CCR* Section 859 [c]).

Scribe
A scribe is an employee of the school district or a person, assigned by an NPS to implement the IEP of a student, who is required to transcribe a student's responses to the format required by the test. A student's parent or guardian is not eligible to serve as the student's scribe (*5 CCR* Section 850 [m]). Scribes must sign STAR Test Security Affidavits (*5 CCR* Section 859 [c]).

Directions for Administration

CST *DFA*s are manuals used by test examiners to administer the CSTs to students (CDE, 2013d). Test examiners must follow all directions and guidelines and read, word-for-word, the instructions to students in "SAY" boxes to ensure test standardization. The *DFA* for the grade two CSTs also includes test questions that the examiner reads aloud to students.

District and Test Site Coordinator Manual

Test administration procedures are to be followed exactly so that all students have an equal opportunity to demonstrate their academic achievement. The *STAR District and Test Site Coordinator Manual* contributes to this goal by providing information about the responsibilities of district and test site coordinators, as well as those of the other staff involved in the administration cycle (CDE, 2013c). However, the manual is not intended as a substitute for the *CCR*, *Title 5,* Education (*5 CCR*), or to detail all of the coordinator's responsibilities.

STAR Management System Manuals

The STAR Management System is a series of secure, Web-based modules that allow district STAR coordinators to set up test administrations, order materials, and submit and correct student Pre-ID data. Every module has its own user manual with detailed instructions on how to use the STAR Management System. The modules of the STAR Management System are as follows:

- **Test Administration Setup—**This module allows school districts to determine and calculate dates for scheduling test administrations for school districts, to verify contact information for those school districts, and to update the school district's shipping information. (CDE, 2013e)
- **Order Management—**This module allows school districts to enter quantities of testing materials for schools. Its manual includes guidelines for determining which materials to order. (CDE, 2013f)
- **Pre-ID—**This module allows school districts to enter or upload student information, including demographics, and to identify the test(s) the student will take. This information is printed on student test booklets or answer documents or on labels that can be affixed to test booklets or answer documents. Its manual includes the CDE's Pre-ID layout. (CDE, 2013b)
- **Extended Pre-ID Data Corrections—**This module allows school districts to correct the data that were submitted during Pre-ID prior to the last day of the school district's selected testing window. (CDE, 2013b)

Test Booklets

For each grade-level and end-of-course test, multiple versions of test booklets are administered. The versions differ only in terms of the field-test items they contain. In grades three through eleven, these versions are spiraled—comingled—and packaged consecutively and are distributed at the student level; that is, each classroom or group of test-takers receives at least one of each version of the test. The grade two CST versions are not spiraled; instead, versions are assigned by school because test questions are read aloud to the students.

The test booklets, along with answer documents and other supporting materials, are packaged by school or group, depending on how the district STAR coordinator ordered the materials. All materials are sent to the district STAR coordinator for proper distribution within the LEA. Special formats of test booklets are also available for test-takers who require

accommodations to participate in testing. These special formats include large-print and braille testing materials.

Test Variations, Accommodations, and Modifications

All public school students participate in the STAR Program, including students with disabilities and English learners. ETS policy states that reasonable testing accommodations be provided to candidates with documented disabilities that are identified in the Americans with Disabilities Act (ADA). The ADA mandates that test accommodations be individualized, meaning that no single type of test accommodation may be adequate or appropriate for all individuals with any given type of disability. The ADA authorizes that test-takers with disabilities may be tested under standard conditions if ETS determines that only minor adjustments to the testing environment are required (e.g., wheelchair access, large-print test book, a sign language interpreter for spoken directions).

Identification

Most students with disabilities and most English learners take the CSTs under standard conditions. However, some students with disabilities and some English learners may need assistance when taking the CSTs. This assistance takes the form of test variations, accommodations, or modifications (see Appendix 2.C on page 36 in Chapter 2 for details). During the test, these students may use the special services specified in their IEP or Section 504 plan. If students use accommodations or modifications for the CSTs, test examiners are responsible for marking the accommodation or modification used on the students' test booklets, answer documents, or Writing Response Booklets.

In the event that a student injures a hand or arm prior to the writing test, is willing and able to sit for the examination, but unable to write, the school completes a Section 504 plan for the student. The Section 504 plan identifies which accommodations or modifications the student will use in completion of his or her writing test (CDE, 20101c).

Scoring

The purpose of test variations, accommodations, and modifications is to enable students to take the CSTs, not to give them an advantage over other students or to inflate their scores artificially. Scores for students tested with modifications are counted as far below basic for API calculations and not proficient for AYP calculations. Test administration variations and accommodations do not result in changes to students' scores for API or AYP calculations.

Demographic Data Corrections

After reviewing student data, some school districts may discover assessment-related data— such as special conditions, accommodations, modifications, variations, test taken, and so forth— that are incorrect. The Demographic Data Corrections module of the STAR Management System gives school districts the means to correct these data within a specified availability window. Districts may correct data to: (1) Have the school district's API/AYP recalculated (when edits are merged with demographic data corrections entered into the California Longitudinal Pupil Assessment Data System); (2) Rescore uncoded or miscoded CST end-of-course mathematics and/or science tests; (3) Obtain a corrected data CD-ROM for school district records; or (4) Match unmatched records for grades four and seven writing and multiple-choice tests. (CDE, 2010g)

Testing Irregularities

Testing irregularities are circumstances that may compromise the reliability and validity of test results and, if more than five percent of the students tested are involved, could affect a school's API and AYP.

The district STAR coordinator is responsible for immediately notifying the CDE of any irregularities that occur before, during, or after testing. The test examiner is responsible for immediately notifying the district STAR coordinator of any security breaches or testing irregularities that occur in the administration of the test. Once the district STAR coordinator and the CDE have determined that an irregularity has occurred, the CDE instructs the district STAR coordinator on how and where to identify the irregularity on the student test booklet or answer document. The information and procedures to assist in identifying irregularities and notifying the CDE are provided in the *STAR District and Test Site Coordinator Manual* (CDE, 2013c).

Social Media Security Breaches

Social media security breaches are exposures of test questions and testing materials through social media Web sites. These security breaches raise serious concerns that require comprehensive investigation and additional statistical analyses. In recognizing the importance of and the need to provide valid and reliable results to the state, districts, and schools, both the CDE and ETS take every precaution necessary, including extensive statistical analyses, to ensure that all test results maintain the highest levels of psychometric integrity.

A preliminary investigation into the scope and magnitude of 2013 social media security breaches was completed by the end of May and resulted in a list of exposed test questions (items) that were found on social media Web sites.

After the list of exposed items was obtained, ETS identified whether any of those items were operational (and, therefore, contributed to test scores) and conducted statistical analyses to determine whether any test items affected by the security breach needed to be removed from scoring to maintain the validity of test results. Because the CSTs comprise previously administered forms and are pre-equated, had any items been removed from scoring due to exposure, scoring keys and conversion tables for the affected test(s) would have been revised and all the students who had taken those tests rescored.

An exhaustive review of the spring 2013 statistical results did not provide evidence of performance differences between exposed and nonexposed items. From a statistical perspective, results did not indicate the need to remove exposed items from scoring. ETS, therefore, recommended that all exposed items be included in scoring for the 2013 administration.

Test Administration Incidents

A test administration incident is any event that occurs before, during, or after test administrations that does not conform to the instructions stated in the *DFAs* (CDE, 2013d) and the *STAR District and Test Site Coordinator Manual* (CDE, 2013c). These events include test administration errors, disruptions, and student cheating. Test administration incidents generally do not affect test results. These administration incidents are not reported to the CDE or the STAR Program testing contractor. The STAR test site coordinator should immediately notify the district STAR coordinator of any test administration incidents that occur. It is recommended by the CDE that districts and schools maintain records of these incidents.

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Chapter 6: Performance Standards

Background

The CSTs for ELA and mathematics became part of the STAR Program in 1999. Five performance standards for the ELA tests were developed in 2000 and adopted by the SBE for the 2001 administration of those tests.

Also in 2001, the CSTs for history–social science and EOC science were introduced in grades nine through eleven. The performance standards for those tests were established in the same year and were adopted in their first operational administration in 2002. The performance standards for mathematics tests were also established in 2001 and adopted in the 2002 operational administration of those CSTs.

In 2003, performance standards were adopted for the CST for Science (Grade 5) and were reported operationally starting in 2004. In 2005, performance standards were adopted for the science CSTs for grades eight and ten and were reported operationally starting in 2006. The performance standards for the CSTs were defined by the SBE as far below basic, below basic, basic, proficient, and advanced.

The state target is to have all students achieve the proficient or advanced level by 2014. Schools and districts are expected to provide additional assistance to students scoring at or below the basic level.

California employed carefully designed standard-setting procedures to facilitate the development of performance standards for each CST. These processes are described in the sections that follow.

Standard-Setting Procedure

The process of standard setting is designed to identify a “cut score” or minimum test score that is required to qualify a student for each performance level. The process generally requires that a panel of subject-matter experts and others with relevant perspectives (for example, teachers, school administrators) be assembled. The panelists for the CST standard setting were selected based on the following characteristics:

- Familiarity with the subject matter assessed
- Familiarity with students in the respective grade levels
- An understanding of large-scale assessments
- An appreciation of the consequences of setting these cut scores

Also, in the interest of equity, representatives from diverse geographic regions, and from different gender and major racial/ethnic subgroups are requested to participate (ETS, 2004, 2006).

The standard-setting processes implemented for CSTs required panelists to follow these steps, which include training and practice prior to making judgments:

1. At the start of the workshop, panelists received training that included the purpose of standard setting and their role in the work, the meaning of a “cut score” and “impact data,” and specific training and practice in the method. Impact data included the percentage of examinees assessed in a previous administration of the test that would fall into each level, given the panelists’ judgments of cut scores.

2. Panelists looked at the content standards upon which the test items are based and discussed the expectations in the content area. This allowed the panelists to understand how their perception of item difficulty may relate to the complexity of content standards.
3. Panelists became familiar with the difficulty level of the items by taking the actual test and then assessing and discussing the demands of the test items.
4. Panelists discussed the meaning of the performance standard descriptions and visualized the knowledge and skills of students who would belong in each performance level.
5. Panelists identified characteristics of a "borderline" examinee. The borderline examinee is defined as a test-taker who possesses just enough knowledge of the content to move over the border separating a performance level from the performance level below it.
6. Panelists made individual judgments and discussed feedback related to other panelists' judgments and feedback based on student performance data (impact data). Panelists could revise their judgments during the process if they wished.
7. The final recommended cut scores were based on the median of panelists' judgment scores. For the CSTs, the cut scores recommended by the panelists and the recommendation of the State Superintendent of Public Instruction were presented for public comment at regional public hearings. Comments and recommendations were then presented to the SBE for approval.

Standard-Setting Methodologies

Several methodologies exist to collect panelists' judgments and to translate their results appropriately into cut scores. For the ELA CSTs, the modified Angoff method was used for standard setting, while the Bookmark method was used to set the performance standards for the history–social science, mathematics, and science CSTs. Both methods represent an appropriate balance between statistical rigor and informed opinion, as explained in the following sections.

Modified Angoff Method

A modified Angoff approach is widely used for recommending cut scores (Brandon, 2004; Hurtz & Auerbach, 2003; Norcini & Shea, 1997). This approach utilizes panelists' estimates of the percentage of borderline examinees that would answer each item correctly. The percentages are summed across the set of test items for each panelist and then the average is computed across panelists to arrive at the full panel's recommended cut score.

Bookmark Method

The Bookmark method for setting cut scores was introduced in 1999 and has been used widely across the United States (Lewis, et al., 1999; Mitzel, et al., 2001). In California, the Bookmark method has been used in standard settings for most of the STAR tests.

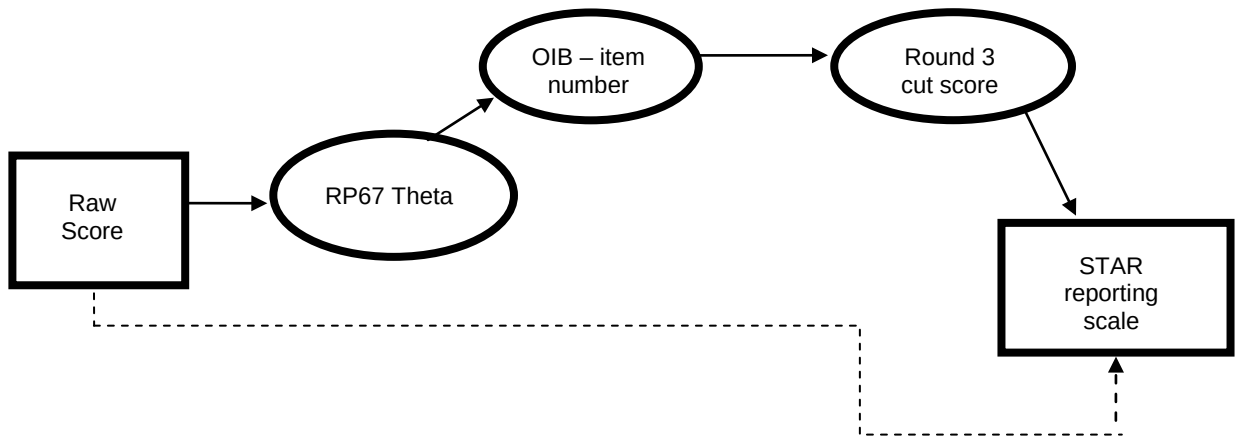
The Bookmark method is an item-mapping procedure in which panelists consider content covered by items in a specially constructed book where items are ordered from easiest to hardest, based on operational student performance data from a previous test administration. The "item map," which accompanies the ordered item booklet (OIB), includes information on the content measured by each operational test question, information about each question's difficulty, the correct answer for each question, and where each question was located in the test booklet before the questions were reordered by difficulty.

Panelists are asked to place a bookmark in the OIB to demarcate each performance level. The bookmarks are placed with the assumption that the borderline students will perform successfully at a given performance level with a probability of at least 0.67. Conversely, these students are expected to perform successfully on the items after the bookmark with a probability of less than 0.67 (Huynh, 1998).

In this method, the panelists' cut-score recommendations are presented in the metric of the OIB and are derived by obtaining the median of the corresponding bookmarks placed for each performance level across panelists.

Each item location corresponds to a value of theta, based on a response probability of 0.67 (RP67 Theta), which maps back to a raw score on this test form. Figure 6.1 below may best illustrate the relationship among the various metrics used when the Bookmark method is applied. The solid lines represent steps in the standard-setting process described above; the dotted line represents the scaling described in the next section.

Figure 6.1 Bookmark Standard-setting Process for the CSTs



Results

The cut scores obtained as a result of the standard-setting process are on the number-correct or raw-score scale; the scores are then translated to a score scale that ranges between 150 and 600. The cut score for the basic performance level is 300 for every grade and content area; this means that a student must earn a score of 300 or higher to achieve a basic classification. The cut score for the proficient performance level is 350 for every grade and content area; this means that a student must earn a score of 350 or higher to achieve a proficient classification.

The cut scores for the other performance levels are derived using procedures based on IRT and usually vary by grade and subject area. Each raw cut score for a given test is mapped to an IRT *theta* (θ) using the test characteristic function or curve and then transformed to the scale-score metric using the following equation:

$$\text{Scale Cut Score}=(350-\theta_{proficient}\times\left(\frac{350-300}{\theta_{proficient}-\theta_{basic}}\right))+\left(\frac{350-300}{\theta_{proficient}-\theta_{basic}}\right)\times\theta_{cut\text{-}score} \quad (6.1)$$

where,

$\theta_{cut-score}$ represents the student ability at cut scores for performance levels other than proficient or basic, e.g., below basic or advanced,

$\theta_{proficient}$ represents the theta corresponding to the cut score for proficient, and

θ_{basic} represents the theta corresponding to the cut score for basic.

Please note that an IRT test characteristic function or curve is the sum of item characteristic curves (ICC), where an ICC represents the probability of correctly responding to an item conditioned on examinee ability.

The scale-score ranges for each performance level are presented in Table 2.2 on page 20. The cut score for each performance level is the lower bound of each scale-score range. The scale-score ranges do not change from year to year. Once established, they remain unchanged from administration to administration until such time that new performance standards are adopted.

Table 7.2 on page 262 in Chapter 7 presents the percentages of examinees meeting each performance level in 2013.

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Chapter 7: Scoring and Reporting

ETS conforms to high standards of quality and fairness (ETS, 2002) when scoring tests and reporting scores. These standards dictate that ETS provides accurate and understandable assessment results to the intended recipients. It is also ETS's mission to provide appropriate guidelines for score interpretation and cautions about the limitations in the meaning and use of the test scores. Finally, ETS conducts analyses needed to ensure that the assessments are equitable for various groups of test-takers.

Procedures for Maintaining and Retrieving Individual Scores

Items for all CSTs, except for the writing task in grades four and seven, are multiple choice. Students are presented with a question and asked to select the correct answer from among four possible choices. In grades two and three, students mark their answer choices in the test booklet. In the other grades, students mark their answer choices in an answer document. All multiple-choice questions are machine scored. Responses to the writing task are scored by trained raters.

In the 2013 administration, because the raw-score-to-scale-score conversion tables were developed before tests were administered using pre-equating, individual student results were available within approximately two weeks of processing the school district's scorable testing materials through the Quick-turnaround Reporting (QTR) module in the STAR Management System.

In order to score and report CST results, ETS follows an established set of written procedures. The specifications for these procedures are presented in the next sections.

Scoring and Reporting Specifications

ETS develops standardized scoring procedures and specifications so that test materials are processed and scored accurately. These documents include the following:

- General Reporting Specifications—Provides the calculation rules for the information presented on STAR summary reports and defines the appropriate codes to use when a student does not take or complete a test or when a score will not be reported
- Score Key and Score Conversion—Defines file formats and information that is provided for scoring and the process of converting raw scores to scale scores
- Form Planner Specifications—Describes, in detail, the contents of files that contain keys required for scoring
- Aggregation Rules—Describes how and when a school's results are aggregated at the school, district, county, and state levels
- "What If" List—Provides a variety of anomalous scenarios that may occur when test materials are returned by school districts to Pearson and defines the action(s) to be taken in response
- Edit Specifications—Describes edits, defaults, and solutions to errors encountered while data are being captured as answer documents are processed
- Reporting Cluster Names and Item Numbers—Identifies the reporting clusters for each test and the number of items in each cluster
- CST and CMA Matching Criteria—Describes the criteria necessary to ensure that, for students who take both CST and CMA tests, all results are combined into a single

student data record by matching specific demographic fields on test booklets and answer documents

- Matching Criteria for Multiple-choice and Writing Answer Documents—Describes the method used to match students' writing and multiple-choice responses

The scoring specifications are reviewed and revised by the CDE, ETS, and Pearson each year. After a version agreeable to all parties is finalized, the CDE issues a formal approval of the scoring and reporting specifications.

Scanning and Scoring

Answer documents are scanned and scored by Pearson in accordance with the scoring specifications that have been approved by the CDE. Answer documents are designed to produce a single complete record for each student. This record includes demographic data and scanned responses for each student; once computed, the scored responses and the total test scores for a student are also merged into the same record. All scores, including those available in quick-turnaround reporting, must comply with the ETS scoring specifications. Pearson has quality control checks in place to ensure the quality and accuracy of scanning and the transfer of scores into the database of student records.

Each school district must return scorable and nonscorable materials within five working days after the selected last day of testing for each test administration period. For the CST for Writing test materials, school districts return the writing booklets within two working days after the test administration's makeup day.

Types of Scores and Subscores

Raw Score

For all of the tests, the total test raw score equals the number of multiple-choice test items answered correctly.

Subscore

The items in each CST are aggregated into groups of related content standards to form reporting clusters. A subscore is a measure of an examinee's performance on the items in each reporting cluster. These results are reported both as raw scores and percent of items answered correctly. A description of the CST reporting clusters is provided in Appendix 2.B of Chapter 2, starting on page 26.

Scale Score

Raw scores obtained on each CST are transformed to three-digit scale scores using the equating process described in Chapter 2 on page 15. Scale scores range from 150 to 600 on each CST. The scale scores of examinees that have been tested in different years at a given grade level and content area can be compared. However, the raw scores of these examinees cannot be meaningfully compared, because these scores are affected by the relative difficulty of the test taken as well as the ability of the examinee.

Performance Levels

The performance of each student on each CST is categorized into one of the following performance levels:

- far below basic
- below basic
- basic

- proficient
- advanced

For all CSTs, the cut score for the basic performance level is 300 for every grade and content area; this means that a student must earn a score of 300 or higher to achieve a basic classification. The cut score for the proficient performance level is 350 for every grade and content area; this means that a student must earn a score of 350 or higher to achieve a proficient classification. The cut scores for the other performance levels usually vary by grade and content area.

Writing Response Score

Examinees' essay responses to the writing task associated with the grades four and seven CST for ELA are rated on a 0–4 scale by a single reader. A score of zero indicates that the student attempted the writing task but either did not provide a response, refused to provide a response, or responded to a writing task from an earlier administration. The rubrics used to assign the nonzero scores to the writing tasks for grades four and seven are presented in Appendix 7.A, which starts on page 269.

It is important to note that the writing score, considered in isolation, does not correspond directly to one of the five performance levels used to show overall student performance on the CST for ELA tests, nor is it included in the CST for ELA total score. For example a writing score of 4 does not correspond to the advanced performance level, nor does a writing score of 3 correspond to the proficient performance level.

It should be noted that parents/guardians may choose not to let their child attempt the writing task in grade four or seven. In these cases, the student will not receive a writing score.

In 2013, the writing score was separated from the total ELA score to allow for early ELA student results to be reported via QTR.

Score Verification Procedures

Various necessary measures are taken to ascertain that the scoring keys are applied to the student responses as intended and the student scores are computed accurately. In 2013, every regular and special-version multiple-choice test is certified by ETS prior to being included in quick-turnaround reporting. To certify a test, psychometricians gather a certain number of test cases and verify the accurate application of scoring keys and scoring tables.

Scoring Key Verification Process

Scoring keys, provided in the form planners, are produced by ETS and verified by performing multiple quality-control checks. The form planners contain the information about an assembled test form, including scoring keys, test name, administration year, subscore identification, and the standards and statistics associated with each item. The quality control checks that are performed before keys are finalized are listed below:

1. Keys in the form planners are checked against their matching test booklets to ensure that the correct keys are listed.
2. The form planners are checked for accuracy against the Form Planner Specification document and the Score Key and Score Conversion document before the keys are loaded into the score key management system (SKM) at ETS.
3. The printed lists of the scoring keys are checked again once the keys have been loaded into the SKM system.

4. The demarcations of various sections in the actual test booklets are checked against the list of demarcations provided by ETS test development staff.
5. Scoring is verified internally at Pearson. ETS independently generates scores and verifies Pearson's scoring of the data by comparing the two results. Any discrepancies are then resolved.
6. The entire scoring system is tested using a test deck that includes typical and extremely atypical response vectors.
7. Classical item analyses are computed on an early sample of data to provide an additional check of the keys. Although rare, if an item is found to be problematic, a follow-up process is carried out for it to be excluded from further analyses.

Monitoring and Quality Control of Writing Scoring

Students who take the CST for ELA in grades four and seven respond to one of two writing tasks each year. One task is administered to the majority of test-takers; the other is administered to students in schools, tracks, or programs not in session during the first administration.

Students' responses to the writing task are each read by a single reader; the writing score is based on that reader's rating. In addition, 10 percent of students' responses are also read by a second reader to provide data that can be used to assess the accuracy and reliability of the writing scores. The score from the second reader does not count toward the student's writing test score.

The next sections detail the process employed by Pearson to score the writing tasks.

Scoring System

All student responses are scanned into the Electronic Performance Evaluation Network (ePEN™) system. Scorers view assigned responses on a computer at one of Pearson's regional scoring centers. The screen does *not* display the student's name or background information; the scorer sees only the student response.

Scorer Training

Individuals who are selected to serve as scorers must be college graduates who possess at least a Bachelor of Arts degree. Each prospective scorer is required to participate in extensive computer-based training and is provided with the following kinds of information:

- General information about the ePEN™ system
- Background information about the STAR Program
- Information about the STAR writing tasks
- Explanations of STAR scoring rubrics and scoring principles
- Sets of prescored annotated training papers
  - The training papers include anchor and practice papers.
  - Anchor papers provide samples of student writing that represent each of the four points in the scoring rubric. The samples of student responses are identified at the rangefinding sessions. During these sessions, the content experts at Pearson select sample responses that represent each of the four score points and illustrate the different ways of responding to the topic.
  - Practice papers include samples of student writing that demonstrate the "high" and "low" end of each score point.

Scorer Qualification

Once the training is complete, the potential scorers complete the Qualification Sets (three sets of scored papers consisting of ten papers per set) before being eligible to score. On at least two of the three sets, scorers must demonstrate exact agreement or adjacent agreement with the scores assigned to seventy percent of the papers on each of these sets.

Scorers continue to qualify throughout the scoring process. Before each operational scoring session, each scorer scores a Calibration Set of three to four papers. The scores on these sets have been previously agreed upon by scoring directors in conjunction with other personnel. The sets are given to scorers to ensure that the accuracy of their scoring does not drift. These sets are used to calibrate the scorers. The scorers that cannot be calibrated during this process do not qualify for operational scoring.

Scoring Supervisors and Directors

Scoring supervisors monitor and mentor scorers during operational scoring. If a writing response is difficult to score, the scorers elevate the response to the scoring supervisor to be scored. In these cases, the scoring supervisor's score is doubled to produce the final writing score.

Scorers with a history of achieving the highest accuracy on the Qualification Sets and the highest level of scoring consistency and validity statistics during operational scoring are selected as scoring supervisors. Approximately ten scorers are assigned to one scoring supervisor; this ratio allows scoring supervisors to work closely with each scorer. The ePEN™ system also allows scoring supervisors to continuously monitor each response scored and the score point assigned to ensure accuracy. All scoring supervisors participate in a two-day training session that provides the same training that is used to qualify scorers. If a scoring supervisor does not achieve the accuracy required on the Qualification Sets, that individual is not allowed to be a supervisor. In addition, all supervisors receive extensive training on how the ePEN™ system works, how to best manage scorers, and how to maintain accuracy as scoring continues.

Scoring directors are responsible for overseeing the scoring and providing leadership for the scoring supervisors. They also help to manage the scorers, and they are ultimately responsible for maintaining the highest accuracy possible during STAR scoring. Scoring directors represent the best of the scoring supervisors. They typically have two to three years' experience as scoring supervisors and strong leadership qualities, as well as a thorough understanding of STAR scoring.

Accuracy Monitoring

The accuracy of all scoring is regularly monitored using several procedures. First, scoring supervisors and scoring directors constantly monitor the degree to which readers are consistent in scores that they assign. This is done using data provided by the second readers employed to score 10 percent of all student responses a second time. The consistency is measured in terms of the percentages of instances in which the first and second readers' scores are identical, adjacent, and nonadjacent; this is a commonly used measure of interrater reliability. If a scorer's rate of agreement begins to decline, the scorer is retrained by a scoring supervisor or scoring director and closely monitored thereafter. If the scorer's performance does not improve, the scorer is released.

Second, the consistency between readers' scores and those of scoring directors or supervisors is evaluated using student responses that are known as validity papers, because they have been previously scored by scoring directors or supervisors. Validity

papers are ones with known psychometric properties that are intended to exemplify certain aspects of student responses and the scores that should be assigned. One in every 40 papers read by each scorer is a validity paper. The consistency of the scorer's ratings with the scores on the validity papers is checked throughout the day to ensure that each scorer has applied the scoring rubrics accurately. The validity papers are introduced throughout the scoring process. If a scorer's performance on the validity papers falls below required levels, the scorer is retrained by a scoring supervisor or scoring director. If a scorer's ratings continue to show poor validity, the scorer is excused.

Third, scoring supervisors "back-read" a certain percentage of the student responses that have been scored by each scorer. The scorer's and supervisor's scores are then compared to check the scorer's reliability and to ensure that the scorer is maintaining scoring standards. In addition, ePEN™ allows scoring directors to view the back-reading completed by scoring supervisors to ensure that scoring supervisors are maintaining accuracy. Scoring directors also back-read to assess scorers' work.

Fourth, to minimize score drift, scorers are required to score a Calibration Set before each scoring session. If a scorer is deficient on any of the accuracy indices, that scorer is immediately retrained or released from the scoring process.

Score Verification Process

ETS psychometricians employ special procedures that adjust for differences in item difficulty of one test form to another. (See Chapter 2, Equating, on page 15 for details.) As a result of this process, scoring tables are produced. Such tables map the current year's raw score to an appropriate scale score. A series of quality control (QC) checks is carried out by ETS psychometricians to ensure the accuracy of each scoring table, as discussed in Chapter 9 on page 566.

Pearson utilizes the scoring tables to generate scale scores for each student. ETS verifies Pearson's scale scores by conducting QC and reasonableness checks, which are described in Chapter 9 on page 567.

Overview of Score Aggregation Procedures

In order to provide meaningful results to the stakeholders, CST scores for a given grade and content area are aggregated at the school, independently testing charter school, district, county, and state levels. The aggregated scores are generated both for individual scores and group scores. The next section contains a description of the types of aggregation performed on CST scores.

Individual Scores

The tables in this section provide state-level summary statistics describing student performance on each CST.

Score Distributions and Summary Statistics

Summary statistics that describe student performance on each CST are presented in Table 7.1 on the next page. Included in the table are the number of items in each test, the number of examinees taking each test, and the means and standard deviations of student scores expressed in terms of both raw scores and scale scores. The last two columns in the table list the raw score means and standard deviations as percentages of the total raw score points in each test.

The last content-area section in the table presents information on the grade-specific end-of-course testing groups. The statistics for grade-specific, end-of-course testing groups are based on the population of test-takers in a particular grade for which the course is recommended. While the assessments are presented to students at a variety of grade levels, the majority of test-takers belong to that specific grade.

Table 7.1 Mean and Standard Deviation of Raw and Scale Scores for the CSTs

				Scale Score		Raw Score		Raw Score Percent Correct	
Content Area	CST *	No. of Items	No. of Examinees	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
English–Language Arts	2	65	458,825	357	66	44.00	13.73	67.70	21.12
	3	65	436,198	346	64	44.89	12.39	69.07	19.07
	4	75	426,373	374	61	50.75	15.07	67.67	20.09
	5	75	420,681	365	56	52.91	13.37	70.55	17.83
	6	75	425,310	363	54	50.91	13.36	67.88	17.81
	7	75	432,810	364	62	51.15	13.36	68.20	17.81
	8	75	429,438	361	59	49.62	13.61	66.15	18.15
	9	75	455,314	364	57	49.82	13.56	66.43	18.08
	10	75	445,018	352	57	50.77	14.22	67.69	18.96
	11	75	433,623	345	62	48.43	14.26	64.58	19.01
History–Social Science	8	75	454,521	357	70	47.87	14.89	63.83	19.85
	World History	60	462,509	347	74	37.85	12.16	63.09	20.27
	11	60	443,241	349	70	37.65	11.86	62.75	19.76
Mathematics	2	65	460,077	380	83	49.45	11.64	76.08	17.91
	3	65	439,109	399	93	50.88	11.42	78.28	17.57
	4	65	430,766	395	78	51.91	11.55	79.85	17.77
	5	65	423,903	393	93	45.98	12.79	70.74	19.68
	6	65	427,761	367	76	43.38	13.18	66.73	20.28
	7	65	392,718	358	68	40.45	12.80	62.24	19.70
	General Mathematics	65	188,410	318	56	32.67	12.08	50.26	18.58
	Algebra I	65	681,237	334	75	33.46	13.01	51.48	20.02
	Geometry	65	405,328	321	69	35.71	13.20	54.94	20.31
	Algebra II	65	294,094	325	68	35.02	12.19	53.88	18.75
	Summ. H.S. Mathematics	65	160,690	360	76	47.46	11.82	73.02	18.18
	Integrated Mathematics 1	65	13,504	291	51	26.66	9.24	41.01	14.22
	Integrated Mathematics 2	65	4,956	318	48	29.54	9.74	45.45	14.98
	Integrated Mathematics 3	65	745	331	75	31.96	12.25	49.17	18.84
Science	5	60	422,520	367	67	42.10	11.08	70.16	18.47
	8	60	430,581	391	97	42.35	11.14	70.58	18.56
	10 Life Science	60	442,013	360	70	39.52	12.23	65.87	20.38
	Biology	60	552,645	354	60	37.39	12.34	62.32	20.57
	Chemistry	60	285,233	343	53	37.66	11.24	62.76	18.73
	Earth Science	60	198,865	333	48	34.48	11.60	57.47	19.33
	Physics	60	85,323	355	54	38.23	11.72	63.71	19.54
	Int/Coord Science 1	60	39,642	319	41	32.15	10.48	53.58	17.47
	Int/Coord Science 2	60	3,409	319	41	30.24	10.38	50.40	17.30
	Int/Coord Science 3	60	856	303	40	25.78	10.24	42.97	17.06
	Int/Coord Science 4	60	56	282	38	23.77	9.39	39.61	15.64
Grade-Specific	Algebra I – 8	65	268,280	358	76	37.87	12.85	58.26	19.77
	Geometry – 9	65	145,467	345	66	40.94	12.32	62.98	18.95
	Algebra II – 10	65	136,611	336	64	37.17	11.58	57.18	17.82
	Summ. H.S. Math – 11	65	132,528	352	74	46.18	11.93	71.04	18.35
	World History – 10	60	416,955	348	72	38.11	11.86	63.52	19.77

* Numbers indicate grade-level tests.

The percentages of students in each performance level are presented in Table 7.2, on the next page. The last column of the table presents the overall percentages of examinees that were classified at the proficient level or higher.

The numbers in the summary tables may not match exactly the results reported on the CDE's Web site because of slight differences in the samples used to compute the statistics. The P1 data file was used for the analyses in this chapter. This file contained the entire test-taking population and all the student records used in the August 8, 2013, reporting of STAR results.

Table 7.2 Percentages of Examinees in Performance Levels for CSTs

Content Area	CST *	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Proficient/ Advanced †
English–Language Arts	2	8%	12%	24%	32%	24%	56%
	3	8%	15%	31%	27%	19%	46%
	4	3%	9%	23%	27%	38%	65%
	5	5%	8%	27%	32%	28%	60%
	6	4%	9%	27%	32%	28%	60%
	7	5%	10%	26%	34%	26%	59%
	8	5%	10%	29%	29%	28%	57%
	9	5%	10%	24%	33%	29%	62%
	10	7%	11%	30%	28%	24%	52%
	11	10%	14%	29%	27%	21%	48%
History–Social Science	8	12%	10%	26%	23%	29%	52%
	World History	17%	9%	28%	23%	23%	46%
	11	14%	12%	24%	26%	24%	50%
Mathematics	2	4%	13%	19%	30%	35%	65%
	3	2%	12%	19%	26%	40%	67%
	4	2%	10%	16%	26%	46%	72%
	5	4%	12%	19%	33%	32%	65%
	6	4%	16%	25%	30%	25%	55%
	7	4%	17%	28%	33%	19%	51%
	General Mathematics	13%	29%	31%	22%	5%	28%
	Algebra I	12%	28%	24%	24%	12%	36%
	Geometry	10%	36%	24%	20%	10%	29%
	Algebra II	14%	25%	28%	23%	10%	32%
	Summ. H.S. Math	4%	19%	23%	34%	19%	54%
	Integrated Math 1	19%	45%	25%	10%	2%	12%
	Integrated Math 2	10%	28%	38%	20%	3%	23%
	Integrated Math 3	16%	22%	25%	26%	11%	38%
Science	5	6%	10%	28%	33%	24%	57%
	8	7%	11%	16%	25%	42%	67%
	10 Life Science	9%	11%	26%	26%	28%	54%
	Biology	8%	10%	32%	27%	22%	50%
	Chemistry	8%	13%	39%	25%	15%	40%
	Earth Science	12%	13%	37%	26%	11%	37%
	Physics	7%	9%	32%	31%	22%	53%
	Int/Coord Science 1	16%	15%	44%	20%	4%	24%
	Int/Coord Science 2	13%	18%	46%	16%	6%	22%
	Int/Coord Science 3	23%	31%	32%	11%	3%	15%
	Int/Coord Science 4	48%	16%	29%	7%	0%	7%

Content Area	CST *	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Proficient/ Advanced †
Grade-Specific	**Algebra I – 8**	6%	19%	24%	33%	17%	50%
	Geometry – 9	4%	23%	28%	31%	14%	45%
	Algebra II – 10	10%	21%	30%	28%	11%	39%
	Summ. H. S. Math – 11	4%	22%	25%	33%	16%	49%
	World History – 10	16%	9%	29%	24%	22%	46%

* Numbers indicate grade-level tests.

† May not exactly match the sum of percent proficient and percent advanced due to rounding.

Table 7.B.1 through Table 7.B.5 in Appendix 7.B starting on page 275 show the distributions of scale scores for each CST. Table 7.B.6 presents analogous information for the five grade-specific testing groups.

The results are reported in terms of 15 score intervals, each of which contains 30 scale score points. A cell value of “N/A” indicates that there are no obtainable scale scores within that scale-score range for the particular CST.

Group Scores

Statistics summarizing student performance by content area and grade for selected groups of students are provided starting on page 279 in Table 7.C.1 through Table 7.C.38 for the CSTs. When a test is administered at more than one grade level, the results are reported for all students tested and also by grade.

In these tables, students are grouped by demographic characteristics, including gender, ethnicity, English-language fluency, need for special education services, and economic status. The tables show, for each demographic group, the numbers of valid cases, scale score means and standard deviations, the percentages of students in each performance level, as well as the mean percent correct in each reporting cluster.

Table 7.3 provides definitions of the demographic groups included in the tables. Students’ economic status was determined by considering the education level of their parents and whether or not they participated in the National School Lunch Program (NSLP).

To protect privacy when the number of students in a subgroup is 10 or fewer, the summary statistics at the test- and reporting-cluster–level are not reported and are presented as hyphens. Percentages in these tables may not sum up to 100 due to rounding.

Table 7.3 Subgroup Definitions

Subgroup	Definition
Gender	• Male • Female
Ethnicity	• American Indian or Alaska Native • Asian – Asian Indian – Cambodian – Chinese – Hmong – Japanese – Korean – Laotian – Vietnamese

Subgroup	Definition
	– Other Asian • Pacific Islander – Guamanian – Native Hawaiian – Samoan – Tahitian – Other Pacific Islander • Filipino • Hispanic or Latino • African American • White (not Hispanic)
English-language Fluency	• English only • Initially fluent English proficient • English learner • Reclassified fluent English proficient
Economic Status	• Not economically disadvantaged • Economically disadvantaged
Special Services	• No special services • Special services

In addition to the subgroups presented in Table 7.3, the demographic tables also include grade-level data for the end-of-course CSTs. The grades included for the end-of-course tests are as follows:

Grades	Test
8, 9	General Mathematics
7, 8, 9, 10, 11	Algebra I
8, 9, 10, 11	Geometry, Algebra II, Integrated Mathematics 1, 2, and 3
9, 10, 11	World History, Summative High School Mathematics, EOC science CSTs

Reports Produced and Scores for Each Report

The tests that make up the STAR Program provide results or score summaries that are reported for different purposes. The four major purposes include:

1. Communicating with parents and guardians;
2. Informing decisions needed to support student achievement;
3. Evaluating school programs; and
4. Providing data for state and federal accountability programs for schools and districts.

A detailed description of the uses and applications of STAR reports is presented in the next section.

Types of Score Reports

There are three categories of STAR reports. These categories and the specific reports in each category are given in Table 7.4.

Table 7.4 Types of CST Reports

1. Summary Reports	▪ STAR Student Master List Summary ▪ STAR Student Master List Summary, End-of-Course ▪ STAR Subgroup Summary (including the Ethnicity for Economic Status)
2. Individual Reports	▪ STAR Student Record Label ▪ STAR Student Master List ▪ STAR Student Report for CSTs
3. Internet Reports	▪ CST Scores (state, county, district, school) ▪ CST Summary Scores (state, county, district, school)

These reports are sent to the independently testing charter schools, counties, or school districts; the school district forwards the appropriate reports to test sites or, in the case of the STAR Student Report, sends the report(s) to the child's parent or guardian and forwards a copy to the student's school or test site. Reports such as the STAR Student Report, Student Record Label, and Student Master List that include individual student results are not distributed beyond the student's school. Internet reports are described on the CDE Web site and are accessible to the public online at http://star.cde.ca.gov/.

Because results were pre-equated, individual student scores were also available to school districts approximately two weeks after scorable materials were received by the contractor by way of the QTR module to the STAR Management System. This module permits districts to download a file containing student data that includes scale scores and performance levels for multiple-choice CST and CMA tests taken.

Score Report Contents

The STAR Student Report provides scale scores, performance levels, and reporting cluster (subscore) results for each CST taken by the student. Scale scores are reported on a scale ranging from 150 to 600. The performance levels reported are: far below basic, below basic, basic, proficient, and advanced. These same scale scores and performance levels are available in the school district's QTR file.

In addition, percent-correct scores are provided at the cluster level. Also given for each cluster is the average percent-correct for proficient students, which is presented as a range from the percent-correct score associated with the lowest proficient score on the total test to the percent-correct score associated with the lowest advanced score on the total test, less one percent. The average percent-correct estimates associated with the lowest proficient and advanced scores were obtained empirically for the tests that have sample sizes of 25 or more examinees at both the minimum proficient and the minimum advanced score levels. In cases where the available sample sizes were less than 25, "data smoothing" was conducted before obtaining the averages (Lu & Smith, 2009).

Students in grades four and seven also receive a separate numerical score (from 0–4) for the CST writing task after QTR.

Reports for students with disabilities and English learners who use accommodations or modifications include a notation that indicates the student used accommodations or was tested with modifications. Scores for students who use accommodations are reported in the same way as they are for nonaccommodated students. Modifications, however, change what is being tested and, therefore, change scores. If students use modifications, their

scores are counted differently from nonmodified test scores on summary reports. On the STAR summary reports, these students' CST scores are counted as far below basic, regardless of the scale score obtained.

Further information about the STAR Student Report and the other reports is provided in Appendix 7.D on page 355.

Score Report Applications

CST results provide parents and guardians with information about their child's progress. The results are a tool for increasing communication and collaboration between parents or guardians and teachers. Along with report cards from teachers and information from school and classroom tests, the STAR Student Report can be used by parents and guardians while talking with teachers about ways to improve their child's achievement of the California content standards.

Schools may use the CST results to help make decisions about how best to support student achievement. CST results, however, should never be used as the only source of information to make important decisions about a child's education.

CST results help school districts and schools identify strengths and weaknesses in their instructional programs. Each year, school districts and school staffs examine CST results at each grade and content area tested. Their findings are used to help determine:

- The extent to which students are learning the academic standards,
- Instructional areas that can be improved,
- Teaching strategies that can be developed to address needs of students, and
- Decisions about how to use funds to ensure that students achieve the standards.

The results from the CSTs are used for state and federal accountability programs to monitor each school's and district's progress toward achieving established goals. As mentioned previously, CST results are used to calculate each school's and district's API. The API is a major component of California's Public School Accountability Act (PSAA) and is used to rank the academic performance of schools, compare schools with similar characteristics (for example, size and ethnic makeup), identify low-performing and high-priority schools, and set yearly targets for academic growth.

CST results also are used to comply with federal ESEA legislation that requires all schools to meet specific academic goals. The progress of each school toward achieving these goals is provided annually in an AYP report. Each year, California schools and districts must meet AYP goals by showing that a specified percentage of CST test-takers at the district and school levels are performing at or above the proficient level on the CSTs in ELA and mathematics. At the high school level, the CAHSEE results for grade ten students are used in place of the CSTs to make this determination.

Criteria for Interpreting Test Scores

A school district may use CST results to help make decisions about student placement, promotion, retention, or other considerations related to student achievement. However, it is important to remember that a single test can provide only limited information. Other relevant information should be considered as well. It is advisable for parents to evaluate their child's strengths and weaknesses in the relevant topics by reviewing classroom work and progress reports in addition to the child's CST results (CDE, 2013a). It is also important to note that a

student's score in a content area contains measurement error and could vary somewhat if the student were retested.

Criteria for Interpreting Score Reports

The information presented in various reports must be interpreted with caution when making performance comparisons. When comparing scale score and performance-level results for the CSTs, the user is limited to comparisons within the same content area and grade. This is because the score scales are different for each content area and grade. The user may compare scale scores for the same content area and grade, within a school, between schools, or between a school and its district, its county, or the state. The user can also make comparisons within the same grade and content area across years. Comparing scores obtained in different grades or content areas should be avoided because the results are not on the same scale. Comparisons between raw scores or cluster scores should be limited to comparisons within not only content area and grade but also test year. For more details on the criteria for interpreting information provided on the score reports, see the *2013 STAR Post-Test Guide* (CDE, 2013b).

References

California Department of Education. (2013a). *2013 STAR CST/CMA, CAPA, and STS printed reports*. Sacramento, CA. Downloaded from http://www.startest.org/pdfs/STAR.reports.2013.pdf

California Department of Education. (2013b). *2013 STAR post-test guide.* Sacramento, CA. Downloaded from http://www.startest.org/pdfs/STAR.post-test_guide.2013.pdf

Educational Testing Service. (2002). *ETS standards for quality and fairness*. Princeton, NJ: Author.

Lu, Y., & Smith, R. L. (2009, April). *An alternative method to estimate cluster performance of proficient students on a large scale state assessment.* Paper presented at the annual meeting of the National Council on Measurement in Education, San Diego, CA.

Appendix 7.A—ELA for Writing (Grades Four and Seven) Rubrics

Grade Four Scoring Rubric

The scoring rubric shown below is used to assign scores to students' written responses on the grade four writing tests. This rubric includes two sets of criteria. The criteria under "The Writing" are adapted from California's English–language arts content standards for Writing Strategies and Written Conventions of English. These criteria are used to evaluate on-demand, first-draft written responses in all genres. Student responses are evaluated on their clarity of purpose, central idea, and organization; their coherence; and their use of supporting evidence, sentence variety, and written conventions. The criteria under "Narrative writing," "Summary writing," and "Response to literature writing," adapted from the grade four Writing Applications content standards for these genres, are used to evaluate student writing in the specific genres to which they apply.

Score: 4

The Writing:

- *Clearly* addresses the writing task.
- Demonstrates a *clear* understanding of purpose.
- Maintains a *consistent* point of view, focus, and organizational structure, including paragraphing when appropriate.
- Includes a *clearly presented* central idea with *relevant* facts, details, and/or explanations.
- Includes sentence *variety.*
- Contains *some errors* in the conventions of the English language (grammar, punctuation, capitalization, spelling). These errors do **not** interfere with the reader's understanding of the writing.

Narrative writing:

- Provides a *thoroughly developed* sequence of *significant* events to relate ideas, observations, and/or memories.
- Includes *vivid* descriptive language and sensory details that enable the reader to imagine the events or experiences.

Summary writing:

- Summarizes text with *clear* identification of the main idea(s) and the most significant details, in the student's own words.

Response to literature writing:

- Demonstrates a *clear* understanding of the literary work.
- Provides *effective* support for judgments through *specific* references to text and/or prior knowledge.

Score: 3

The Writing:

- Addresses *most* of the writing task.
- Demonstrates a *general* understanding of purpose.
- Maintains a *mostly consistent* point of view, focus, and organizational structure, including paragraphing when appropriate.
- Presents a central idea with *mostly* relevant facts, details, and/or explanations.

- Includes some sentence *variety.*
- Contains *errors* in the conventions of the English language (grammar, punctuation, capitalization, spelling). These errors do **not** interfere with the reader's understanding of the writing.

Narrative writing:

- Provides an *adequately developed* sequence of significant events to relate ideas, observations, and/or memories.
- Includes *some* descriptive language and sensory details that enable the reader to imagine the events or experiences.

Summary writing:

- Summarizes text with the main idea(s) and important details, generally in the student's own words.

Response to literature writing:

- Demonstrates an understanding of the literary work.
- Provides *some* support for judgments through references to text and/or prior knowledge.

Score: 2

The Writing:

- Addresses *some* of the writing task.
- Demonstrates *little* understanding of purpose.
- Maintains an *inconsistent* point of view, focus, and/or organizational structure; may lack appropriate paragraphing.
- S*uggests* a central idea with *limited* facts, details, and/or explanations.
- Includes *little* sentence variety.
- Contains *many errors* in the conventions of the English language (grammar, punctuation, capitalization, spelling). These errors **may** interfere with the reader's understanding of the writing.

Narrative writing:

- Provides a *minimally developed* sequence of events to relate ideas, observations, and/or memories.
- Includes *limited* descriptive language and sensory details that enable the reader to imagine the events or experiences.

Summary writing:

- Summarizes text with some of the main idea(s) and details, minimal use of the student's own words.

Response to literature writing:

- Demonstrates a *limited* understanding of the literary work.
- Provides *weak* support for judgments.

Score: 1

The Writing:

- Addresses *only one part*, if any, of the writing task.
- Demonstrates *no* understanding of purpose.
- *Lacks* a clear point of view, focus, and/or organizational structure; may contain inappropriate paragraphing.

- *Lacks* a central idea but may contain *marginally related* facts, details, and/or explanations.
- Includes *no* sentence variety.
- Contains *serious errors* in the conventions of the English language (grammar, punctuation, capitalization, spelling). These errors interfere with the reader's understanding of the writing.

Narrative writing:

- *Lacks* a sequence of events to relate ideas, observations, and/or memories.
- *Lacks* descriptive language and sensory details that enable the reader to imagine the events or experiences.

Summary writing:

- Summarizes text with few, if any, main idea(s) and/or details, little or no use of the student's own words.

Response to literature writing:

- Demonstrates *little or no* understanding of the literary work.
- *Fails* to provide support for judgments.

Grade Seven Scoring Rubric

The scoring rubric that follows is used to assign scores to students' written responses on the grade seven writing tests. This rubric includes two sets of criteria. The criteria under "The Writing" are adapted from California's English–language arts content standards for Writing Strategies and Written Conventions of English. These criteria are used to evaluate on-demand, first-draft written responses in all genres. Student responses are evaluated on their clarity of purpose, central idea, and organization; their coherence; and their use of supporting evidence, sentence variety, and written conventions. The criteria under "Fictional or autobiographical narrative writing," "Response to literature writing," "Persuasive writing," and "Summary writing," adapted from the grade Writing Applications content standards for these genres, are used to evaluate student writing in the specific genres to which they apply.

Score: 4

The Writing:

- *Clearly* addresses the writing task.
- Demonstrates a *clear* understanding of purpose and audience.
- Maintains a *consistent* point of view, focus, and organizational structure, including the *effective* use of transitions.
- Includes a *clearly presented* central idea with *relevant* facts, details, and/or explanations.
- Includes sentence *variety*.
- Contains *some errors* in the conventions of the English language (grammar, punctuation, capitalization, spelling). These errors do **not** interfere with the reader's understanding of the writing.

Fictional or autobiographical narrative writing:

- Provides a *thoroughly developed* plot line, including major and minor characters and a *definite* setting.
- Includes *appropriate* strategies (e.g., dialogue; suspense; narrative action).

Response to literature writing:

- Develops interpretations that demonstrate a *thoughtful,* comprehensive grasp of the text.
- Organizes *accurate and coherent* interpretations around *clear* ideas, premises, or images from the literary work.
- Provides *specific* textual examples and details to support the interpretations.

Persuasive writing:

- *Authoritatively* defends a clear position with precise and relevant evidence and *convincingly* addresses the reader's concerns, biases, and expectations.

Summary writing:

- Summarizes text with clear identification of the main idea(s) and most significant details, in the student's own words, and clearly reflects underlying meaning.

Score: 3

The Writing:

- Addresses most of the writing task.
- Demonstrates a *general* understanding of purpose and audience.
- Maintains a *mostly consistent* point of view, focus, and organizational structure, including use of isolated and/or single word transitions.
- Presents a central idea with *mostly relevant* facts, details, and/or explanations.
- Includes some sentence *variety.*
- Contains *errors* in the conventions of the English language (grammar, punctuation, capitalization, spelling). These errors do **not** interfere with the reader's understanding of the writing.

Fictional or autobiographical narrative writing:

- Provides an *adequately developed* plot line, including major and minor characters and a *definite* setting.
- Includes *appropriate* strategies (e.g., dialogue; suspense; narrative action).

Response to literature writing:

- Develops interpretations that demonstrate a comprehensive grasp of the text.
- Organizes accurate and *reasonably* coherent interpretations around *clear* ideas, premises, or images from the literary work.
- Provides textual examples and details to support the interpretations.

Persuasive writing:

- *Generally* defends a position with relevant evidence and addresses the reader's concerns, biases, and expectations.

Summary writing:

- Summarizes text with the main idea(s) and *important* details, *mostly* in the student's own words, and generally reflects underlying meaning***.***

Score: 2

The Writing:

- Addresses *some* of the writing task.
- Demonstrates *little* understanding of purpose and audience.
- Maintains an *inconsistent* point of view, focus, and/or organizational structure, which may include *ineffective or awkward* transitions that do not unify important ideas.
- *Suggests* a central idea with *limited* facts, details, and/or explanations.
- Includes *little* sentence variety.
- Contains *many errors* in the conventions of the English language (grammar, punctuation, capitalization, spelling). These errors **may** interfere with the reader's understanding of the writing.

Fictional or autobiographical narrative writing:

- Provides a *minimally developed* plot line, including characters and a setting.
- *Attempts* to use strategies but with *minimal* effectiveness (e.g., dialogue; suspense; narrative action).

Response to literature writing:

- Develops interpretations that demonstrate a *limited* grasp of the text.
- Includes interpretations that *lack* accuracy or coherence as related to ideas, premises, or images from the literary work.
- Provides *few, if any,* textual examples and details to support the interpretations.

Persuasive writing:

- Defends a position with *little, if any,* evidence and *may* address the reader's concerns, biases, and expectations.

Summary writing:

- Summarizes text with *some* of the main idea(s) and details, which may be superficial, minimal use of the student's own words, and minimal reflection of underlying meaning.

Score: 1

The Writing:

- Addresses *only one part*, if any, of the writing task.
- Demonstrates *no* understanding of purpose and audience.
- *Lacks* a point of view, focus, organizational structure, and transitions that unify important ideas.
- *Lacks* a central idea but may contain *marginally related* facts, details, and/or explanations.
- Includes *no* sentence variety.
- Contains *serious errors* in the conventions of the English language (grammar, punctuation, capitalization, spelling). These errors interfere with the reader's understanding of the writing.

Fictional or autobiographical narrative writing:

- *Lacks* a developed plot line.
- *Fails* to use strategies (e.g., dialogue; suspense; narrative action).

Response to literature writing:

- Demonstrates *little* grasp of the text.
- *Lacks* an interpretation or may be a simple retelling of the passage.
- *Lacks* textual examples and details.

Persuasive writing:

- *Fails* to defend a position with *any* evidence and *fails* to address the reader's concerns, biases, and expectations.

Summary writing:

- Summarizes text with few, if any, of the main ideas and/or details, little or no use of the student's own words, little or no reflection of underlying meaning.

Appendix 7.B—Scale Score Distribution Tables

A cell value of "N/A" indicates that there are no obtainable scale scores within that scale-score range for the particular CST.

Table 7.B.1 Distribution of CST Scale Scores for ELA

Scale Score	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11
570 – 600	2,209	1,553	893	551	170	645	267	345	255	457
540 – 569	N/A	N/A	2,547	1,805	707	1,706	944	N/A	N/A	N/A
510 – 539	5,266	3,868	4,525	N/A	1,828	3,144	2,146	891	1,083	1,118
480 – 509	8,201	6,368	6,446	9,168	3,182	10,934	8,215	5,374	2,509	6,065
450 – 479	22,378	8,559	28,078	16,742	18,641	15,875	21,758	20,049	10,358	11,921
420 – 449	42,100	35,696	59,613	35,794	29,984	42,201	40,843	46,736	40,303	26,591
390 – 419	59,891	43,502	70,688	69,866	77,865	61,165	57,494	85,884	65,959	55,695
360 – 389	83,146	73,414	78,189	99,642	101,065	86,369	80,204	89,171	77,578	82,356
330 – 359	83,259	88,633	72,723	73,036	75,190	84,050	89,578	78,159	94,933	73,882
300 – 329	61,653	74,333	50,997	60,426	61,929	64,349	65,445	62,335	72,227	73,468
270 – 299	42,505	49,900	37,152	36,157	35,486	35,112	38,280	41,250	41,463	46,199
240 – 269	36,936	30,411	13,566	15,026	17,131	21,457	19,182	20,217	29,702	35,946
210 – 239	10,859	17,722	911	2,350	2,071	5,355	4,755	4,611	8,047	16,819
180 – 209	404	2,069	27	102	51	425	295	256	566	2,889
150 – 179	18	170	18	16	10	23	32	36	35	217

Table 7.B.2 Distribution of CST Scale Scores for History–Social Science

Scale Score	Grade 8	World History	Grade 11
570 – 600	1,904	4,699	1,734
540 – 569	2,785	N/A	N/A
510 – 539	4,147	5,091	2,479
480 – 509	12,142	6,590	9,474
450 – 479	25,541	27,303	15,973
420 – 449	41,085	22,631	34,093
390 – 419	55,083	51,092	56,871
360 – 389	75,121	67,793	73,745
330 – 359	67,400	78,929	75,076
300 – 329	70,748	78,188	58,157
270 – 299	49,599	49,884	52,302
240 – 269	35,173	40,828	33,754
210 – 239	12,715	22,327	23,831
180 – 209	1,006	5,543	5,271
150 – 179	72	1,611	481

Table 7.B.3 Distribution of CST Scale Scores for Mathematics, Grades Two through Seven

Scale Score	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
570 – 600	4,460	18,485	14,580	19,207	4,352	3,965
540 – 569	10,966	23,242	N/A	12,994	7,506	N/A
510 – 539	16,691	23,292	22,955	26,541	8,990	3,744
480 – 509	20,064	21,755	25,875	13,261	10,361	10,104
450 – 479	43,898	39,620	26,377	38,746	31,936	20,907
420 – 449	42,997	34,422	70,750	48,437	32,861	34,485
390 – 419	74,914	59,451	56,419	44,951	54,045	48,139
360 – 389	59,317	61,382	76,662	51,311	63,866	60,074
330 – 359	56,270	49,802	47,292	54,147	69,578	67,998
300 – 329	54,843	44,559	40,152	45,546	59,752	61,245
270 – 299	31,229	33,764	29,820	35,526	47,471	49,282
240 – 269	23,796	16,976	14,117	23,208	29,694	26,211
210 – 239	13,588	8,924	5,388	8,442	6,688	6,131
180 – 209	5,886	2,950	350	1,455	635	394
150 – 179	1,158	485	29	131	26	39

Table 7.B.4 Distribution of Scale Scores for Mathematics End-of-Course CSTs

Scale Score	General Math	Algebra I	Geometry	Algebra II	Summative H.S. Math	Integrated Math 1	Integrated Math 2	Integrated Math 3
570 – 600	124	8,740	1,018	1,490	1,534	10	3	3
540 – 569	N/A	3,943	2,165	1,290	2,972	14	2	6
510 – 539	190	9,406	2,956	1,533	N/A	10	2	5
480 – 509	810	11,121	3,634	3,791	4,142	26	3	8
450 – 479	2,562	20,463	13,553	7,607	10,640	53	31	37
420 – 449	4,491	34,146	15,939	9,532	11,944	131	116	32
390 – 419	11,659	52,340	23,801	21,212	24,052	307	229	79
360 – 389	24,172	76,923	40,943	34,937	21,672	644	543	70
330 – 359	30,984	89,709	48,140	45,023	26,783	1,348	1,050	120
300 – 329	35,347	105,133	66,249	51,313	20,306	2,345	1,083	103
270 – 299	37,894	126,555	89,746	51,195	17,389	3,457	1,103	95
240 – 269	29,565	111,491	64,800	41,850	12,521	3,194	599	112
210 – 239	9,720	27,086	29,632	19,100	5,025	1,718	180	60
180 – 209	812	3,717	2,601	3,839	1,501	210	11	15
150 – 179	80	464	151	382	209	37	1	0

Table 7.B.5 Distribution of CST Scale Scores for Science

Scale Score	Grade 5 Science	Grade 8 Science	Grade 10 Life Science	Biology	Chemistry	Earth Science	Physics
570 – 600	2,278	21,402	2,570	2,189	855	52	180
540 – 569	5,668	11,638	5,408	N/A	N/A	N/A	N/A
510 – 539	N/A	13,034	N/A	4,776	1,902	211	474
480 – 509	20,302	27,968	17,027	6,782	2,822	490	829
450 – 479	13,240	45,062	22,393	18,014	3,500	843	2,573
420 – 449	44,031	45,778	38,447	35,023	14,044	5,723	5,475
390 – 419	60,538	44,016	53,587	70,677	25,145	18,465	12,035
360 – 389	69,402	53,651	76,444	106,908	47,656	31,164	15,981
330 – 359	80,486	56,194	77,072	113,770	68,955	44,921	21,144
300 – 329	60,445	34,839	62,371	91,843	60,895	46,065	13,358
270 – 299	40,821	31,785	49,088	65,544	41,885	34,093	9,721
240 – 269	19,342	21,855	28,673	33,119	16,035	14,940	3,299
210 – 239	5,379	12,402	8,127	3,913	1,487	1,860	244
180 – 209	551	7,977	651	62	47	28	7
150 – 179	37	2,980	155	25	5	10	3

Scale Score	Integrated Science 1	Integrated Science 2	Integrated Science 3	Integrated Science 4
570 – 600	0	0	0	0
540 – 569	N/A	N/A	N/A	N/A
510 – 539	7	2	0	0
480 – 509	N/A	4	1	0
450 – 479	62	13	1	0
420 – 449	287	56	7	0
390 – 419	1,233	126	20	0
360 – 389	4,598	362	53	0
330 – 359	9,835	623	110	9
300 – 329	11,052	1,141	205	11
270 – 299	7,901	740	301	11
240 – 269	3,835	327	150	19
210 – 239	807	15	8	6
180 – 209	22	0	0	0
150 – 179	3	0	0	0

Table 7.B.6 Distribution of CST Scale Scores for a Grade-specific Population

Scale Score	Algebra I – Grade 8	Geometry – Grade 9	Algebra II – Grade 10	High School Math – Grade 11	World History – Grade 10
570 – 600	4,414	310	409	917	4,020
540 – 569	2,155	782	452	1,860	N/A
510 – 539	5,633	1,157	597	N/A	4,457
480 – 509	6,858	1,644	1,683	2,729	5,762
450 – 479	12,604	6,991	3,977	7,285	24,328
420 – 449	20,672	9,174	5,497	8,509	20,485
390 – 419	29,977	14,020	12,631	18,164	46,572
360 – 389	39,571	22,977	20,526	17,379	62,288
330 – 359	39,789	23,221	24,414	22,901	73,214
300 – 329	38,579	25,228	24,677	18,282	72,121
270 – 299	37,002	23,713	20,648	16,173	45,049
240 – 269	25,312	11,762	14,221	11,901	35,285
210 – 239	5,041	4,164	5,741	4,802	18,414
180 – 209	603	311	1,036	1,435	4,469
150 – 179	70	13	102	191	491

Appendix 7.C—Demographic Summaries

To protect privacy when the number of students in a subgroup is 10 or fewer, the summary statistics at the test- and reporting-cluster–level are not reported and are presented as hyphens in the tables in Appendix 7.C. Percentages in these tables may not sum up to 100 due to rounding.

Table 7.C.1 Demographic Summary for ELA, Grade Two

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
All valid scores	458,825	357	66	8%	12%	24%	32%	24%	71%	63%	77%	68%	59%
Male	233,509	351	66	10%	13%	25%	31%	21%	70%	61%	75%	65%	56%
Female	225,084	364	65	6%	10%	23%	34%	27%	73%	66%	79%	71%	61%
Gender unknown	232	333	70	17%	19%	27%	23%	14%	62%	56%	68%	58%	50%
American Indian	3,040	339	62	12%	15%	29%	29%	15%	65%	59%	73%	60%	52%
Asian American	39,538	401	67	2%	4%	13%	31%	49%	83%	76%	86%	81%	72%
Pacific Islander	2,305	354	58	7%	10%	28%	36%	19%	72%	62%	78%	68%	56%
Filipino	9,714	387	60	2%	5%	17%	38%	39%	81%	72%	85%	79%	67%
Hispanic	250,247	341	59	10%	15%	28%	31%	15%	67%	58%	72%	63%	53%
African American	26,221	340	61	12%	15%	28%	30%	15%	67%	57%	72%	62%	53%
White	111,954	379	65	5%	7%	18%	35%	35%	77%	72%	84%	74%	66%
Two or more races	15,806	377	68	6%	7%	18%	34%	35%	76%	71%	82%	73%	65%
English only	262,769	367	66	7%	9%	22%	34%	29%	74%	67%	80%	70%	62%
Initially fluent English prof.	17,072	406	64	2%	3%	12%	32%	51%	84%	78%	89%	82%	75%
English learner	171,606	337	59	11%	17%	29%	29%	13%	65%	56%	70%	62%	52%
Reclassified fluent Eng. prof.	6,697	401	52	1%	1%	11%	40%	47%	85%	77%	90%	84%	74%
English prof. unknown	681	337	69	16%	16%	24%	26%	18%	64%	57%	70%	60%	51%
No special ed. services	423,575	362	64	6%	11%	24%	34%	25%	73%	65%	78%	70%	60%
Special ed. services	35,210	307	63	30%	23%	22%	17%	8%	53%	47%	57%	49%	42%
Special ed. unknown	40	284	62	48%	28%	10%	8%	8%	42%	37%	47%	41%	36%
Not econ. disadvantaged	169,933	388	65	3%	5%	16%	35%	40%	79%	74%	86%	77%	69%
Economically disadvantaged	287,916	340	59	11%	15%	29%	31%	14%	66%	57%	72%	63%	53%
Unknown economic status	976	338	70	16%	17%	24%	26%	17%	63%	58%	71%	60%	52%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	850	366	65	6%	8%	24%	34%	28%	73%	68%	82%	69%	62%
Asian American	25,263	417	64	1%	2%	9%	28%	60%	86%	81%	90%	86%	77%
Pacific Islander	725	372	60	4%	6%	22%	38%	29%	77%	67%	83%	74%	63%
Filipino	6,137	396	58	1%	3%	14%	38%	44%	83%	75%	87%	81%	70%
Hispanic	41,293	367	62	5%	9%	22%	37%	27%	74%	67%	81%	71%	62%
African American	6,429	363	63	7%	9%	23%	35%	26%	74%	65%	80%	70%	60%
White	79,329	390	62	3%	5%	15%	36%	42%	80%	76%	87%	77%	71%
Two or more races	9,907	394	65	3%	4%	14%	35%	44%	81%	76%	87%	79%	71%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
Primary Ethnicity—Economically Disadvantaged													
American Indian	2,179	328	57	14%	18%	30%	27%	9%	62%	55%	69%	57%	49%
Asian American	14,182	371	64	5%	8%	21%	35%	30%	76%	67%	80%	74%	62%
Pacific Islander	1,571	346	56	8%	11%	30%	36%	14%	70%	59%	76%	66%	53%
Filipino	3,564	372	58	3%	7%	22%	38%	29%	78%	67%	81%	75%	61%
Hispanic	208,637	336	58	11%	17%	30%	30%	12%	65%	56%	70%	62%	52%
African American	19,724	333	59	14%	17%	29%	29%	12%	65%	55%	70%	59%	50%
White	32,398	350	62	9%	12%	25%	33%	20%	69%	63%	76%	65%	57%
Two or more races	5,661	348	62	10%	13%	26%	32%	19%	69%	61%	75%	65%	56%
Primary Ethnicity—Unknown Economic Status													
American Indian	11	338	53	9%	9%	45%	27%	9%	65%	64%	83%	56%	45%
Asian American	93	383	85	9%	13%	12%	23%	44%	74%	70%	77%	74%	68%
Pacific Islander	9	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	13	361	81	8%	15%	15%	31%	31%	71%	61%	73%	72%	55%
Hispanic	317	320	59	18%	22%	27%	26%	7%	58%	51%	65%	55%	46%
African American	68	316	55	19%	22%	31%	19%	9%	57%	49%	63%	53%	48%
White	227	347	68	14%	13%	22%	30%	22%	66%	62%	77%	62%	56%
Two or more races	238	338	74	18%	15%	23%	27%	17%	64%	58%	70%	58%	52%

Table 7.C.2 Demographic Summary for ELA, Grade Three

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
All valid scores	436,198	346	64	8%	15%	31%	27%	19%	72%	70%	76%	62%	65%
Male	219,433	341	64	10%	16%	31%	26%	17%	71%	68%	74%	60%	63%
Female	216,581	351	63	7%	14%	31%	28%	21%	73%	72%	78%	63%	67%
Gender unknown	184	313	59	18%	28%	28%	15%	11%	61%	61%	65%	50%	54%
American Indian	3,031	325	58	13%	22%	34%	21%	10%	66%	65%	71%	54%	57%
Asian American	40,403	385	67	3%	6%	20%	30%	41%	82%	78%	85%	75%	77%
Pacific Islander	2,368	340	58	7%	16%	36%	27%	14%	71%	68%	76%	60%	63%
Filipino	10,166	370	57	2%	7%	27%	34%	29%	80%	76%	83%	70%	74%
Hispanic	230,580	327	57	11%	19%	36%	23%	10%	67%	65%	72%	56%	59%
African American	24,666	328	58	12%	19%	34%	23%	11%	68%	65%	71%	56%	59%
White	111,034	370	62	4%	8%	25%	32%	31%	79%	77%	84%	68%	73%
Two or more races	13,950	368	64	4%	9%	26%	30%	30%	78%	76%	83%	68%	72%
English only	247,648	357	63	6%	12%	29%	30%	24%	75%	73%	80%	65%	69%
Initially fluent English prof.	19,186	387	63	2%	5%	21%	32%	40%	83%	80%	88%	74%	78%
English learner	136,684	312	53	16%	25%	38%	17%	5%	62%	60%	66%	52%	54%
Reclassified fluent Eng. prof.	32,122	379	48	0%	3%	25%	41%	31%	82%	80%	88%	74%	78%
English prof. unknown	558	322	63	18%	22%	25%	22%	13%	64%	63%	69%	54%	57%
No special ed. services	411,838	348	63	8%	14%	31%	27%	20%	73%	71%	77%	62%	66%
Special ed. services	24,315	314	63	20%	23%	30%	17%	10%	62%	60%	65%	52%	54%
Special ed. unknown	45	287	55	33%	36%	20%	7%	4%	54%	52%	57%	39%	45%
Not econ. disadvantaged	167,942	377	62	3%	7%	24%	33%	34%	80%	78%	85%	71%	76%
Economically disadvantaged	267,485	327	57	12%	20%	36%	23%	10%	67%	65%	71%	56%	59%
Unknown economic status	771	328	63	16%	19%	28%	23%	15%	66%	65%	71%	56%	59%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	851	350	59	5%	14%	34%	28%	19%	74%	73%	79%	62%	66%
Asian American	25,945	402	63	1%	3%	15%	30%	51%	86%	82%	89%	79%	83%
Pacific Islander	749	358	60	4%	10%	31%	33%	22%	76%	74%	81%	65%	70%
Filipino	6,320	379	57	1%	6%	23%	36%	34%	82%	78%	85%	73%	77%
Hispanic	38,399	355	59	5%	11%	31%	31%	21%	75%	73%	80%	64%	69%
African American	6,490	349	59	6%	13%	32%	30%	19%	74%	71%	78%	63%	66%
White	80,275	381	60	2%	6%	22%	34%	36%	82%	80%	86%	72%	77%
Two or more races	8,913	384	61	2%	6%	21%	32%	39%	82%	80%	87%	73%	77%
Primary Ethnicity—Economically Disadvantaged													
American Indian	2,175	315	54	16%	25%	34%	19%	7%	63%	62%	68%	51%	54%
Asian American	14,381	354	62	6%	12%	30%	30%	22%	75%	72%	77%	66%	68%
Pacific Islander	1,616	331	54	9%	18%	38%	25%	10%	69%	66%	73%	57%	60%
Filipino	3,836	356	55	4%	10%	33%	32%	21%	76%	73%	79%	67%	69%
Hispanic	191,912	322	55	13%	21%	37%	21%	8%	65%	63%	70%	55%	57%
African American	18,131	321	56	14%	22%	35%	21%	8%	66%	63%	69%	53%	56%
White	30,579	342	58	8%	15%	33%	28%	16%	71%	70%	76%	60%	64%
Two or more races	4,855	339	59	8%	16%	35%	27%	15%	71%	69%	75%	59%	63%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
Primary Ethnicity—Unknown Economic Status													
American Indian	5	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	77	346	72	17%	8%	23%	27%	25%	71%	67%	75%	66%	64%
Pacific Islander	3	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	10	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	269	310	57	22%	21%	31%	20%	6%	60%	60%	64%	51%	53%
African American	45	304	62	22%	24%	38%	7%	9%	60%	54%	62%	48%	53%
White	180	347	60	8%	13%	28%	31%	19%	72%	72%	78%	62%	67%
Two or more races	182	334	63	12%	23%	23%	22%	20%	68%	67%	73%	57%	61%

Table 7.C.3 Demographic Summary for ELA, Grade Four

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
All valid scores	426,373	374	61	3%	9%	23%	27%	38%	76%	63%	67%	69%	60%
Male	213,026	369	62	4%	10%	24%	26%	35%	75%	62%	67%	67%	58%
Female	213,218	379	60	2%	7%	22%	27%	41%	78%	65%	68%	72%	62%
Gender unknown	129	346	61	8%	21%	26%	22%	24%	66%	54%	54%	61%	50%
American Indian	2,705	357	59	6%	12%	29%	25%	28%	71%	58%	62%	64%	53%
Asian American	40,001	412	63	1%	4%	11%	20%	64%	86%	74%	79%	80%	72%
Pacific Islander	2,227	368	55	3%	9%	27%	30%	32%	76%	60%	67%	68%	57%
Filipino	10,959	395	54	1%	3%	16%	28%	52%	84%	70%	74%	76%	68%
Hispanic	223,351	357	55	5%	12%	30%	29%	25%	71%	57%	62%	65%	54%
African American	24,397	355	56	5%	12%	29%	28%	25%	72%	56%	62%	64%	53%
White	110,487	397	59	2%	4%	15%	25%	54%	84%	72%	75%	76%	67%
Two or more races	12,246	394	61	2%	5%	16%	25%	52%	83%	70%	74%	75%	66%
English only	240,732	385	60	2%	7%	20%	27%	45%	80%	67%	71%	72%	63%
Initially fluent English prof.	20,442	411	60	1%	3%	12%	22%	63%	87%	75%	79%	79%	72%
English learner	106,869	332	46	8%	19%	40%	24%	9%	60%	47%	53%	57%	46%
Reclassified fluent Eng. prof.	57,776	398	46	0%	1%	12%	34%	53%	86%	72%	77%	79%	69%
English prof. unknown	554	356	62	7%	15%	26%	25%	27%	69%	57%	62%	63%	54%
No special ed. services	404,556	376	61	3%	8%	23%	27%	39%	77%	64%	68%	70%	60%
Special ed. services	20,145	351	61	8%	15%	30%	24%	24%	67%	56%	59%	61%	52%
Special ed. unknown	1,672	340	57	9%	19%	32%	21%	19%	64%	51%	54%	58%	48%
Not econ. disadvantaged	166,474	404	59	1%	3%	13%	24%	59%	85%	74%	77%	78%	70%
Economically disadvantaged	259,189	355	54	5%	12%	30%	29%	25%	71%	56%	61%	64%	53%
Unknown economic status	710	357	61	6%	15%	27%	24%	28%	70%	57%	60%	64%	53%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	856	383	60	3%	5%	21%	27%	43%	79%	68%	71%	71%	62%
Asian American	25,478	429	58	1%	2%	6%	16%	75%	90%	80%	84%	84%	78%
Pacific Islander	801	386	57	1%	4%	22%	27%	46%	82%	67%	72%	73%	63%
Filipino	6,811	405	53	0%	2%	12%	26%	59%	87%	73%	77%	79%	71%
Hispanic	37,769	383	56	2%	6%	20%	29%	43%	80%	67%	71%	72%	63%
African American	6,494	377	57	3%	8%	22%	29%	39%	79%	64%	69%	70%	60%
White	80,425	408	56	1%	3%	11%	23%	62%	87%	76%	78%	79%	71%
Two or More Races	7,840	410	57	1%	3%	10%	23%	63%	87%	76%	79%	79%	71%
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,844	346	55	7%	15%	33%	24%	21%	67%	54%	58%	60%	49%
Asian American	14,461	381	58	3%	7%	20%	28%	43%	79%	65%	70%	73%	63%
Pacific Islander	1,422	358	50	3%	11%	30%	32%	24%	73%	57%	64%	65%	54%
Filipino	4,134	380	52	2%	5%	22%	33%	39%	80%	65%	69%	72%	63%
Hispanic	185,340	351	53	5%	13%	32%	28%	22%	69%	55%	60%	63%	52%
African American	17,855	347	53	6%	14%	32%	27%	20%	69%	53%	59%	61%	50%
White	29,892	369	56	4%	9%	24%	29%	34%	76%	63%	66%	68%	57%
Two or more races	4,241	365	56	4%	10%	26%	28%	32%	75%	61%	65%	67%	56%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
Primary Ethnicity—Unknown Economic Status													
American Indian	5	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	62	377	77	5%	21%	18%	6%	50%	69%	62%	68%	70%	63%
Pacific Islander	4	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	14	365	72	7%	7%	36%	14%	36%	70%	59%	68%	66%	55%
Hispanic	242	340	57	10%	17%	33%	24%	16%	64%	52%	54%	59%	48%
African American	48	344	57	8%	19%	27%	29%	17%	66%	51%	59%	60%	49%
White	170	376	55	2%	9%	21%	31%	38%	79%	65%	68%	70%	59%
Two or more races	165	357	60	5%	16%	27%	22%	30%	71%	57%	60%	65%	53%

Table 7.C.4 Demographic Summary for ELA, Grade Five

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
All valid scores	420,681	365	56	5%	8%	27%	32%	28%	70%	66%	72%	75%	70%
Male	209,918	359	56	6%	9%	28%	31%	26%	69%	65%	70%	72%	67%
Female	210,651	371	55	3%	7%	26%	33%	31%	71%	67%	74%	78%	72%
Gender unknown	112	338	57	14%	14%	30%	28%	13%	60%	59%	63%	65%	60%
American Indian	2,764	348	54	8%	12%	30%	31%	18%	66%	61%	67%	68%	64%
Asian American	38,937	400	59	2%	3%	14%	27%	53%	79%	76%	82%	85%	79%
Pacific Islander	2,320	359	51	4%	8%	31%	34%	22%	68%	63%	70%	75%	69%
Filipino	11,002	383	50	1%	4%	19%	36%	39%	75%	71%	78%	82%	76%
Hispanic	219,873	349	50	7%	11%	34%	32%	17%	65%	60%	66%	72%	65%
African American	25,071	347	52	8%	11%	34%	30%	17%	65%	59%	66%	70%	64%
White	109,205	387	53	2%	4%	17%	33%	44%	79%	74%	80%	79%	76%
Two or more races	11,509	382	56	3%	5%	20%	32%	41%	77%	72%	78%	78%	75%
English only	235,326	375	55	3%	6%	23%	33%	35%	74%	69%	75%	76%	73%
Initially fluent English prof.	19,791	398	55	1%	3%	14%	31%	51%	80%	76%	82%	83%	79%
English learner	86,613	319	42	13%	20%	45%	18%	4%	52%	50%	53%	63%	55%
Reclassified fluent Eng. prof.	78,482	381	43	0%	2%	22%	44%	32%	76%	71%	78%	82%	76%
English prof. unknown	469	344	61	14%	13%	25%	29%	19%	63%	60%	64%	66%	62%
No special ed. services	399,395	367	55	4%	8%	26%	32%	29%	71%	66%	72%	76%	70%
Special ed. services	19,630	338	56	12%	15%	34%	25%	15%	61%	57%	62%	65%	60%
Special ed. unknown	1,656	339	56	11%	16%	34%	24%	15%	61%	56%	62%	67%	61%
Not econ. disadvantaged	164,255	392	53	2%	3%	16%	32%	47%	79%	75%	81%	81%	78%
Economically disadvantaged	255,816	348	50	7%	11%	34%	32%	16%	64%	60%	66%	71%	65%
Unknown economic status	610	347	57	10%	13%	29%	27%	20%	64%	61%	66%	68%	63%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	870	371	55	4%	8%	22%	36%	31%	74%	69%	75%	74%	71%
Asian American	24,627	416	56	1%	1%	8%	24%	66%	83%	80%	86%	87%	83%
Pacific Islander	811	376	52	2%	6%	23%	35%	34%	74%	69%	76%	78%	74%
Filipino	6,810	391	49	1%	3%	16%	36%	45%	78%	74%	81%	84%	79%
Hispanic	37,385	373	51	3%	5%	24%	36%	32%	74%	69%	75%	77%	73%
African American	6,896	367	52	4%	6%	26%	35%	28%	72%	66%	73%	75%	71%
White	79,480	396	50	1%	2%	13%	32%	51%	81%	77%	83%	81%	79%
Two or more races	7,376	396	53	1%	2%	15%	31%	51%	81%	76%	82%	82%	79%
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,886	338	51	10%	15%	34%	29%	13%	63%	57%	63%	66%	61%
Asian American	14,259	372	55	4%	6%	24%	34%	33%	70%	67%	74%	80%	72%
Pacific Islander	1,508	350	48	5%	10%	35%	34%	15%	65%	59%	67%	74%	66%
Filipino	4,180	370	49	2%	6%	26%	37%	29%	71%	66%	74%	80%	72%
Hispanic	182,286	344	49	7%	12%	36%	31%	14%	63%	59%	64%	71%	64%
African American	18,129	340	50	9%	13%	37%	28%	13%	63%	56%	63%	68%	62%
White	29,577	361	51	5%	8%	28%	35%	24%	71%	66%	72%	72%	69%
Two or more races	3,991	357	52	6%	9%	29%	34%	22%	69%	63%	70%	72%	67%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
Primary Ethnicity—Unknown Economic Status													
American Indian	8	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	51	354	61	14%	4%	27%	27%	27%	63%	65%	68%	72%	66%
Pacific Islander	1	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	12	364	45	0%	8%	33%	42%	17%	68%	67%	76%	75%	69%
Hispanic	202	336	50	11%	15%	33%	30%	11%	61%	56%	62%	66%	60%
African American	46	326	40	2%	28%	43%	20%	7%	59%	52%	58%	64%	54%
White	148	363	61	8%	11%	21%	27%	32%	70%	67%	72%	70%	67%
Two or more races	142	350	61	11%	12%	27%	26%	23%	64%	63%	67%	69%	63%

Table 7.C.5 Demographic Summary for ELA, Grade Six

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
All valid scores	425,310	363	54	4%	9%	27%	32%	28%	73%	64%	70%	74%	60%
Male	212,371	359	54	5%	10%	28%	31%	26%	71%	63%	69%	72%	59%
Female	212,795	368	53	3%	8%	27%	33%	30%	75%	65%	71%	76%	62%
Gender unknown	144	341	62	12%	12%	36%	22%	19%	63%	58%	61%	65%	52%
American Indian	2,682	348	50	6%	12%	32%	32%	18%	68%	59%	66%	70%	55%
Asian American	39,073	397	56	2%	4%	14%	27%	54%	82%	75%	79%	83%	71%
Pacific Islander	2,314	356	49	4%	9%	31%	34%	21%	71%	63%	68%	73%	57%
Filipino	11,775	382	47	1%	4%	19%	37%	40%	79%	72%	76%	81%	66%
Hispanic	221,274	347	49	5%	12%	34%	32%	17%	68%	59%	65%	71%	55%
African American	25,993	345	50	6%	14%	34%	31%	16%	67%	58%	64%	69%	53%
White	110,536	383	50	2%	4%	18%	34%	42%	80%	71%	77%	79%	68%
Two or more races	11,663	379	53	2%	6%	20%	32%	39%	78%	70%	75%	78%	66%
English only	236,835	372	52	3%	7%	23%	33%	34%	76%	67%	73%	76%	63%
Initially fluent English prof.	19,930	392	53	1%	3%	16%	32%	48%	82%	74%	78%	81%	70%
English learner	68,839	312	40	13%	27%	44%	14%	2%	52%	46%	51%	60%	42%
Reclassified fluent Eng. prof.	99,196	372	43	1%	3%	27%	41%	28%	77%	68%	73%	79%	64%
English prof. unknown	510	343	59	11%	13%	32%	25%	19%	64%	58%	63%	67%	53%
No special ed. services	404,866	365	53	3%	9%	27%	33%	29%	74%	65%	70%	75%	61%
Special ed. services	18,846	332	53	11%	18%	35%	23%	13%	61%	54%	59%	64%	49%
Special ed. unknown	1,598	338	53	10%	17%	33%	26%	15%	64%	56%	61%	66%	51%
Not econ. disadvantaged	166,946	388	51	1%	4%	16%	33%	46%	81%	73%	78%	80%	69%
Economically disadvantaged	257,707	347	49	5%	13%	34%	32%	16%	67%	59%	65%	70%	54%
Unknown economic status	657	343	56	10%	15%	32%	25%	18%	65%	58%	62%	67%	53%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	916	367	49	2%	7%	26%	37%	28%	76%	66%	73%	75%	62%
Asian American	24,248	413	52	1%	2%	8%	23%	67%	87%	80%	83%	87%	76%
Pacific Islander	777	374	47	1%	6%	22%	38%	33%	78%	69%	73%	78%	64%
Filipino	7,293	389	45	1%	3%	15%	36%	46%	82%	74%	79%	82%	69%
Hispanic	38,258	370	49	2%	6%	24%	37%	31%	76%	67%	73%	76%	63%
African American	7,486	363	50	3%	8%	27%	35%	26%	74%	65%	71%	74%	60%
White	80,611	392	48	1%	3%	14%	33%	49%	83%	74%	80%	81%	71%
Two or more races	7,357	392	50	1%	3%	14%	32%	50%	83%	74%	79%	81%	71%
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,764	339	48	7%	15%	36%	30%	12%	65%	56%	62%	67%	51%
Asian American	14,769	372	53	3%	7%	23%	34%	34%	75%	68%	72%	78%	63%
Pacific Islander	1,536	347	46	5%	11%	36%	32%	15%	68%	60%	65%	71%	53%
Filipino	4,472	369	46	2%	6%	25%	38%	29%	75%	68%	73%	78%	62%
Hispanic	182,797	343	47	6%	14%	36%	31%	14%	66%	57%	63%	69%	53%
African American	18,443	337	48	7%	16%	36%	29%	12%	64%	56%	62%	67%	51%
White	29,766	359	49	4%	9%	28%	35%	24%	73%	63%	69%	72%	59%
Two or more races	4,160	356	50	4%	10%	30%	34%	22%	71%	62%	69%	72%	58%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
Primary Ethnicity—Unknown Economic Status													
American Indian	2	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	56	367	67	9%	7%	20%	29%	36%	70%	67%	68%	73%	62%
Pacific Islander	1	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	10	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	219	323	49	15%	23%	33%	21%	9%	58%	51%	55%	62%	45%
African American	64	327	52	11%	25%	36%	14%	14%	58%	55%	57%	62%	46%
White	159	357	53	8%	8%	26%	35%	23%	71%	63%	69%	71%	58%
Two or more races	146	354	59	5%	10%	38%	24%	23%	69%	62%	67%	69%	56%

Table 7.C.6 Demographic Summary for ELA, Grade Seven

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
All valid scores	432,810	364	62	5%	10%	26%	34%	26%	73%	72%	70%	67%	61%
Male	216,576	357	62	6%	11%	27%	32%	23%	72%	70%	68%	65%	59%
Female	216,098	370	61	3%	8%	26%	35%	28%	75%	73%	73%	70%	62%
Gender unknown	136	334	60	12%	19%	26%	30%	13%	65%	62%	64%	58%	51%
American Indian	2,733	349	57	7%	13%	29%	34%	17%	69%	68%	67%	62%	55%
Asian American	41,193	406	67	2%	4%	13%	29%	53%	82%	81%	78%	79%	74%
Pacific Islander	2,486	355	55	5%	10%	31%	34%	19%	70%	69%	69%	66%	57%
Filipino	12,174	386	56	1%	5%	18%	38%	38%	79%	78%	75%	76%	68%
Hispanic	223,211	345	54	6%	13%	33%	33%	14%	69%	67%	66%	62%	54%
African American	26,494	342	56	8%	14%	32%	31%	14%	67%	65%	66%	61%	53%
White	113,242	387	60	2%	5%	18%	36%	39%	79%	79%	77%	73%	69%
Two or more races	11,277	382	63	3%	6%	19%	35%	37%	78%	76%	75%	72%	66%
English only	241,087	373	61	4%	8%	23%	35%	31%	76%	75%	74%	69%	64%
Initially fluent English prof.	30,992	392	62	2%	4%	17%	35%	41%	81%	79%	77%	74%	70%
English learner	60,673	303	42	17%	29%	40%	12%	1%	53%	52%	50%	51%	40%
Reclassified fluent Eng. prof.	99,466	369	49	1%	5%	29%	43%	22%	77%	75%	73%	70%	62%
English prof. unknown	592	336	62	12%	17%	30%	26%	15%	64%	63%	62%	60%	52%
No special ed. services	412,923	365	61	4%	9%	26%	34%	26%	74%	72%	71%	68%	61%
Special ed. services	18,381	324	57	14%	20%	34%	22%	9%	60%	59%	59%	55%	49%
Special ed. unknown	1,506	339	63	11%	15%	31%	27%	15%	65%	64%	64%	60%	52%
Not econ. disadvantaged	175,767	392	61	2%	4%	17%	35%	42%	81%	79%	78%	75%	70%
Economically disadvantaged	256,224	344	54	7%	13%	33%	33%	14%	68%	66%	65%	62%	54%
Unknown economic status	819	334	63	14%	16%	29%	27%	14%	63%	63%	62%	59%	50%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	1,058	368	59	4%	9%	23%	37%	27%	75%	74%	72%	67%	62%
Asian American	25,476	424	63	1%	2%	8%	25%	65%	86%	85%	82%	83%	79%
Pacific Islander	924	374	56	2%	6%	24%	40%	28%	76%	75%	75%	71%	64%
Filipino	7,645	396	54	1%	3%	15%	37%	44%	82%	80%	78%	78%	71%
Hispanic	41,977	368	56	3%	7%	25%	38%	26%	75%	74%	73%	68%	62%
African American	7,997	362	57	5%	9%	26%	37%	23%	73%	71%	71%	67%	60%
White	83,479	397	57	1%	3%	14%	36%	46%	82%	81%	79%	75%	72%
Two or more races	7,211	398	60	2%	3%	14%	34%	46%	82%	80%	79%	76%	72%
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,672	336	53	9%	15%	33%	32%	10%	66%	64%	64%	59%	51%
Asian American	15,663	377	62	4%	7%	21%	35%	33%	75%	75%	72%	73%	65%
Pacific Islander	1,558	343	52	6%	13%	36%	31%	13%	66%	66%	66%	63%	53%
Filipino	4,510	369	55	2%	8%	24%	39%	27%	75%	74%	71%	72%	63%
Hispanic	180,947	339	52	7%	14%	35%	32%	11%	67%	65%	64%	61%	53%
African American	18,418	333	53	9%	17%	35%	29%	10%	64%	62%	64%	59%	50%
White	29,600	359	57	5%	9%	28%	36%	21%	72%	71%	70%	65%	59%
Two or more races	3,856	354	56	6%	11%	28%	35%	20%	71%	69%	69%	65%	57%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
Primary Ethnicity—Unknown Economic Status													
American Indian	3	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	54	347	78	19%	9%	22%	24%	26%	62%	65%	61%	64%	57%
Pacific Islander	4	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	19	362	52	0%	11%	26%	42%	21%	67%	76%	69%	70%	60%
Hispanic	287	322	57	14%	24%	33%	22%	8%	59%	59%	59%	56%	45%
African American	79	303	55	33%	13%	30%	22%	3%	52%	51%	50%	50%	42%
White	163	352	65	9%	10%	29%	29%	23%	69%	69%	69%	63%	56%
Two or more races	210	344	63	11%	14%	26%	33%	16%	67%	65%	65%	62%	54%

Table 7.C.7 Demographic Summary for ELA, Grade Eight

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
All valid scores	429,438	361	59	5%	10%	29%	29%	28%	67%	66%	63%	73%	63%
Male	215,331	355	60	7%	12%	29%	28%	25%	66%	64%	61%	70%	61%
Female	213,951	368	58	3%	8%	28%	30%	31%	67%	67%	66%	76%	66%
Gender unknown	156	324	57	13%	25%	31%	18%	13%	56%	55%	51%	59%	49%
American Indian	2,782	349	55	7%	13%	32%	29%	20%	65%	62%	59%	69%	59%
Asian American	38,429	399	63	2%	4%	15%	25%	54%	76%	76%	74%	82%	75%
Pacific Islander	2,461	352	53	5%	11%	34%	29%	21%	65%	63%	61%	71%	60%
Filipino	12,590	381	53	2%	5%	21%	34%	39%	72%	71%	70%	79%	70%
Hispanic	219,644	344	52	6%	13%	36%	28%	16%	61%	61%	58%	68%	57%
African American	27,213	341	54	8%	14%	35%	27%	16%	61%	59%	57%	67%	57%
White	115,478	384	57	2%	5%	20%	31%	43%	74%	72%	70%	78%	71%
Two or more races	10,841	377	61	4%	7%	21%	30%	38%	72%	70%	68%	76%	68%
English only	241,280	371	59	4%	8%	25%	30%	34%	70%	68%	66%	75%	66%
Initially fluent English prof.	33,642	385	59	2%	5%	21%	30%	42%	73%	72%	71%	79%	70%
English learner	50,905	300	39	19%	31%	40%	8%	1%	46%	46%	42%	53%	41%
Reclassified fluent Eng. prof.	103,007	363	48	1%	6%	34%	36%	23%	67%	67%	64%	75%	64%
English prof. unknown	604	329	61	15%	20%	31%	20%	15%	57%	55%	52%	61%	52%
No special ed. services	411,006	363	59	4%	9%	28%	29%	29%	67%	66%	64%	73%	64%
Special ed. services	18,390	323	55	15%	21%	36%	18%	10%	56%	53%	50%	59%	50%
Special ed. unknown	42	294	55	33%	19%	38%	5%	5%	47%	42%	42%	48%	40%
Not econ. disadvantaged	177,733	387	58	2%	5%	19%	30%	44%	74%	72%	71%	79%	72%
Economically disadvantaged	250,948	344	53	7%	13%	35%	28%	16%	61%	61%	58%	68%	57%
Unknown economic status	757	331	62	15%	17%	31%	21%	15%	58%	56%	53%	62%	53%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	1,137	365	56	4%	8%	28%	32%	29%	69%	67%	64%	74%	65%
Asian American	23,344	417	60	1%	2%	9%	22%	66%	81%	80%	79%	86%	80%
Pacific Islander	984	367	54	4%	6%	28%	32%	30%	69%	67%	65%	75%	65%
Filipino	7,972	389	52	1%	3%	17%	34%	45%	75%	73%	73%	81%	73%
Hispanic	43,362	364	54	4%	8%	28%	33%	28%	68%	66%	65%	74%	65%
African American	8,494	359	55	5%	9%	29%	31%	26%	66%	64%	63%	72%	63%
White	85,574	392	55	1%	3%	16%	30%	49%	77%	74%	73%	81%	74%
Two or more races	6,866	392	59	2%	4%	16%	29%	48%	76%	74%	73%	80%	73%
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,640	337	52	9%	16%	35%	27%	13%	62%	59%	55%	65%	55%
Asian American	15,057	373	59	4%	7%	23%	30%	35%	69%	69%	67%	75%	67%
Pacific Islander	1,470	343	50	6%	14%	38%	27%	16%	62%	60%	58%	68%	57%
Filipino	4,610	365	51	2%	7%	29%	34%	28%	68%	67%	65%	75%	65%
Hispanic	175,969	339	50	7%	14%	38%	27%	13%	59%	59%	56%	67%	55%
African American	18,654	333	51	9%	16%	38%	25%	12%	58%	57%	54%	64%	54%
White	29,746	359	55	5%	9%	29%	32%	25%	68%	66%	62%	71%	62%
Two or more races	3,802	352	55	6%	11%	30%	31%	21%	65%	63%	60%	70%	60%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
Primary Ethnicity—Unknown Economic Status													
American Indian	5	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	28	375	94	14%	4%	29%	18%	36%	65%	65%	65%	74%	65%
Pacific Islander	7	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	8	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	313	315	52	19%	20%	34%	19%	7%	52%	51%	48%	57%	47%
African American	65	306	49	20%	26%	31%	20%	3%	50%	47%	47%	54%	44%
White	158	360	64	7%	8%	30%	27%	28%	69%	65%	62%	70%	63%
Two or more races	173	333	62	15%	20%	26%	20%	20%	59%	56%	54%	63%	53%

Table 7.C.8 Demographic Summary for ELA, Grade Nine

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
All valid scores	455,314	364	57	5%	10%	24%	33%	29%	72%	70%	62%	67%	64%
Male	229,615	359	59	6%	11%	24%	32%	27%	71%	69%	60%	64%	62%
Female	225,555	369	55	3%	8%	24%	34%	31%	73%	70%	64%	70%	67%
Gender unknown	144	323	58	21%	15%	28%	28%	8%	59%	55%	50%	53%	52%
American Indian	3,141	354	56	6%	12%	26%	33%	23%	70%	66%	60%	64%	61%
Asian American	39,154	398	59	2%	4%	12%	28%	54%	77%	80%	73%	77%	74%
Pacific Islander	2,571	356	54	5%	10%	28%	34%	22%	70%	67%	60%	64%	63%
Filipino	13,529	383	50	1%	5%	17%	37%	40%	75%	77%	68%	73%	71%
Hispanic	236,257	348	52	6%	13%	30%	34%	17%	68%	65%	57%	62%	60%
African American	28,736	343	54	8%	15%	30%	31%	16%	67%	63%	56%	59%	58%
White	119,189	386	54	2%	5%	15%	33%	44%	78%	77%	70%	75%	69%
Two or more races	12,737	379	58	3%	7%	17%	33%	40%	76%	75%	68%	72%	68%
English only	255,236	373	57	4%	8%	20%	34%	35%	75%	73%	66%	70%	66%
Initially fluent English prof.	37,714	385	54	2%	5%	17%	35%	41%	76%	77%	69%	74%	71%
English learner	54,882	302	40	18%	32%	38%	11%	1%	53%	47%	40%	46%	45%
Reclassified fluent Eng. prof.	106,793	366	46	2%	5%	28%	42%	23%	73%	72%	63%	68%	67%
English prof. unknown	689	336	59	13%	18%	25%	28%	16%	63%	60%	53%	58%	56%
No special ed. services	433,729	366	57	4%	9%	23%	34%	30%	72%	71%	63%	68%	65%
Special ed. services	21,558	317	53	17%	25%	32%	19%	8%	58%	53%	47%	51%	49%
Special ed. unknown	27	306	55	26%	26%	26%	15%	7%	53%	52%	44%	45%	43%
Not econ. disadvantaged	198,934	386	55	2%	5%	16%	33%	44%	77%	77%	70%	74%	70%
Economically disadvantaged	255,560	347	53	7%	14%	30%	33%	17%	67%	64%	56%	62%	60%
Unknown economic status	820	336	59	13%	18%	25%	28%	16%	62%	60%	54%	58%	55%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	1,415	371	56	4%	8%	20%	35%	33%	74%	72%	66%	69%	66%
Asian American	23,978	415	54	1%	2%	7%	24%	66%	81%	85%	78%	82%	78%
Pacific Islander	1,144	370	54	4%	7%	21%	38%	30%	73%	72%	64%	69%	66%
Filipino	8,932	390	47	1%	3%	14%	37%	46%	77%	79%	71%	76%	73%
Hispanic	54,700	365	53	4%	9%	23%	37%	28%	72%	70%	63%	68%	65%
African American	10,551	358	55	6%	10%	26%	34%	24%	71%	68%	61%	64%	63%
White	89,932	395	51	1%	3%	12%	33%	50%	80%	80%	73%	78%	72%
Two or more races	8,282	394	54	2%	4%	12%	32%	50%	79%	79%	72%	76%	72%
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,716	340	52	8%	15%	31%	31%	14%	66%	62%	55%	59%	57%
Asian American	15,120	373	56	4%	8%	20%	34%	34%	71%	73%	65%	69%	68%
Pacific Islander	1,424	345	52	7%	13%	33%	31%	15%	67%	63%	56%	60%	60%
Filipino	4,575	369	51	2%	8%	23%	37%	29%	72%	72%	64%	68%	68%
Hispanic	181,231	343	51	7%	14%	32%	33%	14%	66%	63%	55%	61%	59%
African American	18,127	335	52	10%	17%	32%	29%	12%	64%	60%	53%	57%	56%
White	29,116	361	55	6%	10%	23%	35%	26%	72%	69%	62%	67%	63%
Two or more races	4,251	354	54	6%	11%	25%	36%	21%	70%	67%	60%	64%	61%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
Primary Ethnicity—Unknown Economic Status													
American Indian	10	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	56	354	64	11%	9%	21%	39%	20%	61%	66%	62%	62%	62%
Pacific Islander	3	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	22	370	54	0%	18%	14%	32%	36%	68%	74%	65%	68%	67%
Hispanic	326	325	54	14%	22%	27%	26%	10%	60%	55%	50%	54%	53%
African American	58	317	56	22%	24%	22%	26%	5%	57%	54%	48%	50%	49%
White	141	356	66	11%	11%	21%	25%	33%	68%	68%	62%	64%	58%
Two or more races	204	336	56	12%	17%	29%	30%	13%	64%	59%	54%	60%	55%

Table 7.C.9 Demographic Summary for ELA, Grade Ten

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
All valid scores	445,018	352	57	7%	11%	30%	28%	24%	67%	71%	64%	69%	67%
Male	223,768	347	58	9%	12%	30%	27%	22%	67%	69%	62%	66%	65%
Female	221,084	358	55	5%	10%	30%	29%	26%	68%	72%	66%	72%	69%
Gender unknown	166	310	55	23%	22%	33%	15%	8%	53%	54%	52%	54%	51%
American Indian	3,027	343	55	9%	13%	31%	29%	18%	65%	67%	62%	66%	64%
Asian American	41,725	385	59	3%	5%	17%	28%	47%	77%	81%	73%	78%	77%
Pacific Islander	2,588	343	53	8%	13%	35%	27%	18%	64%	68%	61%	68%	64%
Filipino	13,593	371	50	2%	6%	24%	35%	33%	74%	79%	69%	76%	74%
Hispanic	226,046	337	51	9%	14%	36%	27%	14%	62%	66%	60%	65%	62%
African American	27,546	332	54	12%	16%	35%	24%	13%	60%	63%	58%	63%	60%
White	119,646	372	55	4%	6%	22%	32%	36%	75%	77%	71%	74%	73%
Two or more races	10,847	364	59	6%	8%	24%	29%	32%	72%	74%	68%	72%	70%
English only	246,981	360	57	6%	9%	26%	30%	29%	70%	73%	67%	71%	70%
Initially fluent English prof.	34,238	375	55	3%	6%	23%	31%	37%	75%	78%	71%	76%	74%
English learner	52,403	292	38	25%	33%	36%	6%	1%	46%	47%	45%	48%	44%
Reclassified fluent Eng. prof.	110,740	356	46	2%	7%	37%	34%	20%	68%	74%	66%	71%	70%
English prof. unknown	656	322	56	17%	20%	32%	21%	9%	57%	59%	55%	58%	55%
No special ed. services	422,966	355	56	6%	10%	30%	29%	25%	68%	72%	65%	70%	68%
Special ed. services	22,016	304	51	25%	24%	32%	13%	6%	51%	52%	49%	51%	49%
Special ed. unknown	36	298	51	28%	36%	14%	19%	3%	49%	50%	49%	47%	45%
Not econ. disadvantaged	199,464	372	56	4%	6%	22%	31%	36%	75%	77%	71%	75%	73%
Economically disadvantaged	244,737	336	52	10%	15%	36%	26%	14%	62%	65%	59%	64%	62%
Unknown economic status	817	321	55	17%	21%	31%	21%	10%	57%	59%	55%	58%	55%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	1,470	357	53	5%	9%	28%	33%	25%	70%	72%	66%	70%	69%
Asian American	25,078	401	55	2%	3%	11%	26%	58%	82%	85%	78%	82%	81%
Pacific Islander	1,174	355	53	6%	8%	30%	31%	25%	68%	72%	65%	71%	68%
Filipino	9,119	378	48	1%	4%	21%	36%	37%	76%	81%	72%	78%	76%
Hispanic	53,530	352	53	6%	10%	31%	31%	22%	68%	71%	65%	69%	67%
African American	10,252	345	54	8%	12%	32%	28%	19%	66%	68%	62%	67%	65%
White	91,743	379	53	3%	4%	19%	33%	41%	77%	79%	73%	77%	76%
Two or more races	7,098	378	56	3%	5%	20%	31%	41%	77%	79%	72%	76%	75%
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,548	330	54	13%	17%	34%	25%	11%	60%	62%	58%	61%	59%
Asian American	16,595	362	56	5%	9%	26%	30%	30%	69%	75%	67%	72%	71%
Pacific Islander	1,413	333	49	9%	16%	38%	25%	12%	60%	64%	58%	65%	60%
Filipino	4,463	358	51	3%	9%	30%	32%	25%	69%	74%	65%	72%	70%
Hispanic	172,209	333	50	10%	16%	38%	25%	12%	60%	64%	58%	63%	61%
African American	17,229	324	52	15%	18%	36%	22%	9%	57%	60%	56%	60%	57%
White	27,717	347	55	8%	11%	31%	30%	20%	66%	69%	63%	67%	65%
Two or more races	3,563	340	55	11%	13%	31%	28%	17%	63%	67%	61%	65%	62%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
Primary Ethnicity—Unknown Economic Status													
American Indian	9	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	52	339	60	15%	15%	23%	23%	23%	63%	66%	59%	64%	63%
Pacific Islander	1	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	11	341	59	9%	18%	27%	27%	18%	63%	63%	63%	70%	61%
Hispanic	307	307	48	21%	26%	32%	18%	3%	53%	54%	50%	54%	50%
African American	65	310	53	26%	20%	26%	20%	8%	54%	55%	52%	53%	50%
White	186	342	58	10%	15%	28%	31%	16%	64%	67%	62%	64%	63%
Two or more races	186	322	54	16%	20%	35%	18%	11%	57%	60%	56%	59%	55%

Table 7.C.10 Demographic Summary for ELA, Grade Eleven

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
All valid scores	433,623	345	62	10%	14%	29%	27%	21%	66%	65%	64%	69%	63%
Male	217,502	339	64	12%	15%	28%	25%	19%	64%	63%	63%	66%	60%
Female	215,965	351	60	7%	13%	29%	28%	23%	67%	66%	65%	72%	66%
Gender unknown	156	308	56	22%	22%	29%	21%	5%	54%	54%	55%	54%	50%
American Indian	2,994	336	60	12%	15%	31%	25%	16%	62%	63%	62%	65%	59%
Asian American	42,387	379	64	5%	7%	19%	28%	42%	75%	74%	71%	80%	73%
Pacific Islander	2,517	333	57	11%	16%	33%	27%	13%	60%	62%	61%	66%	59%
Filipino	13,558	362	53	3%	8%	27%	35%	26%	72%	70%	69%	77%	69%
Hispanic	214,233	328	55	12%	18%	34%	25%	11%	61%	60%	59%	63%	58%
African American	26,565	321	58	17%	19%	32%	22%	10%	57%	58%	58%	61%	55%
White	120,956	366	62	6%	9%	23%	30%	32%	71%	71%	70%	76%	69%
Two or more races	10,413	357	64	8%	11%	24%	30%	28%	69%	69%	67%	73%	66%
English only	241,413	353	63	8%	12%	26%	29%	25%	67%	67%	66%	72%	65%
Initially fluent English prof.	32,542	368	60	5%	8%	24%	31%	32%	73%	71%	70%	77%	70%
English learner	47,415	280	40	33%	36%	26%	4%	1%	47%	44%	43%	46%	41%
Reclassified fluent Eng. prof.	111,654	348	50	4%	11%	37%	32%	16%	68%	66%	65%	71%	65%
English prof. unknown	599	316	61	20%	19%	30%	21%	10%	58%	56%	56%	58%	54%
No special ed. services	412,143	348	61	8%	13%	29%	28%	22%	67%	66%	65%	70%	64%
Special ed. services	21,451	291	55	32%	26%	26%	11%	4%	48%	48%	49%	49%	44%
Special ed. unknown	29	267	49	45%	31%	21%	0%	3%	38%	40%	43%	40%	35%
Not econ. disadvantaged	200,233	366	62	6%	9%	23%	30%	32%	72%	71%	69%	76%	69%
Economically disadvantaged	232,606	327	56	13%	18%	34%	24%	11%	61%	60%	59%	63%	57%
Unknown economic status	784	314	60	22%	18%	31%	20%	9%	56%	56%	55%	58%	53%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	1,524	349	61	9%	12%	29%	28%	23%	66%	67%	66%	70%	64%
Asian American	24,840	397	60	2%	4%	13%	27%	54%	81%	79%	76%	85%	78%
Pacific Islander	1,181	346	60	9%	13%	27%	31%	20%	65%	66%	65%	70%	63%
Filipino	9,101	368	52	3%	7%	25%	36%	30%	73%	71%	70%	79%	71%
Hispanic	52,252	342	58	9%	14%	31%	29%	18%	65%	64%	64%	68%	62%
African American	10,622	334	60	13%	15%	30%	26%	15%	61%	62%	61%	66%	59%
White	93,768	374	61	4%	7%	21%	31%	37%	74%	74%	72%	78%	71%
Two or more races	6,945	370	62	6%	8%	21%	31%	35%	73%	72%	71%	77%	70%
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,468	322	56	16%	19%	34%	22%	9%	57%	59%	59%	60%	55%
Asian American	17,496	354	61	7%	11%	27%	29%	25%	67%	67%	65%	73%	67%
Pacific Islander	1,332	321	52	13%	19%	38%	23%	7%	57%	58%	58%	63%	56%
Filipino	4,429	349	52	5%	12%	32%	33%	18%	68%	66%	66%	73%	65%
Hispanic	161,697	323	54	13%	20%	35%	23%	9%	60%	58%	58%	62%	56%
African American	15,879	312	55	19%	22%	33%	19%	7%	54%	56%	55%	58%	52%
White	27,027	338	61	12%	15%	29%	27%	17%	62%	63%	63%	67%	61%
Two or more races	3,278	332	59	13%	17%	29%	27%	14%	61%	62%	61%	65%	59%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Word Analysis and Vocabulary Development	Reading Comprehension	Literary Response and Analysis	Written Conventions	Writing Strategies
Primary Ethnicity—Unknown Economic Status													
American Indian	2	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	51	319	65	18%	24%	25%	20%	14%	52%	58%	57%	59%	55%
Pacific Islander	4	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	28	338	62	18%	14%	21%	29%	18%	65%	62%	63%	69%	60%
Hispanic	284	302	55	26%	20%	33%	15%	5%	53%	51%	52%	53%	49%
African American	64	286	55	36%	23%	25%	14%	2%	45%	47%	47%	49%	43%
White	161	333	62	14%	17%	25%	28%	16%	64%	62%	60%	66%	58%
Two or more races	190	322	60	19%	12%	38%	20%	11%	58%	59%	57%	59%	56%

Table 7.C.11 Demographic Summary for History–Social Science, Grade Eight

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	World History and Geography: Ancient Civ.	Late Antiquity and the Middle Ages	Renaissance/Reformation	U.S. Constitution and the Early Republic	Civil War and Its Aftermath
All valid scores	454,521	357	70	12%	10%	26%	23%	29%	63%	63%	67%	62%	65%
Male	232,256	359	74	14%	9%	23%	22%	32%	64%	64%	66%	62%	65%
Female	222,064	355	65	10%	10%	29%	25%	26%	63%	63%	67%	62%	65%
Gender unknown	201	306	64	36%	17%	26%	10%	11%	51%	49%	52%	45%	46%
American Indian	2,989	339	64	17%	12%	29%	23%	20%	59%	58%	61%	57%	60%
Asian American	39,075	406	73	4%	4%	14%	21%	57%	74%	77%	77%	75%	79%
Pacific Islander	2,556	349	62	12%	11%	28%	25%	23%	63%	62%	65%	60%	63%
Filipino	12,848	386	63	4%	5%	20%	28%	44%	71%	72%	75%	71%	74%
Hispanic	235,845	338	62	16%	12%	31%	23%	18%	59%	58%	62%	57%	59%
African American	29,988	332	64	20%	14%	29%	21%	17%	57%	57%	60%	54%	58%
White	119,916	381	69	7%	6%	20%	25%	42%	69%	70%	73%	70%	73%
Two or more races	11,304	373	72	9%	7%	22%	24%	39%	68%	68%	71%	67%	70%
English only	254,242	366	70	10%	8%	24%	24%	34%	66%	66%	69%	65%	68%
Initially fluent English prof.	34,167	387	70	5%	5%	21%	25%	44%	71%	72%	75%	70%	74%
English learner	61,101	292	46	37%	23%	29%	8%	3%	46%	43%	47%	42%	43%
Reclassified fluent Eng. prof.	104,351	364	59	5%	7%	31%	29%	27%	65%	67%	70%	65%	68%
English prof. unknown	660	320	67	27%	18%	25%	17%	14%	55%	52%	55%	50%	52%
No special ed. services	410,227	364	68	9%	9%	26%	25%	31%	65%	65%	69%	64%	67%
Special ed. services	44,045	297	59	41%	19%	23%	10%	7%	47%	44%	47%	44%	45%
Special ed. unknown	249	275	44	52%	26%	16%	4%	2%	40%	37%	40%	38%	37%
Not econ. disadvantaged	183,160	387	70	5%	5%	19%	25%	46%	71%	71%	74%	71%	75%
Economically disadvantaged	270,515	337	63	16%	13%	31%	22%	18%	58%	58%	61%	56%	59%
Unknown economic status	846	319	69	29%	15%	24%	17%	15%	55%	52%	55%	50%	51%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	1,196	360	64	9%	8%	27%	27%	28%	64%	64%	68%	64%	67%
Asian American	23,565	426	69	2%	2%	8%	19%	69%	79%	81%	82%	80%	84%
Pacific Islander	1,009	366	63	7%	8%	27%	25%	33%	67%	66%	70%	66%	68%
Filipino	8,121	395	62	3%	3%	16%	27%	50%	73%	74%	77%	74%	77%
Hispanic	45,452	362	65	9%	8%	26%	27%	30%	65%	65%	69%	64%	67%
African American	8,979	355	66	12%	9%	25%	26%	27%	63%	63%	66%	62%	65%
White	87,809	393	67	4%	4%	17%	25%	49%	72%	73%	76%	73%	77%
Two or more races	7,029	392	69	5%	5%	17%	24%	49%	72%	73%	76%	72%	76%
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,788	325	61	22%	14%	29%	20%	14%	56%	54%	57%	53%	55%
Asian American	15,481	376	69	7%	7%	21%	25%	40%	67%	71%	70%	68%	72%
Pacific Islander	1,539	338	59	15%	13%	29%	25%	17%	60%	59%	62%	57%	60%
Filipino	4,718	369	61	6%	7%	25%	29%	32%	67%	69%	70%	66%	70%
Hispanic	190,043	332	60	17%	13%	32%	22%	15%	57%	57%	60%	55%	57%
African American	20,935	322	60	23%	15%	31%	19%	12%	55%	54%	57%	51%	54%
White	31,935	350	66	13%	10%	28%	25%	24%	62%	62%	65%	61%	63%
Two or more races	4,076	344	65	15%	10%	30%	23%	21%	60%	60%	63%	58%	61%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	World History and Geography: Ancient Civ.	Late Antiquity and the Middle Ages	Renaissance/Reformation	U.S. Constitution and the Early Republic	Civil War and Its Aftermath
Primary Ethnicity—Unknown Economic Status													
American Indian	5	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	29	359	94	10%	28%	17%	10%	34%	65%	59%	64%	58%	65%
Pacific Islander	8	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	9	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	350	305	60	36%	17%	24%	15%	8%	51%	48%	51%	46%	46%
African American	74	299	59	38%	15%	27%	16%	4%	49%	48%	46%	44%	46%
White	172	349	75	16%	12%	21%	22%	29%	62%	61%	64%	60%	61%
Two or more races	199	319	68	28%	14%	28%	17%	14%	55%	52%	56%	50%	51%

Table 7.C.12 Demographic Summary for World History

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Development of Modern Political Thought	Industrial Expansion and Imperialism	Causes and Effects of the First World War	Causes and Effects of the Second World War	International Developments in the Post-WW II Era
All valid scores	462,509	347	74	17%	9%	28%	23%	23%	61%	66%	65%	62%	62%
Grade 9	32,594	354	86	20%	8%	21%	22%	30%	63%	66%	66%	64%	64%
Grade 10	416,955	348	72	16%	9%	29%	24%	22%	62%	66%	65%	63%	62%
Grade 11	12,960	289	73	47%	12%	22%	11%	8%	44%	49%	47%	45%	45%
Male	235,098	354	80	18%	8%	24%	23%	28%	62%	67%	67%	65%	63%
Female	227,257	340	66	16%	11%	33%	23%	17%	61%	64%	62%	60%	61%
Gender unknown	154	299	66	42%	16%	24%	14%	5%	50%	51%	48%	48%	47%
American Indian	3,112	336	71	21%	10%	30%	22%	18%	58%	63%	62%	60%	58%
Asian American	42,623	393	77	6%	4%	19%	26%	45%	72%	77%	76%	74%	74%
Pacific Islander	2,679	336	66	17%	10%	33%	24%	15%	59%	64%	62%	60%	58%
Filipino	14,167	369	65	6%	6%	27%	31%	30%	67%	73%	72%	70%	69%
Hispanic	236,622	328	66	22%	12%	32%	21%	14%	57%	60%	59%	57%	57%
African American	29,043	316	66	29%	12%	30%	18%	11%	54%	58%	55%	53%	52%
White	123,120	371	74	10%	6%	24%	27%	33%	67%	73%	71%	69%	68%
Two or more races	11,143	363	77	13%	7%	24%	25%	31%	65%	70%	69%	67%	66%
English only	255,152	355	75	14%	8%	27%	25%	26%	63%	69%	67%	65%	64%
Initially fluent English prof.	35,476	373	75	8%	6%	25%	27%	34%	68%	73%	72%	69%	69%
English learner	58,026	284	51	47%	18%	25%	8%	2%	44%	45%	46%	44%	42%
Reclassified fluent Eng. prof.	113,221	352	64	10%	9%	34%	27%	21%	63%	68%	67%	64%	65%
English prof. unknown	634	313	66	31%	12%	30%	16%	10%	53%	56%	54%	53%	53%
No special ed. services	423,339	352	72	14%	9%	29%	25%	24%	63%	68%	66%	64%	63%
Special ed. services	39,051	288	64	50%	14%	21%	9%	6%	44%	47%	47%	46%	42%
Special ed. unknown	119	274	56	58%	15%	18%	6%	3%	42%	42%	41%	39%	39%
Not econ. disadvantaged	205,065	371	75	9%	6%	24%	27%	34%	67%	73%	71%	69%	68%
Economically disadvantaged	256,638	327	67	23%	12%	31%	21%	14%	57%	60%	59%	57%	56%
Unknown economic status	806	310	66	34%	11%	29%	17%	9%	52%	54%	53%	52%	51%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	1,500	353	72	14%	8%	28%	25%	25%	63%	68%	67%	65%	63%
Asian American	25,509	410	74	3%	2%	14%	25%	54%	76%	81%	80%	79%	78%
Pacific Islander	1,209	350	67	12%	9%	30%	29%	20%	63%	68%	66%	63%	62%
Filipino	9,504	376	65	5%	5%	25%	32%	34%	69%	75%	74%	72%	71%
Hispanic	55,221	345	69	15%	9%	30%	25%	21%	61%	66%	64%	62%	62%
African American	10,747	332	69	22%	10%	29%	23%	16%	58%	63%	60%	58%	57%
White	94,081	380	73	7%	5%	22%	28%	38%	69%	75%	74%	72%	71%
Two or more races	7,294	380	76	8%	5%	22%	27%	38%	69%	75%	73%	72%	70%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Development of Modern Political Thought	Industrial Expansion and Imperialism	Causes and Effects of the First World War	Causes and Effects of the Second World War	International Developments in the Post-WW II Era
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,608	321	67	26%	12%	31%	18%	12%	54%	59%	57%	55%	53%
Asian American	17,063	367	73	10%	7%	25%	26%	31%	66%	71%	70%	68%	69%
Pacific Islander	1,469	325	62	22%	11%	36%	20%	11%	57%	61%	58%	57%	54%
Filipino	4,654	355	64	9%	9%	31%	28%	23%	64%	70%	68%	66%	65%
Hispanic	181,105	322	64	24%	12%	33%	20%	11%	55%	59%	58%	56%	55%
African American	18,225	307	63	34%	13%	30%	16%	8%	52%	55%	52%	50%	49%
White	28,856	340	71	18%	10%	29%	24%	19%	60%	65%	63%	61%	59%
Two or more races	3,658	333	69	21%	11%	29%	22%	16%	58%	63%	61%	58%	57%
Primary Ethnicity—Unknown Economic Status													
American Indian	4	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	51	346	74	18%	10%	25%	27%	20%	62%	64%	63%	63%	64%
Pacific Islander	1	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	9	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	296	298	61	40%	13%	26%	15%	5%	49%	49%	50%	48%	48%
African American	71	290	60	48%	8%	25%	15%	3%	50%	47%	48%	45%	41%
White	183	323	67	27%	7%	33%	21%	11%	55%	61%	55%	57%	56%
Two or more races	191	312	66	30%	15%	29%	15%	10%	52%	55%	53%	54%	52%

Table 7.C.13 Demographic Summary for History–Social Science, Grade Eleven

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Foundations of Amer. Pol. & Social Thought	Industrialization and the U.S. Role as a World Power	United States Between the World Wars	World War II and Foreign Affairs	Post-World War II Domestic Issues
All valid scores	443,241	349	70	14%	12%	24%	26%	24%	62%	65%	62%	63%	62%
Male	224,493	354	75	16%	10%	20%	25%	29%	63%	66%	63%	66%	63%
Female	218,594	343	63	13%	13%	28%	27%	19%	61%	64%	61%	60%	61%
Gender unknown	154	308	63	34%	16%	24%	17%	10%	52%	51%	49%	50%	52%
American Indian	3,063	340	67	16%	14%	26%	24%	20%	60%	62%	60%	60%	60%
Asian American	42,383	384	70	6%	6%	17%	28%	43%	71%	75%	71%	73%	71%
Pacific Islander	2,526	337	62	15%	14%	29%	26%	16%	60%	62%	59%	59%	60%
Filipino	13,571	367	59	6%	8%	24%	34%	29%	67%	71%	67%	69%	68%
Hispanic	220,844	332	64	18%	15%	28%	24%	15%	57%	60%	57%	59%	57%
African American	27,665	322	65	24%	16%	26%	22%	12%	55%	57%	55%	54%	55%
White	122,677	370	69	9%	8%	19%	29%	35%	69%	71%	68%	68%	68%
Two or more races	10,512	360	70	11%	9%	21%	28%	30%	66%	68%	65%	65%	66%
English only	246,423	356	70	12%	10%	22%	27%	28%	65%	67%	64%	64%	65%
Initially fluent English prof.	32,631	372	67	7%	7%	21%	29%	35%	69%	72%	68%	69%	69%
English learner	51,787	282	49	44%	25%	22%	8%	2%	41%	44%	42%	45%	40%
Reclassified fluent Eng. prof.	111,796	355	59	7%	11%	30%	31%	22%	63%	68%	64%	66%	64%
English prof. unknown	604	316	65	28%	14%	26%	22%	11%	52%	56%	52%	53%	54%
No special ed. services	407,054	354	68	12%	11%	24%	28%	25%	64%	67%	64%	64%	64%
Special ed. services	36,102	288	62	45%	20%	18%	10%	6%	44%	45%	44%	46%	43%
Special ed. unknown	85	260	43	66%	21%	7%	5%	1%	35%	36%	34%	37%	36%
Not econ. disadvantaged	202,346	370	69	9%	8%	20%	29%	34%	69%	71%	68%	68%	68%
Economically disadvantaged	240,119	331	65	19%	15%	27%	24%	15%	56%	60%	57%	58%	57%
Unknown economic status	776	316	66	28%	15%	26%	20%	11%	52%	55%	53%	53%	54%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	1,543	356	66	10%	11%	24%	27%	26%	64%	66%	64%	65%	65%
Asian American	24,794	401	67	4%	4%	12%	27%	53%	76%	79%	75%	76%	76%
Pacific Islander	1,183	348	64	13%	11%	25%	28%	23%	63%	65%	61%	62%	64%
Filipino	9,112	372	59	5%	6%	22%	35%	32%	69%	73%	69%	70%	70%
Hispanic	53,263	347	66	14%	12%	25%	28%	22%	62%	65%	61%	62%	62%
African American	10,905	336	67	18%	13%	25%	26%	18%	59%	62%	60%	58%	59%
White	94,578	379	67	7%	6%	18%	30%	39%	72%	73%	70%	70%	71%
Two or more races	6,968	374	68	8%	7%	19%	29%	37%	70%	72%	69%	69%	70%
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,517	324	64	22%	16%	27%	21%	14%	55%	58%	56%	55%	55%
Asian American	17,541	361	68	10%	9%	23%	29%	29%	65%	69%	65%	68%	65%
Pacific Islander	1,339	328	59	16%	16%	33%	24%	11%	57%	59%	57%	57%	56%
Filipino	4,432	355	59	8%	10%	28%	31%	23%	64%	69%	64%	66%	64%
Hispanic	167,292	327	63	20%	16%	28%	23%	13%	55%	59%	56%	58%	55%
African American	16,699	313	62	27%	17%	27%	19%	9%	52%	54%	53%	51%	52%
White	27,937	340	68	17%	13%	24%	26%	20%	60%	63%	60%	60%	60%
Two or more races	3,362	334	66	19%	14%	25%	25%	17%	58%	60%	58%	58%	59%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Foundations of Amer. Pol. & Social Thought	Industrialization and the U.S. Role as a World Power	United States Between the World Wars	World War II and Foreign Affairs	Post-World War II Domestic Issues
Primary Ethnicity—Unknown Economic Status													
American Indian	3	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	48	333	68	21%	13%	31%	21%	15%	56%	61%	60%	57%	57%
Pacific Islander	4	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	27	351	77	19%	0%	30%	30%	22%	61%	64%	61%	61%	65%
Hispanic	289	303	58	33%	19%	26%	17%	6%	48%	51%	49%	49%	49%
African American	61	290	53	43%	15%	25%	18%	0%	45%	46%	47%	46%	43%
White	162	334	76	25%	9%	23%	20%	22%	58%	59%	57%	57%	59%
Two or more races	182	323	64	21%	17%	26%	25%	12%	54%	57%	55%	56%	56%

Table 7.C.14 Demographic Summary for Mathematics, Grade Two

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Place Value, Addition, and Subtraction	Multiplication, Division, and Fractions	Algebra and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
All valid scores	460,077	380	83	4%	13%	19%	30%	35%	78%	77%	76%	72%	79%
Male	234,433	380	85	5%	13%	18%	29%	35%	78%	76%	76%	72%	78%
Female	225,411	380	81	3%	12%	20%	31%	34%	78%	77%	75%	72%	80%
Gender unknown	233	345	86	8%	23%	25%	24%	19%	69%	67%	68%	64%	72%
American Indian	3,053	359	80	6%	17%	23%	30%	25%	73%	72%	70%	69%	75%
Asian American	39,596	436	83	1%	4%	9%	23%	63%	88%	87%	88%	81%	88%
Pacific Islander	2,309	372	78	4%	13%	20%	32%	30%	77%	75%	75%	71%	78%
Filipino	9,722	410	78	2%	6%	13%	31%	49%	84%	83%	84%	78%	84%
Hispanic	250,977	361	77	5%	16%	23%	31%	25%	74%	73%	72%	68%	76%
African American	26,313	347	79	8%	20%	24%	28%	21%	71%	70%	67%	64%	72%
White	112,257	406	79	2%	7%	14%	30%	47%	83%	82%	81%	78%	84%
Two or more races	15,850	402	84	3%	9%	15%	29%	45%	82%	81%	80%	76%	83%
English only	263,494	389	83	3%	10%	17%	30%	39%	80%	79%	77%	74%	81%
Initially fluent English prof.	17,077	434	78	0%	4%	9%	25%	62%	88%	87%	87%	81%	89%
English learner	172,116	359	79	5%	17%	23%	30%	25%	73%	73%	72%	68%	75%
Reclassified fluent Eng. prof.	6,702	434	70	0%	2%	8%	28%	62%	89%	88%	88%	82%	89%
English prof. unknown	688	349	88	9%	21%	22%	26%	22%	69%	69%	69%	66%	72%
No special ed. services	423,443	386	80	2%	11%	19%	31%	36%	79%	78%	77%	73%	80%
Special ed. services	36,592	316	88	21%	26%	19%	20%	15%	61%	59%	60%	58%	63%
Special ed. unknown	42	285	89	38%	29%	12%	14%	7%	53%	49%	50%	51%	53%
Not econ. disadvantaged	170,262	415	80	1%	6%	12%	29%	52%	85%	84%	83%	79%	85%
Economically disadvantaged	288,822	359	78	5%	17%	23%	31%	24%	73%	73%	71%	68%	75%
Unknown economic status	993	350	90	10%	20%	21%	25%	24%	70%	69%	68%	66%	72%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	854	390	81	3%	10%	17%	30%	40%	80%	79%	78%	75%	81%
Asian American	25,285	456	76	1%	2%	6%	18%	73%	91%	90%	91%	84%	91%
Pacific Islander	726	395	76	2%	9%	15%	33%	41%	82%	80%	81%	75%	82%
Filipino	6,140	421	75	1%	4%	10%	30%	55%	86%	85%	86%	80%	86%
Hispanic	41,383	389	78	3%	9%	17%	33%	38%	80%	79%	78%	74%	81%
African American	6,446	373	80	4%	13%	20%	31%	32%	78%	76%	75%	70%	78%
White	79,499	419	76	1%	4%	11%	30%	54%	86%	85%	84%	80%	86%
Two or more races	9,929	423	80	1%	5%	11%	27%	56%	86%	85%	85%	80%	87%
Primary Ethnicity—Economically Disadvantaged													
American Indian	2,188	347	76	7%	19%	25%	29%	19%	70%	69%	67%	66%	73%
Asian American	14,218	402	82	2%	8%	15%	30%	45%	83%	81%	82%	76%	82%
Pacific Islander	1,574	362	77	5%	16%	22%	32%	25%	75%	73%	73%	69%	76%
Filipino	3,569	391	78	2%	9%	17%	32%	39%	81%	79%	81%	75%	81%
Hispanic	209,268	356	76	5%	17%	24%	31%	23%	72%	72%	71%	67%	75%
African American	19,795	338	76	9%	22%	25%	28%	17%	69%	68%	65%	63%	71%
White	32,532	374	78	4%	12%	20%	33%	31%	77%	76%	74%	72%	78%
Two or more races	5,678	367	79	5%	15%	21%	31%	28%	75%	74%	73%	70%	77%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Place Value, Addition, and Subtraction	Multiplication, Division, and Fractions	Algebra and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
Primary Ethnicity—Unknown Economic Status													
American Indian	11	399	42	0%	0%	18%	36%	45%	84%	82%	76%	82%	94%
Asian American	93	422	95	3%	10%	13%	15%	59%	86%	82%	87%	76%	83%
Pacific Islander	9	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	13	365	99	8%	15%	23%	15%	38%	74%	69%	71%	71%	79%
Hispanic	326	327	78	13%	23%	25%	23%	16%	65%	64%	60%	63%	68%
African American	72	298	71	22%	31%	22%	17%	8%	55%	57%	52%	53%	64%
White	226	370	87	5%	16%	16%	33%	29%	75%	74%	74%	69%	77%
Two or more races	243	345	91	12%	21%	20%	27%	21%	69%	67%	68%	64%	71%

Table 7.C.15 Demographic Summary for Mathematics, Grade Three

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Place Value, Fractions, and Decimals	Addition, Subtraction, Multiplication, Division	Algebra and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
All valid scores	439,109	399	93	2%	12%	19%	26%	40%	78%	76%	75%	82%	84%
Male	221,790	401	95	3%	12%	18%	26%	42%	79%	76%	75%	82%	84%
Female	217,118	397	92	2%	12%	20%	27%	39%	77%	76%	74%	82%	85%
Gender unknown	201	348	88	9%	23%	24%	25%	19%	68%	64%	64%	71%	76%
American Indian	3,061	367	85	4%	18%	24%	27%	26%	72%	69%	69%	76%	80%
Asian American	40,499	467	93	1%	4%	8%	18%	70%	88%	89%	87%	90%	91%
Pacific Islander	2,367	388	88	2%	13%	22%	28%	34%	76%	75%	72%	80%	82%
Filipino	10,172	434	88	1%	5%	13%	26%	56%	84%	84%	82%	87%	89%
Hispanic	232,341	376	85	3%	16%	23%	28%	30%	74%	72%	70%	79%	82%
African American	24,719	361	86	5%	20%	24%	26%	24%	71%	68%	66%	75%	78%
White	111,912	426	91	1%	7%	14%	26%	53%	83%	80%	82%	86%	89%
Two or more races	14,038	422	96	1%	8%	15%	24%	51%	82%	80%	80%	85%	87%
English only	249,297	408	94	2%	10%	17%	26%	45%	80%	77%	77%	83%	86%
Initially fluent English prof.	19,223	457	92	0%	4%	10%	21%	66%	87%	87%	86%	90%	91%
English learner	137,906	362	81	4%	19%	26%	28%	23%	71%	69%	66%	76%	79%
Reclassified fluent Eng. prof.	32,108	453	81	0%	2%	8%	25%	66%	87%	88%	86%	90%	91%
English prof. unknown	575	366	96	7%	20%	21%	24%	27%	71%	68%	69%	74%	78%
No special ed. services	411,567	402	93	2%	11%	19%	27%	41%	78%	77%	75%	82%	85%
Special ed. services	27,435	355	92	8%	22%	24%	23%	23%	69%	65%	65%	72%	77%
Special ed. unknown	107	305	65	12%	34%	34%	16%	5%	58%	53%	54%	62%	67%
Not econ. disadvantaged	168,711	439	92	1%	5%	12%	24%	58%	85%	83%	83%	87%	89%
Economically disadvantaged	269,592	375	86	3%	16%	23%	28%	29%	74%	72%	69%	78%	81%
Unknown economic status	806	368	92	6%	18%	23%	24%	28%	72%	68%	69%	75%	79%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	859	397	88	1%	12%	20%	27%	40%	79%	75%	76%	81%	84%
Asian American	25,988	489	85	0%	2%	4%	14%	80%	91%	92%	91%	93%	93%
Pacific Islander	748	413	91	1%	8%	20%	27%	45%	81%	80%	78%	84%	86%
Filipino	6,323	446	86	0%	3%	10%	24%	62%	86%	86%	85%	88%	90%
Hispanic	38,608	406	88	1%	9%	18%	28%	43%	80%	78%	77%	83%	86%
African American	6,484	390	90	3%	13%	20%	27%	36%	77%	74%	73%	80%	83%
White	80,764	441	88	1%	4%	11%	24%	60%	86%	83%	85%	88%	90%
Two or more races	8,937	446	92	1%	5%	12%	22%	61%	86%	84%	85%	88%	90%
Primary Ethnicity—Economically Disadvantaged													
American Indian	2,197	355	80	6%	20%	26%	27%	21%	70%	67%	66%	74%	78%
Asian American	14,432	427	93	1%	7%	14%	24%	53%	83%	83%	80%	85%	87%
Pacific Islander	1,615	376	84	3%	16%	23%	29%	29%	74%	72%	69%	78%	80%
Filipino	3,838	415	87	1%	7%	17%	29%	46%	81%	81%	78%	84%	86%
Hispanic	193,452	370	83	3%	17%	25%	28%	27%	73%	71%	68%	78%	81%
African American	18,187	350	82	6%	23%	26%	26%	20%	69%	66%	63%	73%	77%
White	30,959	389	88	3%	13%	21%	28%	35%	77%	73%	74%	81%	84%
Two or more races	4,912	381	88	3%	15%	21%	28%	32%	75%	72%	71%	79%	82%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Place Value, Fractions, and Decimals	Addition, Subtraction, Multiplication, Division	Algebra and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
Primary Ethnicity—Unknown Economic Status													
American Indian	5	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	79	426	109	0%	15%	14%	16%	54%	81%	81%	80%	82%	83%
Pacific Islander	4	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	11	380	81	0%	9%	36%	36%	18%	77%	77%	71%	77%	80%
Hispanic	281	343	81	7%	22%	30%	22%	19%	66%	63%	63%	72%	75%
African American	48	326	83	13%	31%	27%	17%	13%	63%	56%	59%	66%	74%
White	189	383	87	5%	12%	18%	28%	37%	76%	72%	76%	78%	83%
Two or more races	189	376	95	5%	17%	21%	27%	30%	73%	70%	71%	76%	81%

Table 7.C.16 Demographic Summary for Mathematics, Grade Four

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Decimals, Fractions, and Negative Numbers	Operations and Factoring	Algebra and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
All valid scores	430,766	395	78	2%	10%	16%	26%	46%	82%	81%	82%	72%	79%
Male	216,432	395	80	2%	10%	16%	25%	47%	82%	80%	82%	72%	78%
Female	214,204	395	77	1%	9%	16%	27%	46%	81%	82%	83%	73%	80%
Gender unknown	130	354	80	7%	18%	25%	26%	24%	72%	70%	71%	62%	68%
American Indian	2,751	369	76	3%	16%	21%	27%	33%	76%	75%	76%	66%	73%
Asian American	40,211	453	80	0%	2%	6%	15%	76%	91%	92%	92%	84%	88%
Pacific Islander	2,240	390	71	2%	9%	16%	30%	43%	81%	81%	83%	71%	78%
Filipino	11,007	423	74	1%	4%	10%	24%	62%	87%	88%	89%	78%	84%
Hispanic	226,053	377	72	2%	13%	20%	29%	37%	78%	78%	79%	69%	75%
African American	24,557	364	72	4%	17%	21%	28%	31%	75%	74%	76%	64%	73%
White	111,585	413	76	1%	6%	12%	25%	57%	86%	85%	86%	77%	84%
Two or more races	12,362	409	79	1%	7%	13%	24%	54%	85%	84%	86%	75%	82%
English only	243,071	400	78	2%	9%	15%	26%	50%	83%	82%	84%	73%	81%
Initially fluent English prof.	20,522	438	80	0%	3%	8%	20%	68%	89%	89%	90%	82%	87%
English learner	108,818	357	66	3%	18%	25%	29%	25%	73%	73%	74%	64%	71%
Reclassified fluent Eng. prof.	57,788	430	69	0%	2%	8%	24%	66%	89%	90%	91%	81%	85%
English prof. unknown	567	367	81	4%	18%	23%	22%	33%	75%	73%	74%	66%	74%
No special ed. services	404,360	397	78	1%	9%	16%	26%	48%	82%	82%	83%	73%	79%
Special ed. services	24,566	361	77	5%	17%	22%	26%	29%	74%	72%	73%	64%	72%
Special ed. unknown	1,840	348	73	5%	25%	22%	25%	22%	70%	69%	70%	61%	68%
Not econ. disadvantaged	167,680	425	78	1%	4%	10%	22%	63%	88%	87%	89%	79%	85%
Economically disadvantaged	262,360	376	73	2%	13%	20%	28%	36%	78%	77%	79%	68%	75%
Unknown economic status	726	369	82	4%	18%	22%	24%	33%	75%	73%	75%	66%	74%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	869	396	77	1%	10%	17%	25%	47%	82%	81%	82%	73%	81%
Asian American	25,577	472	76	0%	1%	3%	11%	84%	93%	95%	95%	87%	91%
Pacific Islander	808	407	73	0%	6%	13%	26%	54%	85%	85%	86%	76%	81%
Filipino	6,833	433	72	0%	3%	8%	22%	68%	89%	90%	91%	81%	86%
Hispanic	38,131	400	73	1%	7%	15%	27%	49%	83%	83%	84%	74%	81%
African American	6,526	389	74	2%	10%	17%	28%	44%	81%	80%	82%	70%	78%
White	81,052	425	74	1%	4%	9%	23%	63%	88%	87%	89%	79%	86%
Two or more races	7,884	428	76	0%	3%	9%	22%	65%	89%	88%	89%	79%	86%
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,877	357	71	4%	19%	23%	28%	26%	73%	72%	73%	63%	70%
Asian American	14,570	422	78	1%	5%	10%	22%	61%	86%	88%	88%	78%	83%
Pacific Islander	1,428	380	68	2%	11%	18%	33%	37%	79%	79%	81%	69%	76%
Filipino	4,161	406	73	1%	6%	14%	27%	52%	84%	85%	86%	75%	80%
Hispanic	187,671	373	71	2%	14%	21%	29%	34%	77%	77%	78%	68%	74%
African American	17,983	356	70	4%	19%	23%	28%	26%	73%	72%	74%	62%	71%
White	30,362	382	73	2%	12%	18%	28%	40%	80%	78%	80%	70%	77%
Two or more races	4,308	376	73	3%	13%	20%	28%	37%	78%	77%	79%	68%	76%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Decimals, Fractions, and Negative Numbers	Operations and Factoring	Algebra and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
Primary Ethnicity—Unknown Economic Status													
American Indian	5	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	64	432	87	3%	5%	8%	16%	69%	86%	88%	90%	77%	84%
Pacific Islander	4	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	13	387	93	0%	23%	8%	31%	38%	78%	75%	79%	72%	75%
Hispanic	251	354	77	4%	22%	26%	25%	23%	71%	71%	71%	62%	68%
African American	48	348	67	4%	19%	31%	27%	19%	72%	68%	69%	63%	72%
White	171	380	76	2%	13%	23%	22%	40%	80%	75%	78%	70%	79%
Two or more races	170	364	83	6%	19%	19%	25%	31%	74%	71%	73%	64%	72%

Table 7.C.17 Demographic Summary for Mathematics, Grade Five

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Estimation, Percents, and Factoring	Operations with Fractions and Decimals	Algebra and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
All valid scores	423,903	393	93	4%	12%	19%	33%	32%	69%	69%	75%	66%	83%
Male	212,599	394	96	5%	13%	18%	31%	33%	69%	68%	75%	66%	82%
Female	211,191	392	90	3%	12%	20%	34%	31%	68%	70%	75%	66%	84%
Gender unknown	113	351	92	6%	27%	28%	19%	19%	58%	59%	64%	58%	71%
American Indian	2,780	359	86	8%	19%	22%	32%	19%	61%	61%	68%	58%	76%
Asian American	39,109	468	95	1%	3%	8%	24%	64%	84%	84%	87%	80%	92%
Pacific Islander	2,325	381	84	4%	12%	22%	36%	26%	67%	67%	74%	64%	81%
Filipino	11,041	427	89	1%	6%	13%	33%	46%	77%	77%	81%	73%	89%
Hispanic	222,153	370	83	5%	16%	23%	34%	22%	64%	64%	71%	62%	80%
African American	25,140	353	83	8%	20%	24%	31%	17%	59%	60%	67%	58%	75%
White	109,787	418	92	2%	8%	15%	33%	42%	75%	75%	80%	71%	88%
Two or more races	11,568	412	94	3%	9%	16%	31%	41%	74%	73%	78%	70%	86%
English only	236,663	400	93	3%	11%	18%	33%	35%	71%	71%	76%	67%	85%
Initially fluent English prof.	19,824	445	97	1%	5%	11%	29%	53%	79%	79%	84%	76%	91%
English learner	88,410	338	72	8%	24%	28%	29%	10%	56%	56%	63%	54%	71%
Reclassified fluent Eng. prof.	78,532	423	85	1%	5%	15%	38%	42%	75%	77%	82%	73%	90%
English prof. unknown	474	360	96	10%	20%	22%	25%	23%	61%	61%	66%	59%	74%
No special ed. services	399,193	396	93	3%	12%	19%	33%	33%	69%	70%	76%	67%	84%
Special ed. services	23,027	351	87	10%	21%	24%	27%	17%	59%	59%	65%	57%	74%
Special ed. unknown	1,683	352	89	9%	22%	24%	26%	18%	59%	59%	66%	57%	73%
Not econ. disadvantaged	164,974	431	94	2%	6%	13%	31%	48%	77%	77%	82%	73%	89%
Economically disadvantaged	258,312	369	84	5%	16%	23%	34%	22%	63%	64%	71%	61%	79%
Unknown economic status	617	362	97	10%	20%	21%	26%	23%	62%	61%	66%	59%	76%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	877	389	90	4%	12%	19%	35%	30%	69%	68%	74%	65%	83%
Asian American	24,696	493	88	0%	2%	5%	19%	74%	88%	88%	90%	84%	95%
Pacific Islander	813	403	87	2%	8%	19%	35%	35%	71%	72%	78%	68%	86%
Filipino	6,839	438	88	1%	4%	11%	32%	51%	79%	80%	83%	75%	91%
Hispanic	37,620	398	88	3%	10%	18%	36%	33%	70%	71%	77%	67%	85%
African American	6,916	379	87	5%	14%	21%	34%	26%	66%	66%	72%	63%	81%
White	79,797	432	90	1%	5%	12%	33%	49%	78%	78%	83%	74%	90%
Two or more races	7,416	434	92	1%	6%	13%	31%	50%	79%	78%	82%	74%	90%
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,894	345	80	10%	22%	23%	31%	14%	58%	58%	65%	55%	74%
Asian American	14,359	426	93	2%	7%	14%	32%	46%	76%	77%	81%	72%	88%
Pacific Islander	1,511	370	80	4%	15%	23%	36%	21%	64%	65%	71%	61%	79%
Filipino	4,191	408	88	2%	8%	17%	35%	37%	73%	74%	78%	70%	86%
Hispanic	184,329	365	81	5%	17%	24%	34%	20%	62%	63%	70%	61%	79%
African American	18,177	344	79	9%	22%	26%	29%	14%	57%	57%	64%	56%	73%
White	29,844	379	86	4%	14%	21%	35%	25%	66%	66%	73%	63%	82%
Two or more races	4,007	374	85	5%	15%	23%	33%	24%	65%	65%	72%	62%	80%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Estimation, Percents, and Factoring	Operations with Fractions and Decimals	Algebra and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
Primary Ethnicity—Unknown Economic Status													
American Indian	9	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	54	437	116	6%	9%	11%	19%	56%	80%	76%	77%	74%	84%
Pacific Islander	1	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	11	415	121	0%	9%	45%	9%	36%	73%	67%	76%	70%	82%
Hispanic	204	342	88	14%	23%	22%	25%	16%	57%	56%	62%	55%	74%
African American	47	317	62	13%	30%	26%	26%	6%	49%	52%	57%	51%	68%
White	146	374	95	8%	16%	19%	32%	25%	65%	64%	71%	61%	80%
Two or more races	145	365	96	8%	21%	19%	28%	24%	63%	62%	68%	60%	76%

Table 7.C.18 Demographic Summary for Mathematics, Grade Six

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Ratios, Proportions, Percentages, Neg. Fractions	Operations and Problem Solving with Fractions	Algebra and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
All valid scores	427,761	367	76	4%	16%	25%	30%	25%	65%	71%	71%	62%	63%
Male	214,513	367	77	5%	16%	24%	29%	26%	65%	71%	71%	62%	61%
Female	213,104	366	75	4%	16%	26%	30%	24%	65%	71%	70%	62%	64%
Gender unknown	144	335	75	10%	26%	26%	22%	16%	57%	59%	62%	54%	52%
American Indian	2,687	345	67	6%	22%	31%	26%	16%	59%	65%	65%	56%	57%
Asian American	39,258	432	85	1%	5%	12%	25%	57%	80%	84%	86%	79%	77%
Pacific Islander	2,330	357	69	3%	18%	30%	30%	19%	63%	70%	68%	60%	59%
Filipino	11,796	392	73	1%	8%	21%	34%	36%	72%	78%	78%	70%	69%
Hispanic	223,214	346	65	5%	20%	30%	29%	15%	60%	66%	65%	57%	57%
African American	26,035	334	64	8%	25%	30%	25%	12%	56%	64%	61%	52%	54%
White	110,742	389	74	2%	9%	20%	34%	35%	71%	77%	77%	68%	70%
Two or more races	11,699	383	77	3%	12%	21%	31%	33%	69%	75%	75%	67%	67%
English only	237,562	374	76	3%	14%	24%	31%	28%	67%	73%	73%	64%	65%
Initially fluent English prof.	19,952	407	84	1%	8%	17%	30%	44%	75%	79%	80%	73%	73%
English learner	70,428	312	54	11%	34%	33%	17%	5%	50%	56%	54%	47%	46%
Reclassified fluent Eng. prof.	99,299	380	70	1%	9%	26%	36%	28%	70%	75%	75%	67%	67%
English prof. unknown	520	340	76	9%	25%	27%	25%	15%	57%	61%	63%	55%	54%
No special ed. services	404,644	369	76	4%	15%	25%	30%	26%	66%	71%	71%	63%	63%
Special ed. services	21,510	326	67	11%	29%	29%	20%	11%	53%	59%	58%	50%	50%
Special ed. unknown	1,607	328	65	11%	27%	29%	22%	11%	54%	60%	59%	51%	52%
Not econ. disadvantaged	167,352	399	78	2%	8%	18%	32%	40%	73%	79%	79%	71%	72%
Economically disadvantaged	259,738	346	66	6%	21%	30%	28%	15%	60%	66%	65%	57%	57%
Unknown economic status	671	337	72	10%	24%	29%	23%	14%	56%	61%	63%	54%	53%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	914	368	71	4%	13%	27%	31%	25%	66%	72%	72%	62%	64%
Asian American	24,321	454	81	0%	2%	8%	21%	69%	84%	88%	90%	83%	82%
Pacific Islander	782	380	72	1%	10%	27%	32%	30%	69%	75%	76%	66%	66%
Filipino	7,304	403	74	1%	6%	18%	33%	42%	75%	80%	81%	73%	72%
Hispanic	38,450	370	70	3%	13%	25%	34%	25%	67%	72%	72%	64%	64%
African American	7,496	356	70	5%	18%	28%	30%	19%	62%	70%	68%	59%	60%
White	80,705	401	73	1%	6%	17%	35%	41%	74%	80%	80%	72%	73%
Two or more races	7,380	401	76	1%	8%	17%	32%	42%	74%	79%	80%	72%	72%
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,770	333	62	7%	26%	32%	24%	11%	56%	62%	62%	53%	53%
Asian American	14,883	396	78	2%	8%	19%	32%	39%	73%	78%	79%	71%	69%
Pacific Islander	1,547	345	63	4%	22%	32%	29%	13%	60%	67%	65%	57%	56%
Filipino	4,482	374	69	2%	11%	26%	35%	27%	68%	73%	74%	65%	64%
Hispanic	184,540	341	63	6%	22%	31%	28%	13%	59%	64%	64%	56%	56%
African American	18,473	326	60	9%	28%	32%	23%	9%	53%	62%	58%	50%	51%
White	29,875	356	68	4%	17%	28%	31%	20%	62%	69%	69%	60%	61%
Two or more races	4,168	352	68	5%	18%	29%	30%	18%	61%	68%	67%	58%	59%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Ratios, Proportions, Percentages, Neg. Fractions	Operations and Problem Solving with Fractions	Algebra and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
Primary Ethnicity—Unknown Economic Status													
American Indian	3	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	54	402	79	2%	9%	15%	30%	44%	75%	76%	82%	75%	67%
Pacific Islander	1	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	10	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	224	310	54	16%	31%	28%	21%	4%	49%	54%	54%	46%	47%
African American	66	310	59	20%	29%	29%	17%	6%	46%	57%	54%	45%	48%
White	162	349	70	7%	17%	33%	25%	18%	60%	64%	67%	60%	58%
Two or more races	151	350	78	5%	24%	27%	26%	18%	60%	65%	67%	57%	55%

Table 7.C.19 Demographic Summary for Mathematics, Grade Seven

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Rational Numbers	Exponents, Powers, and Roots	Quant. Relationships and Evaluating Expressions	Multistep Problems, Graphing, and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
All valid scores	392,718	358	68	4%	17%	28%	33%	19%	63%	55%	63%	63%	62%	69%
Male	196,571	358	70	5%	17%	27%	32%	19%	64%	53%	62%	64%	61%	67%
Female	196,012	358	66	4%	16%	29%	33%	18%	62%	57%	64%	62%	62%	70%
Gender unknown	135	333	59	7%	26%	35%	21%	10%	57%	44%	51%	58%	56%	59%
American Indian	2,598	343	64	6%	22%	29%	30%	12%	58%	50%	58%	60%	58%	63%
Asian American	30,387	413	77	1%	5%	15%	33%	46%	77%	72%	77%	77%	76%	80%
Pacific Islander	2,305	350	60	4%	19%	30%	35%	13%	60%	55%	62%	61%	60%	67%
Filipino	10,237	380	66	2%	9%	23%	40%	27%	69%	63%	71%	69%	68%	75%
Hispanic	211,537	342	61	6%	21%	32%	30%	12%	59%	50%	59%	59%	57%	65%
African American	25,135	330	60	9%	25%	32%	25%	9%	54%	48%	56%	54%	53%	60%
White	100,626	378	67	2%	10%	24%	38%	27%	70%	60%	68%	70%	68%	73%
Two or more races	9,893	370	70	3%	13%	25%	35%	24%	67%	58%	66%	68%	66%	71%
English only	217,395	364	68	4%	14%	27%	34%	21%	65%	56%	64%	66%	64%	70%
Initially fluent English prof.	25,408	384	73	2%	10%	23%	36%	30%	70%	63%	70%	70%	69%	75%
English learner	60,908	310	51	12%	36%	33%	16%	4%	48%	40%	48%	48%	47%	55%
Reclassified fluent Eng. prof.	88,421	369	62	1%	10%	29%	39%	20%	67%	59%	67%	67%	65%	73%
English prof. unknown	586	331	63	9%	27%	31%	22%	11%	55%	43%	54%	57%	55%	58%
No special ed. services	372,349	360	68	4%	16%	28%	33%	19%	64%	56%	63%	64%	62%	69%
Special ed. services	18,985	321	61	12%	30%	30%	20%	7%	52%	42%	51%	53%	50%	57%
Special ed. unknown	1,384	335	64	8%	26%	29%	26%	11%	56%	47%	56%	57%	55%	61%
Not econ. disadvantaged	149,927	384	70	2%	9%	22%	37%	30%	70%	62%	70%	71%	69%	75%
Economically disadvantaged	241,994	342	62	6%	21%	31%	30%	12%	58%	50%	58%	59%	57%	65%
Unknown economic status	797	329	64	10%	29%	28%	22%	11%	55%	43%	53%	56%	54%	58%
Primary Ethnicity—Not Economically Disadvantaged														
American Indian	978	360	68	4%	15%	27%	35%	18%	64%	55%	63%	64%	63%	68%
Asian American	17,263	431	75	0%	3%	10%	31%	55%	81%	77%	81%	81%	80%	83%
Pacific Islander	824	365	62	2%	13%	27%	39%	19%	65%	58%	67%	67%	64%	71%
Filipino	6,289	389	66	1%	7%	20%	40%	32%	72%	66%	73%	72%	71%	77%
Hispanic	38,499	360	63	3%	14%	29%	36%	18%	64%	56%	64%	65%	63%	70%
African American	7,376	348	63	5%	18%	31%	32%	14%	60%	54%	62%	60%	59%	65%
White	72,613	388	66	1%	7%	21%	40%	31%	72%	63%	71%	73%	71%	76%
Two or more races	6,085	386	69	2%	8%	22%	38%	31%	71%	62%	71%	72%	70%	75%
Primary Ethnicity—Economically Disadvantaged														
American Indian	1,618	333	60	7%	26%	31%	27%	9%	55%	46%	55%	57%	55%	60%
Asian American	13,073	388	72	2%	8%	20%	37%	33%	71%	66%	72%	71%	70%	77%
Pacific Islander	1,477	341	57	5%	22%	31%	33%	9%	57%	52%	59%	58%	57%	65%
Filipino	3,932	366	63	2%	13%	26%	39%	20%	65%	59%	67%	65%	64%	72%
Hispanic	172,757	338	59	6%	22%	32%	29%	10%	57%	49%	57%	57%	56%	64%
African American	17,680	323	57	10%	28%	33%	22%	6%	51%	46%	54%	52%	51%	58%
White	27,856	352	62	4%	17%	31%	33%	15%	62%	52%	61%	63%	61%	67%
Two or more races	3,601	345	63	6%	20%	31%	30%	13%	59%	50%	59%	60%	58%	64%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Rational Numbers	Exponents, Powers, and Roots	Quant. Relationships and Evaluating Expressions	Multistep Problems, Graphing, and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
Primary Ethnicity—Unknown Economic Status														
American Indian	2	–	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	51	393	93	6%	12%	14%	27%	41%	74%	67%	68%	70%	70%	68%
Pacific Islander	4	–	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	16	342	62	0%	38%	19%	25%	19%	56%	50%	61%	56%	62%	64%
Hispanic	281	316	56	12%	34%	27%	21%	6%	50%	41%	51%	52%	49%	55%
African American	79	292	53	24%	41%	23%	9%	4%	42%	30%	41%	43%	44%	44%
White	157	338	61	5%	27%	29%	24%	15%	60%	42%	56%	60%	55%	60%
Two or more races	207	337	59	8%	22%	34%	26%	11%	58%	45%	55%	59%	57%	62%

Table 7.C.20 Demographic Summary for General Mathematics

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Rational Numbers	Exponents, Powers, and Roots	Quant. Relationships and Evaluating Expressions	Multistep Problems, Graphing, and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
All valid scores	188,410	318	56	13%	29%	31%	22%	5%	53%	46%	50%	54%	43%	55%
Grade 8	146,558	323	56	11%	27%	32%	25%	6%	55%	48%	52%	56%	44%	56%
Grade 9	41,852	300	51	19%	36%	28%	15%	3%	46%	39%	45%	49%	38%	50%
Male	103,897	316	57	14%	29%	29%	22%	6%	53%	45%	49%	54%	44%	53%
Female	84,367	320	54	11%	28%	33%	24%	5%	54%	47%	52%	55%	42%	57%
Gender unknown	146	292	54	29%	32%	25%	8%	5%	44%	39%	42%	44%	35%	45%
American Indian	1,859	313	55	15%	31%	30%	20%	5%	51%	43%	48%	53%	43%	54%
Asian American	5,700	345	65	8%	18%	28%	30%	15%	63%	57%	59%	62%	50%	61%
Pacific Islander	978	317	55	12%	29%	32%	22%	5%	54%	46%	52%	55%	41%	53%
Filipino	2,594	336	57	7%	22%	32%	31%	9%	60%	52%	57%	61%	48%	60%
Hispanic	109,573	311	52	14%	31%	32%	19%	3%	51%	44%	48%	52%	40%	52%
African American	14,962	301	51	19%	35%	29%	15%	3%	47%	41%	46%	48%	36%	50%
White	47,949	335	60	9%	22%	30%	30%	9%	58%	51%	55%	60%	51%	61%
Two or more races	4,795	327	60	11%	25%	30%	25%	8%	56%	48%	53%	57%	47%	58%
English only	107,752	323	58	12%	27%	30%	25%	7%	54%	47%	52%	56%	45%	57%
Initially fluent English prof.	7,904	334	57	7%	22%	33%	29%	8%	58%	51%	56%	60%	48%	60%
English learner	44,588	293	45	21%	40%	28%	10%	1%	44%	38%	43%	46%	34%	46%
Reclassified fluent Eng. prof.	27,688	337	51	4%	20%	38%	31%	7%	60%	53%	57%	62%	48%	61%
English prof. unknown	478	306	55	17%	36%	27%	15%	5%	49%	41%	45%	50%	40%	51%
No special ed. services	145,935	328	55	8%	25%	34%	27%	7%	57%	49%	54%	58%	46%	58%
Special ed. services	42,256	282	44	30%	42%	20%	7%	1%	40%	34%	38%	41%	32%	43%
Special ed. unknown	219	261	28	43%	50%	6%	0%	0%	32%	27%	30%	33%	25%	39%
Not econ. disadvantaged	58,936	335	59	8%	22%	30%	30%	9%	59%	52%	55%	60%	50%	60%
Economically disadvantaged	128,860	310	52	15%	32%	31%	19%	4%	50%	43%	48%	52%	40%	52%
Unknown economic status	614	305	56	19%	34%	27%	16%	4%	49%	41%	45%	50%	40%	51%
Primary Ethnicity—Not Economically Disadvantaged														
American Indian	633	323	56	11%	28%	31%	24%	7%	55%	47%	52%	56%	46%	57%
Asian American	2,392	364	68	5%	13%	23%	35%	23%	69%	63%	65%	67%	57%	66%
Pacific Islander	328	325	55	10%	26%	31%	28%	5%	56%	48%	54%	58%	44%	55%
Filipino	1,430	344	57	5%	18%	31%	35%	10%	62%	56%	60%	63%	50%	62%
Hispanic	19,012	321	54	11%	27%	32%	25%	5%	54%	47%	51%	56%	44%	56%
African American	3,740	314	55	15%	29%	30%	21%	4%	52%	45%	50%	52%	41%	54%
White	29,095	344	60	6%	19%	29%	35%	12%	62%	54%	58%	62%	54%	63%
Two or more races	2,306	342	61	7%	20%	30%	32%	12%	61%	54%	57%	62%	52%	63%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Rational Numbers	Exponents, Powers, and Roots	Quant. Relationships and Evaluating Expressions	Multistep Problems, Graphing, and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
Primary Ethnicity—Economically Disadvantaged														
American Indian	1,220	307	53	17%	32%	29%	18%	3%	49%	41%	46%	51%	41%	52%
Asian American	3,292	331	60	10%	22%	32%	27%	9%	58%	52%	55%	58%	46%	57%
Pacific Islander	647	314	54	13%	31%	32%	19%	5%	52%	46%	51%	53%	40%	51%
Filipino	1,159	327	55	8%	26%	33%	26%	6%	57%	48%	55%	58%	44%	58%
Hispanic	90,296	309	51	15%	32%	32%	18%	3%	50%	43%	48%	52%	39%	52%
African American	11,178	297	49	21%	36%	28%	13%	2%	46%	39%	45%	47%	35%	48%
White	18,733	321	57	12%	28%	30%	24%	6%	54%	46%	51%	56%	46%	56%
Two or more races	2,335	313	55	15%	31%	30%	20%	5%	51%	43%	49%	53%	42%	54%
Primary Ethnicity—Unknown Economic Status														
American Indian	6	–	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	16	320	58	6%	38%	25%	31%	0%	58%	49%	47%	49%	48%	51%
Pacific Islander	3	–	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	5	–	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	265	299	55	22%	37%	24%	14%	3%	47%	40%	43%	49%	37%	46%
African American	44	296	54	27%	30%	25%	16%	2%	47%	35%	46%	48%	35%	47%
White	121	316	56	15%	26%	35%	19%	6%	52%	44%	47%	53%	46%	57%
Two or more races	154	306	57	18%	36%	25%	14%	6%	49%	42%	47%	48%	40%	53%

Table 7.C.21 Demographic Summary for Algebra I

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster			
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Number Properties, Operations, and Linear Equations	Graphing and Systems of Linear Equations	Quadratics and Polynomials	Functions and Rational Expressions
All valid scores	681,237	334	75	12%	28%	24%	24%	12%	61%	51%	51%	41%
Grade 7	40,950	437	85	1%	4%	10%	33%	53%	83%	79%	77%	65%
Grade 8	268,280	358	76	6%	19%	24%	33%	17%	67%	58%	58%	47%
Grade 9	233,942	313	57	14%	34%	28%	21%	4%	56%	45%	45%	35%
Grade 10	94,055	295	48	20%	41%	25%	12%	1%	51%	39%	39%	32%
Grade 11	44,010	287	47	25%	44%	21%	9%	1%	48%	37%	37%	30%
Male	351,496	330	76	13%	29%	24%	23%	11%	60%	50%	49%	40%
Female	329,492	338	75	10%	27%	25%	26%	12%	62%	53%	52%	41%
Gender unknown	249	297	66	25%	43%	14%	12%	6%	48%	40%	40%	33%
American Indian	4,741	316	63	15%	33%	26%	21%	6%	57%	46%	46%	36%
Asian American	48,691	413	97	3%	10%	15%	30%	42%	78%	72%	70%	60%
Pacific Islander	3,962	331	67	11%	27%	26%	27%	9%	61%	51%	50%	39%
Filipino	17,829	363	77	5%	18%	24%	34%	19%	69%	61%	59%	47%
Hispanic	375,821	318	63	14%	33%	26%	21%	6%	57%	47%	46%	37%
African American	45,616	306	61	19%	36%	23%	17%	4%	53%	43%	43%	34%
White	167,624	352	76	7%	21%	25%	31%	16%	67%	57%	55%	45%
Two or more races	16,953	346	79	10%	23%	25%	27%	15%	65%	55%	54%	43%
English only	374,174	338	75	11%	26%	25%	26%	12%	63%	52%	52%	42%
Initially fluent English prof.	49,937	361	88	7%	22%	23%	28%	21%	68%	58%	57%	47%
English learner	96,142	290	54	25%	43%	20%	10%	2%	46%	38%	39%	32%
Reclassified fluent Eng. prof.	159,911	343	73	7%	25%	27%	28%	13%	64%	54%	54%	42%
English prof. unknown	1,073	301	65	24%	38%	20%	13%	5%	51%	41%	41%	34%
No special ed. services	644,104	337	75	11%	27%	25%	25%	12%	62%	52%	51%	41%
Special ed. services	36,955	291	57	27%	40%	19%	11%	3%	47%	39%	39%	32%
Special ed. unknown	178	351	105	22%	19%	13%	22%	24%	61%	55%	55%	45%
Not econ. disadvantaged	270,210	358	83	7%	21%	23%	30%	19%	67%	58%	57%	46%
Economically disadvantaged	409,717	319	65	14%	33%	25%	21%	7%	57%	47%	47%	37%
Unknown economic status	1,310	303	65	22%	39%	19%	15%	5%	52%	42%	42%	34%
Primary Ethnicity—Not Economically Disadvantaged												
American Indian	2,018	330	67	11%	28%	27%	26%	9%	61%	50%	49%	39%
Asian American	28,261	439	96	2%	6%	11%	28%	53%	83%	77%	76%	66%
Pacific Islander	1,630	342	71	9%	23%	26%	30%	12%	64%	54%	53%	42%
Filipino	11,158	371	77	4%	15%	23%	36%	22%	71%	63%	62%	49%
Hispanic	79,454	328	67	11%	29%	26%	25%	8%	60%	50%	49%	39%
African American	15,457	318	65	15%	32%	25%	22%	6%	57%	46%	47%	36%
White	121,957	362	77	5%	18%	24%	34%	19%	70%	60%	58%	48%
Two or More Races	10,275	363	82	7%	18%	24%	32%	20%	69%	60%	58%	47%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster			
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Number Properties, Operations, and Linear Equations	Graphing and Systems of Linear Equations	Quadratics and Polynomials	Functions and Rational Expressions
Primary Ethnicity—Economically Disadvantaged												
American Indian	2,712	307	57	17%	38%	25%	17%	4%	54%	43%	43%	34%
Asian American	20,368	377	87	5%	16%	20%	32%	27%	71%	64%	63%	51%
Pacific Islander	2,324	323	64	12%	30%	27%	24%	6%	59%	48%	48%	37%
Filipino	6,640	349	73	7%	22%	26%	30%	15%	65%	57%	56%	44%
Hispanic	295,818	315	62	15%	34%	26%	20%	5%	56%	46%	46%	36%
African American	30,057	300	57	21%	38%	23%	15%	3%	51%	41%	42%	33%
White	45,435	325	66	12%	30%	26%	24%	8%	60%	49%	48%	38%
Two or more races	6,363	320	66	14%	31%	26%	21%	7%	58%	47%	47%	37%
Primary Ethnicity—Unknown Economic Status												
American Indian	11	282	43	27%	55%	9%	9%	0%	47%	35%	35%	28%
Asian American	62	383	95	10%	11%	16%	37%	26%	72%	63%	63%	54%
Pacific Islander	8	–	–	–	–	–	–	–	–	–	–	–
Filipino	31	324	73	16%	32%	19%	19%	13%	56%	48%	49%	40%
Hispanic	549	290	52	27%	43%	16%	12%	2%	47%	38%	38%	30%
African American	102	288	51	28%	42%	19%	9%	2%	47%	38%	36%	31%
White	232	318	64	12%	38%	25%	19%	6%	58%	45%	46%	37%
Two or more races	315	302	68	23%	38%	20%	12%	6%	51%	41%	41%	34%

Table 7.C.22 Demographic Summary for Geometry

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster			
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Logic and Geometric Proofs	Volume and Area Formulas	Angle Relationships, Constructions, and Lines	Trigonometry
All valid scores	405,328	321	69	10%	36%	24%	20%	10%	58%	51%	53%	55%
Grade 8	30,958	423	71	0%	3%	12%	35%	50%	84%	82%	80%	82%
Grade 9	145,467	345	66	4%	23%	28%	31%	14%	66%	61%	60%	64%
Grade 10	152,813	297	50	13%	46%	26%	13%	2%	51%	43%	46%	49%
Grade 11	76,090	280	43	21%	52%	20%	7%	1%	46%	37%	41%	43%
Male	198,798	322	71	11%	34%	24%	20%	10%	58%	52%	54%	55%
Female	206,427	319	67	10%	37%	25%	19%	9%	58%	51%	52%	56%
Gender unknown	103	284	52	23%	49%	18%	7%	3%	45%	39%	42%	45%
American Indian	2,517	310	57	10%	41%	28%	18%	4%	55%	48%	50%	52%
Asian American	39,965	380	87	3%	17%	19%	28%	33%	72%	70%	68%	71%
Pacific Islander	2,543	306	58	12%	41%	26%	16%	5%	53%	47%	48%	52%
Filipino	14,108	339	67	5%	28%	27%	27%	13%	63%	59%	58%	62%
Hispanic	200,687	300	55	14%	44%	24%	14%	4%	52%	44%	47%	50%
African American	24,193	289	53	19%	47%	20%	11%	3%	49%	41%	43%	46%
White	110,964	340	68	5%	26%	28%	28%	13%	65%	58%	58%	61%
Two or more races	10,351	339	72	7%	28%	26%	26%	14%	64%	58%	58%	60%
English only	225,714	327	69	8%	32%	26%	23%	11%	60%	54%	55%	57%
Initially fluent English prof.	33,888	345	80	6%	28%	24%	23%	18%	64%	59%	59%	62%
English learner	38,399	273	49	29%	52%	12%	5%	2%	42%	35%	39%	40%
Reclassified fluent Eng. prof.	106,900	316	64	9%	40%	26%	17%	8%	56%	50%	51%	54%
English prof. unknown	427	303	64	16%	43%	23%	12%	6%	52%	46%	47%	49%
No special ed. services	390,756	322	69	10%	35%	25%	20%	10%	58%	52%	53%	56%
Special ed. services	14,559	281	56	27%	47%	15%	8%	3%	45%	39%	41%	42%
Special ed. unknown	13	279	52	15%	54%	15%	15%	0%	44%	43%	38%	41%
Not econ. disadvantaged	189,082	343	74	6%	27%	25%	26%	16%	65%	59%	59%	62%
Economically disadvantaged	215,677	301	58	14%	44%	24%	14%	4%	52%	45%	47%	50%
Unknown economic status	569	300	63	17%	43%	22%	13%	5%	51%	45%	46%	49%
Primary Ethnicity—Not Economically Disadvantaged												
American Indian	1,291	321	60	7%	35%	28%	22%	7%	59%	52%	53%	56%
Asian American	23,812	403	86	2%	11%	16%	29%	43%	78%	77%	74%	76%
Pacific Islander	1,169	319	62	9%	36%	27%	21%	7%	58%	52%	52%	55%
Filipino	9,493	345	68	4%	25%	27%	29%	15%	65%	61%	60%	64%
Hispanic	49,385	313	60	10%	38%	27%	19%	6%	56%	49%	51%	54%
African American	9,556	301	58	15%	43%	23%	15%	4%	52%	45%	47%	49%
White	87,203	347	68	4%	23%	28%	30%	15%	67%	61%	60%	63%
Two or more races	7,173	352	73	4%	23%	25%	29%	18%	67%	62%	62%	64%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster			
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Logic and Geometric Proofs	Volume and Area Formulas	Angle Relationships, Constructions, and Lines	Trigonometry
Primary Ethnicity—Economically Disadvantaged												
American Indian	1,224	297	50	12%	46%	27%	13%	2%	51%	43%	47%	48%
Asian American	16,114	346	77	6%	27%	24%	26%	18%	64%	60%	60%	63%
Pacific Islander	1,372	295	51	15%	46%	25%	11%	3%	50%	43%	45%	48%
Filipino	4,599	325	64	7%	34%	27%	23%	9%	59%	54%	55%	58%
Hispanic	151,108	296	53	15%	46%	23%	13%	3%	50%	43%	46%	48%
African American	14,591	282	48	22%	50%	18%	8%	2%	46%	38%	41%	43%
White	23,625	314	59	10%	37%	28%	20%	6%	57%	49%	51%	53%
Two or more races	3,044	311	60	11%	39%	26%	18%	6%	56%	49%	50%	52%
Primary Ethnicity—Unknown Economic Status												
American Indian	2	–	–	–	–	–	–	–	–	–	–	–
Asian American	39	368	90	3%	23%	26%	21%	28%	68%	69%	65%	66%
Pacific Islander	2	–	–	–	–	–	–	–	–	–	–	–
Filipino	16	315	54	6%	38%	13%	44%	0%	57%	49%	49%	60%
Hispanic	194	284	45	20%	49%	20%	10%	1%	48%	40%	40%	44%
African American	46	270	43	30%	52%	13%	4%	0%	43%	35%	37%	39%
White	136	313	67	13%	36%	28%	15%	8%	56%	50%	51%	51%
Two or more races	134	298	62	17%	46%	22%	11%	4%	50%	44%	46%	49%

Table 7.C.23 Demographic Summary for Algebra II

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster			
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Polynomials and Rational Expressions	Quadratics, Conics, and Complex Numbers	Exponents and Logarithms	Series, Combinatorics, Probability and Statistics
All valid scores	294,094	325	68	14%	25%	28%	23%	10%	62%	49%	54%	49%
Grade 8	1,004	430	91	2%	4%	13%	29%	52%	84%	77%	79%	72%
Grade 9	36,454	384	81	4%	10%	20%	33%	32%	76%	66%	69%	63%
Grade 10	136,611	336	64	10%	21%	30%	28%	11%	65%	52%	57%	52%
Grade 11	120,025	295	50	23%	35%	28%	13%	2%	53%	40%	45%	41%
Male	140,103	328	71	14%	24%	27%	24%	11%	62%	50%	54%	50%
Female	153,942	322	66	15%	26%	28%	22%	9%	61%	48%	53%	48%
Gender unknown	49	289	56	35%	37%	12%	12%	4%	51%	39%	43%	39%
American Indian	1,492	315	60	15%	29%	30%	21%	5%	59%	46%	51%	47%
Asian American	38,293	377	82	5%	13%	22%	31%	29%	75%	63%	68%	60%
Pacific Islander	1,601	313	61	18%	29%	28%	18%	6%	58%	45%	50%	45%
Filipino	11,857	335	64	9%	23%	30%	28%	11%	65%	52%	58%	51%
Hispanic	132,175	306	58	20%	30%	28%	17%	4%	57%	44%	48%	44%
African American	15,465	294	55	27%	32%	25%	14%	3%	52%	40%	45%	40%
White	85,771	336	64	9%	22%	31%	28%	11%	64%	52%	57%	53%
Two or more races	7,440	336	69	10%	23%	29%	27%	12%	64%	52%	57%	52%
English only	162,252	329	66	12%	24%	29%	25%	10%	62%	50%	55%	51%
Initially fluent English prof.	27,488	348	79	10%	21%	26%	26%	18%	67%	55%	60%	54%
English learner	18,239	283	63	40%	30%	16%	9%	4%	49%	38%	41%	35%
Reclassified fluent Eng. prof.	85,860	321	66	15%	28%	28%	21%	8%	61%	48%	52%	47%
English prof. unknown	255	307	72	28%	29%	20%	15%	9%	55%	45%	47%	44%
No special ed. services	286,170	327	68	14%	25%	28%	23%	10%	62%	49%	54%	49%
Special ed. services	7,909	280	62	42%	28%	16%	10%	3%	47%	38%	40%	36%
Special ed. unknown	15	248	51	80%	0%	13%	7%	0%	35%	31%	30%	29%
Not econ. disadvantaged	151,729	341	71	9%	21%	29%	27%	14%	66%	53%	58%	53%
Economically disadvantaged	142,055	309	62	20%	29%	27%	18%	6%	58%	45%	49%	44%
Unknown economic status	310	308	75	27%	29%	20%	13%	10%	54%	45%	48%	45%
Primary Ethnicity—Not Economically Disadvantaged												
American Indian	895	320	56	11%	28%	31%	23%	6%	60%	48%	53%	48%
Asian American	23,597	392	83	3%	10%	19%	32%	35%	78%	67%	71%	64%
Pacific Islander	803	323	64	15%	25%	29%	22%	8%	61%	48%	54%	49%
Filipino	8,179	339	63	7%	22%	30%	29%	12%	66%	53%	59%	52%
Hispanic	34,136	316	59	15%	28%	30%	21%	6%	60%	46%	51%	47%
African American	6,747	303	57	21%	30%	28%	17%	4%	56%	43%	48%	43%
White	71,749	339	65	8%	21%	31%	29%	12%	65%	53%	58%	54%
Two or more races	5,623	343	69	8%	21%	28%	29%	14%	66%	54%	59%	54%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster			
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Polynomials and Rational Expressions	Quadratics, Conics, and Complex Numbers	Exponents and Logarithms	Series, Combinatorics, Probability and Statistics
Primary Ethnicity—Economically Disadvantaged												
American Indian	595	308	64	21%	29%	27%	18%	5%	56%	45%	49%	45%
Asian American	14,647	352	75	8%	18%	26%	30%	19%	70%	57%	61%	54%
Pacific Islander	798	303	56	20%	34%	27%	15%	4%	56%	42%	47%	42%
Filipino	3,668	326	64	11%	26%	30%	24%	9%	63%	49%	55%	48%
Hispanic	97,946	303	57	22%	31%	27%	16%	4%	56%	43%	47%	42%
African American	8,701	286	53	32%	32%	22%	11%	2%	50%	38%	43%	38%
White	13,956	318	59	14%	27%	31%	22%	6%	60%	47%	52%	48%
Two or more races	1,744	314	62	16%	28%	30%	20%	6%	59%	46%	51%	45%
Primary Ethnicity—Unknown Economic Status												
American Indian	2	–	–	–	–	–	–	–	–	–	–	–
Asian American	49	372	89	8%	20%	14%	24%	33%	75%	60%	67%	57%
Pacific Islander	0	–	–	–	–	–	–	–	–	–	–	–
Filipino	10	–	–	–	–	–	–	–	–	–	–	–
Hispanic	93	277	53	40%	34%	17%	6%	2%	45%	37%	39%	37%
African American	17	298	100	47%	12%	24%	6%	12%	47%	42%	43%	44%
White	66	312	65	15%	33%	32%	9%	11%	55%	47%	49%	48%
Two or more races	73	305	62	26%	29%	21%	19%	5%	55%	45%	48%	43%

Table 7.C.24 Demographic Summary for Summative High School Mathematics

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster			
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Algebra I	Geometry	Algebra II	Probability and Statistics
All valid scores	160,690	360	76	4%	19%	23%	34%	19%	76%	74%	72%	66%
Grade 9	1,003	449	81	1%	2%	6%	29%	62%	91%	89%	89%	83%
Grade 10	27,159	399	73	1%	7%	16%	42%	34%	85%	82%	81%	75%
Grade 11	132,528	352	74	4%	22%	25%	33%	16%	74%	72%	69%	64%
Male	76,816	371	79	3%	16%	21%	36%	24%	78%	76%	73%	71%
Female	83,861	351	73	4%	22%	25%	33%	15%	74%	72%	70%	62%
Gender unknown	13	334	73	8%	23%	31%	23%	15%	74%	64%	65%	57%
American Indian	660	338	69	5%	26%	28%	30%	11%	71%	69%	66%	64%
Asian American	37,900	403	78	1%	8%	15%	38%	38%	85%	82%	82%	74%
Pacific Islander	732	337	66	5%	25%	28%	32%	10%	72%	68%	67%	59%
Filipino	7,606	353	65	3%	19%	27%	36%	14%	75%	73%	71%	63%
Hispanic	50,905	327	65	6%	30%	28%	28%	7%	69%	65%	64%	56%
African American	5,362	316	65	10%	34%	27%	25%	5%	66%	62%	61%	54%
White	53,272	367	71	2%	15%	23%	39%	20%	78%	77%	73%	72%
Two or more races	4,253	370	75	2%	15%	23%	37%	22%	78%	77%	73%	71%
English only	90,774	362	74	3%	18%	24%	37%	19%	77%	75%	72%	69%
Initially fluent English prof.	20,076	386	82	2%	14%	18%	35%	31%	81%	78%	77%	71%
English learner	3,406	314	81	17%	32%	19%	21%	11%	65%	59%	59%	47%
Reclassified fluent Eng. prof.	46,344	348	75	4%	24%	25%	31%	15%	74%	70%	69%	60%
English prof. unknown	90	340	76	7%	24%	30%	26%	13%	73%	69%	65%	57%
No special ed. services	159,215	361	76	3%	19%	23%	35%	19%	76%	74%	72%	66%
Special ed. services	1,475	326	86	14%	28%	19%	26%	13%	67%	64%	62%	57%
Special ed. unknown	0	–	–	–	–	–	–	–	–	–	–	–
Not econ. disadvantaged	101,132	376	76	2%	14%	21%	38%	25%	79%	78%	75%	72%
Economically disadvantaged	59,454	333	69	6%	28%	27%	29%	10%	71%	67%	65%	57%
Unknown economic status	104	341	76	8%	24%	21%	30%	17%	72%	69%	66%	62%
Primary Ethnicity—Not Economically Disadvantaged												
American Indian	434	349	67	3%	21%	27%	35%	13%	74%	72%	69%	68%
Asian American	26,378	416	76	0%	5%	13%	37%	44%	87%	85%	84%	78%
Pacific Islander	436	347	68	4%	20%	28%	36%	12%	74%	71%	69%	62%
Filipino	5,533	358	65	2%	17%	27%	38%	16%	76%	75%	72%	65%
Hispanic	14,898	341	67	4%	24%	28%	33%	11%	72%	70%	67%	63%
African American	2,809	328	65	6%	30%	28%	29%	7%	69%	65%	64%	58%
White	47,078	370	71	2%	14%	23%	40%	21%	78%	77%	74%	73%
Two or more races	3,566	375	74	2%	14%	22%	39%	24%	79%	78%	75%	72%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster			
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Algebra I	Geometry	Algebra II	Probability and Statistics
Primary Ethnicity—Economically Disadvantaged												
American Indian	226	319	68	8%	35%	29%	22%	8%	66%	64%	60%	55%
Asian American	11,502	373	73	2%	14%	22%	39%	23%	80%	76%	76%	66%
Pacific Islander	296	322	60	5%	32%	29%	26%	6%	69%	64%	63%	54%
Filipino	2,066	340	66	4%	25%	28%	32%	11%	72%	70%	68%	59%
Hispanic	35,985	320	63	7%	33%	29%	26%	6%	68%	63%	62%	53%
African American	2,547	303	62	14%	38%	25%	20%	3%	62%	58%	57%	49%
White	6,165	345	70	4%	23%	26%	34%	13%	73%	71%	68%	65%
Two or more races	667	343	71	6%	25%	26%	31%	12%	72%	70%	67%	63%
Primary Ethnicity—Unknown Economic Status												
American Indian	0	–	–	–	–	–	–	–	–	–	–	–
Asian American	20	387	63	0%	15%	10%	40%	35%	84%	81%	79%	73%
Pacific Islander	0	–	–	–	–	–	–	–	–	–	–	–
Filipino	7	–	–	–	–	–	–	–	–	–	–	–
Hispanic	22	303	70	14%	41%	9%	32%	5%	61%	59%	56%	48%
African American	6	–	–	–	–	–	–	–	–	–	–	–
White	29	346	72	7%	17%	28%	34%	14%	75%	69%	68%	67%
Two or more races	20	362	77	5%	10%	30%	30%	25%	78%	74%	72%	67%

Table 7.C.25 Demographic Summary for Integrated Mathematics 1

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Number Properties, Operations, and Linear Equations	Graphing	Quadratics and Polynomials	Functions and Rational Expressions	Geometry
All valid scores	13,504	291	51	19%	45%	25%	10%	2%	57%	44%	39%	36%	31%
Grade 8	95	293	69	25%	41%	19%	8%	6%	51%	42%	38%	28%	41%
Grade 9	1,084	314	72	13%	37%	28%	14%	8%	62%	51%	46%	42%	36%
Grade 10	6,426	288	47	19%	47%	24%	10%	1%	56%	43%	38%	36%	30%
Grade 11	5,899	290	49	19%	45%	25%	10%	1%	57%	43%	38%	35%	31%
Male	7,327	290	52	20%	44%	24%	10%	2%	57%	43%	38%	35%	32%
Female	6,173	292	50	17%	47%	25%	10%	1%	57%	45%	40%	38%	30%
Gender unknown	4	–	–	–	–	–	–	–	–	–	–	–	–
American Indian	113	300	56	16%	41%	24%	17%	3%	61%	46%	42%	38%	33%
Asian American	329	315	58	10%	36%	29%	21%	4%	64%	51%	47%	46%	35%
Pacific Islander	87	293	45	17%	39%	33%	10%	0%	60%	43%	39%	38%	31%
Filipino	230	293	48	15%	47%	30%	5%	2%	58%	45%	38%	34%	32%
Hispanic	7,974	286	47	20%	47%	24%	8%	1%	55%	42%	38%	35%	30%
African American	984	279	48	25%	48%	20%	6%	1%	51%	41%	36%	33%	29%
White	3,381	304	57	14%	41%	27%	14%	3%	62%	47%	42%	38%	34%
Two or more races	406	290	49	17%	45%	27%	10%	1%	56%	43%	38%	35%	32%
English only	7,716	295	54	17%	43%	26%	11%	2%	59%	45%	40%	36%	32%
Initially fluent English prof.	698	299	52	15%	42%	29%	13%	2%	62%	47%	40%	37%	33%
English learner	2,329	269	40	30%	51%	15%	3%	0%	46%	38%	33%	33%	27%
Reclassified fluent Eng. prof.	2,748	294	45	14%	47%	28%	11%	0%	59%	45%	40%	38%	31%
English prof. unknown	13	273	32	23%	62%	15%	0%	0%	51%	29%	38%	26%	29%
No special ed. services	11,917	294	51	16%	45%	26%	11%	2%	59%	45%	40%	37%	32%
Special ed. services	1,583	264	41	38%	46%	12%	3%	0%	45%	36%	32%	29%	27%
Special ed. unknown	4	–	–	–	–	–	–	–	–	–	–	–	–
Not econ. disadvantaged	4,659	301	55	15%	42%	27%	13%	3%	61%	46%	42%	38%	34%
Economically disadvantaged	8,821	285	48	21%	47%	23%	8%	1%	55%	42%	38%	35%	30%
Unknown economic status	24	284	39	13%	58%	21%	8%	0%	53%	40%	37%	33%	32%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	62	302	51	13%	47%	19%	19%	2%	61%	45%	42%	39%	35%
Asian American	141	316	64	11%	43%	20%	21%	5%	64%	50%	46%	45%	36%
Pacific Islander	32	297	50	16%	44%	25%	16%	0%	59%	43%	39%	40%	34%
Filipino	123	298	53	11%	48%	30%	7%	3%	61%	48%	40%	35%	32%
Hispanic	1,601	294	50	17%	44%	28%	10%	2%	59%	44%	40%	36%	31%
African American	316	288	49	19%	48%	23%	9%	1%	55%	44%	39%	35%	30%
White	2,144	309	59	13%	38%	29%	16%	4%	64%	48%	44%	39%	36%
Two or more races	240	293	52	17%	44%	26%	11%	1%	57%	44%	39%	35%	33%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Number Properties, Operations, and Linear Equations	Graphing	Quadratics and Polynomials	Functions and Rational Expressions	Geometry
Primary Ethnicity—Economically Disadvantaged													
American Indian	51	299	61	20%	33%	29%	14%	4%	61%	47%	43%	36%	32%
Asian American	188	314	54	10%	31%	35%	21%	3%	64%	52%	48%	47%	34%
Pacific Islander	55	291	42	18%	36%	38%	7%	0%	60%	43%	38%	37%	30%
Filipino	106	286	42	19%	47%	30%	3%	1%	54%	42%	37%	33%	32%
Hispanic	6,362	284	46	21%	48%	23%	8%	1%	54%	42%	37%	35%	29%
African American	666	274	47	28%	49%	18%	4%	1%	49%	39%	35%	32%	28%
White	1,233	294	53	17%	44%	25%	11%	2%	59%	45%	39%	35%	33%
Two or more races	160	288	45	18%	44%	29%	9%	1%	56%	44%	37%	35%	31%
Primary Ethnicity—Unknown Economic Status													
American Indian	0	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	0	–	–	–	–	–	–	–	–	–	–	–	–
Pacific Islander	0	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	1	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	11	278	37	18%	55%	27%	0%	0%	48%	44%	32%	36%	29%
African American	2	–	–	–	–	–	–	–	–	–	–	–	–
White	4	–	–	–	–	–	–	–	–	–	–	–	–
Two or more races	6	–	–	–	–	–	–	–	–	–	–	–	–

Table 7.C.26 Demographic Summary for Integrated Mathematics 2

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Algebra I	Logic and Geometric Proofs	Angle Relationships, Constructions, and Lines	Trigonometry	Algebra II/ Probability and Statistics
All valid scores	4,956	318	48	10%	28%	38%	20%	3%	49%	45%	48%	43%	35%
Grade 8	39	365	71	5%	10%	28%	36%	21%	58%	62%	61%	56%	51%
Grade 9	271	337	54	8%	18%	35%	30%	8%	59%	51%	49%	46%	37%
Grade 10	1,272	328	51	9%	21%	39%	26%	5%	51%	48%	52%	46%	37%
Grade 11	3,374	313	45	11%	32%	38%	17%	2%	47%	43%	47%	41%	33%
Male	2,519	319	51	11%	26%	38%	21%	4%	50%	45%	49%	43%	36%
Female	2,435	317	46	9%	30%	39%	20%	3%	48%	45%	48%	43%	34%
Gender unknown	2	–	–	–	–	–	–	–	–	–	–	–	–
American Indian	42	320	36	5%	31%	43%	21%	0%	50%	45%	48%	45%	33%
Asian American	281	330	54	9%	22%	37%	25%	7%	53%	48%	53%	47%	33%
Pacific Islander	32	320	34	6%	25%	50%	19%	0%	47%	45%	54%	48%	34%
Filipino	161	334	48	4%	16%	52%	22%	6%	53%	50%	55%	49%	36%
Hispanic	2,616	311	45	12%	33%	38%	16%	2%	47%	42%	46%	41%	33%
African American	362	305	44	15%	33%	36%	14%	2%	45%	40%	46%	38%	32%
White	1,252	331	51	9%	19%	38%	29%	5%	53%	49%	51%	46%	40%
Two or more races	210	330	49	4%	24%	41%	25%	6%	50%	50%	54%	47%	37%
English only	2,918	323	50	9%	25%	39%	24%	4%	50%	47%	50%	44%	37%
Initially fluent English prof.	285	322	47	9%	25%	40%	23%	4%	51%	46%	50%	44%	34%
English learner	569	289	37	21%	48%	25%	6%	0%	40%	35%	40%	34%	27%
Reclassified fluent Eng. prof.	1,179	319	45	8%	27%	44%	18%	3%	50%	45%	48%	44%	33%
English prof. unknown	5	–	–	–	–	–	–	–	–	–	–	–	–
No special ed. services	4,600	321	48	9%	27%	40%	21%	3%	50%	46%	49%	44%	35%
Special ed. services	356	286	43	25%	46%	22%	6%	1%	39%	34%	37%	32%	29%
Special ed. unknown	0	–	–	–	–	–	–	–	–	–	–	–	–
Not econ. disadvantaged	2,010	326	49	8%	23%	40%	25%	4%	51%	48%	51%	45%	37%
Economically disadvantaged	2,936	313	47	12%	31%	37%	17%	2%	48%	43%	46%	41%	33%
Unknown economic status	10	–	–	–	–	–	–	–	–	–	–	–	–
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	29	320	33	0%	38%	41%	21%	0%	50%	44%	50%	45%	32%
Asian American	104	337	55	10%	15%	38%	30%	7%	54%	51%	55%	49%	36%
Pacific Islander	15	307	31	7%	40%	53%	0%	0%	44%	42%	46%	39%	31%
Filipino	113	333	45	4%	13%	55%	22%	5%	53%	49%	56%	49%	37%
Hispanic	586	319	45	9%	28%	41%	20%	2%	48%	45%	49%	44%	36%
African American	152	315	45	11%	30%	39%	18%	3%	49%	43%	48%	40%	33%
White	873	331	51	9%	20%	37%	30%	5%	53%	49%	52%	46%	40%
Two or more races	138	331	50	4%	24%	41%	25%	7%	50%	50%	55%	47%	38%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Algebra I	Logic and Geometric Proofs	Angle Relationships, Constructions, and Lines	Trigonometry	Algebra II/ Probability and Statistics
Primary Ethnicity—Economically Disadvantaged													
American Indian	13	320	44	15%	15%	46%	23%	0%	50%	46%	45%	46%	37%
Asian American	173	327	54	9%	26%	36%	22%	7%	53%	47%	52%	46%	31%
Pacific Islander	17	332	33	6%	12%	47%	35%	0%	49%	47%	61%	56%	36%
Filipino	48	336	55	4%	21%	46%	21%	8%	53%	52%	54%	50%	33%
Hispanic	2,027	309	44	12%	34%	37%	15%	2%	46%	42%	45%	40%	32%
African American	209	298	43	18%	36%	34%	11%	1%	42%	39%	44%	37%	31%
White	379	330	51	8%	19%	40%	27%	6%	53%	48%	50%	46%	40%
Two or more races	70	328	45	4%	26%	41%	26%	3%	51%	49%	52%	47%	35%
Primary Ethnicity—Unknown Economic Status													
American Indian	0	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	4	–	–	–	–	–	–	–	–	–	–	–	–
Pacific Islander	0	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	0	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	3	–	–	–	–	–	–	–	–	–	–	–	–
African American	1	–	–	–	–	–	–	–	–	–	–	–	–
White	0	–	–	–	–	–	–	–	–	–	–	–	–
Two or more races	2	–	–	–	–	–	–	–	–	–	–	–	–

Table 7.C.27 Demographic Summary for Integrated Mathematics 3

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Geometry	Polynomials and Rational Expressions	Quadratics, Conics, and Complex Numbers	Exponents and Logarithms	Series, Combinatorics, Probability and Statistics
All valid scores	745	331	75	16%	22%	25%	26%	11%	52%	54%	45%	51%	41%
Grade 8	3	–	–	–	–	–	–	–	–	–	–	–	–
Grade 9	17	339	66	6%	24%	29%	35%	6%	66%	53%	47%	51%	49%
Grade 10	201	362	76	8%	12%	23%	36%	20%	57%	64%	52%	60%	45%
Grade 11	524	319	71	19%	26%	25%	22%	8%	50%	50%	42%	48%	39%
Male	352	334	80	17%	19%	24%	26%	13%	53%	54%	46%	52%	41%
Female	392	328	70	14%	25%	25%	27%	9%	51%	54%	44%	51%	40%
Gender unknown	1	–	–	–	–	–	–	–	–	–	–	–	–
American Indian	3	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	106	361	85	8%	18%	18%	34%	22%	55%	63%	56%	57%	45%
Pacific Islander	2	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	59	344	67	14%	12%	24%	42%	8%	56%	58%	49%	57%	42%
Hispanic	354	321	67	17%	24%	28%	23%	8%	49%	53%	41%	49%	39%
African American	48	302	68	19%	42%	21%	15%	4%	43%	46%	39%	42%	35%
White	139	333	76	17%	19%	23%	27%	14%	58%	52%	47%	52%	43%
Two or more races	34	343	96	18%	24%	18%	24%	18%	60%	56%	48%	54%	42%
English only	433	335	76	15%	21%	24%	28%	12%	55%	54%	46%	53%	42%
Initially fluent English prof.	54	332	82	20%	19%	19%	30%	13%	47%	58%	45%	51%	40%
English learner	41	270	50	41%	41%	10%	5%	2%	39%	36%	31%	34%	27%
Reclassified fluent Eng. prof.	217	334	69	12%	22%	29%	26%	12%	51%	57%	45%	52%	41%
English prof. unknown	0	–	–	–	–	–	–	–	–	–	–	–	–
No special ed. services	716	332	74	15%	22%	25%	27%	11%	53%	54%	45%	52%	41%
Special ed. services	29	304	87	38%	28%	10%	14%	10%	44%	46%	41%	41%	34%
Special ed. unknown	0	–	–	–	–	–	–	–	–	–	–	–	–
Not econ. disadvantaged	379	343	79	14%	18%	21%	31%	15%	56%	57%	49%	54%	43%
Economically disadvantaged	364	318	68	17%	26%	28%	21%	7%	48%	51%	41%	49%	38%
Unknown economic status	2	–	–	–	–	–	–	–	–	–	–	–	–
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	1	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	78	376	85	4%	17%	18%	35%	27%	59%	67%	58%	60%	48%
Pacific Islander	2	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	36	344	64	11%	11%	25%	47%	6%	56%	58%	48%	59%	43%
Hispanic	89	331	77	20%	17%	20%	33%	10%	53%	53%	45%	52%	42%
African American	26	308	63	19%	38%	23%	15%	4%	44%	50%	40%	44%	34%
White	119	334	74	17%	18%	23%	28%	14%	58%	52%	47%	52%	44%
Two or more races	28	356	97	14%	21%	18%	25%	21%	64%	58%	51%	57%	46%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Geometry	Polynomials and Rational Expressions	Quadratics, Conics, and Complex Numbers	Exponents and Logarithms	Series, Combinatorics, Probability and Statistics
Primary Ethnicity—Economically Disadvantaged													
American Indian	2	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	28	320	72	21%	21%	18%	32%	7%	44%	49%	49%	47%	39%
Pacific Islander	0	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	23	344	74	17%	13%	22%	35%	13%	56%	57%	51%	55%	42%
Hispanic	265	318	64	16%	26%	31%	20%	7%	48%	52%	40%	49%	37%
African American	21	293	74	19%	48%	14%	14%	5%	40%	41%	38%	38%	37%
White	20	326	89	20%	20%	25%	20%	15%	58%	49%	43%	54%	37%
Two or more races	5	–	–	–	–	–	–	–	–	–	–	–	–
Primary Ethnicity—Unknown Economic Status													
American Indian	0	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	0	–	–	–	–	–	–	–	–	–	–	–	–
Pacific Islander	0	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	0	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	0	–	–	–	–	–	–	–	–	–	–	–	–
African American	1	–	–	–	–	–	–	–	–	–	–	–	–
White	0	–	–	–	–	–	–	–	–	–	–	–	–
Two or more races	1	–	–	–	–	–	–	–	–	–	–	–	–

Table 7.C.28 Demographic Summary for Science, Grade Five

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Physical Science, Grade Five	Physical Science, Grade Four	Life Science, Grade Five	Life Science, Grade Four	Earth Science, Grade Five	Earth Science, Grade Four
All valid scores	422,520	367	67	6%	10%	28%	33%	24%	74%	75%	69%	68%	70%	64%
Male	211,341	369	70	7%	9%	26%	32%	26%	74%	76%	70%	69%	70%	64%
Female	211,066	365	64	5%	10%	29%	34%	22%	74%	74%	69%	67%	70%	64%
Gender unknown	113	338	70	17%	15%	30%	24%	14%	63%	66%	59%	60%	62%	57%
American Indian	2,785	347	63	11%	13%	31%	30%	15%	70%	70%	63%	63%	65%	57%
Asian American	38,978	411	73	2%	4%	14%	30%	49%	84%	84%	80%	80%	79%	77%
Pacific Islander	2,328	354	61	7%	12%	34%	31%	16%	73%	71%	65%	63%	67%	61%
Filipino	11,010	386	61	2%	5%	22%	40%	31%	81%	80%	75%	74%	75%	71%
Hispanic	221,171	346	58	8%	13%	35%	31%	13%	69%	70%	64%	62%	65%	58%
African American	25,194	340	60	11%	15%	34%	29%	12%	69%	68%	61%	60%	63%	55%
White	109,516	396	65	2%	4%	18%	37%	39%	82%	81%	77%	77%	77%	73%
Two or more races	11,538	390	69	4%	5%	20%	36%	36%	80%	80%	75%	75%	75%	71%
English only	236,124	379	67	4%	7%	24%	35%	30%	78%	77%	72%	72%	73%	68%
Initially fluent English prof.	19,805	405	68	1%	3%	17%	36%	43%	83%	84%	79%	79%	78%	75%
English learner	87,624	316	48	16%	22%	40%	18%	3%	59%	62%	54%	51%	56%	48%
Reclassified fluent Eng. prof.	78,491	379	55	1%	4%	28%	43%	25%	79%	79%	74%	73%	73%	70%
English prof. unknown	476	344	73	16%	14%	27%	25%	19%	67%	68%	61%	61%	63%	58%
No special ed. services	399,005	369	67	5%	9%	27%	33%	24%	75%	75%	70%	69%	70%	65%
Special ed. services	21,797	340	67	14%	16%	31%	25%	15%	66%	67%	60%	59%	63%	55%
Special ed. unknown	1,718	337	65	15%	16%	32%	24%	13%	66%	66%	59%	59%	62%	55%
Not econ. disadvantaged	164,646	401	66	2%	4%	17%	36%	42%	83%	82%	78%	78%	78%	75%
Economically disadvantaged	257,253	345	58	9%	13%	35%	31%	12%	69%	70%	63%	61%	64%	58%
Unknown economic status	621	346	69	13%	13%	30%	27%	17%	68%	69%	62%	62%	64%	56%
Primary Ethnicity—Not Economically Disadvantaged														
American Indian	881	374	64	4%	9%	23%	37%	26%	77%	77%	71%	72%	72%	66%
Asian American	24,641	432	69	1%	2%	9%	27%	61%	88%	88%	84%	85%	83%	82%
Pacific Islander	813	377	61	3%	7%	26%	39%	25%	79%	78%	72%	70%	73%	68%
Filipino	6,816	396	60	1%	3%	18%	41%	37%	83%	83%	77%	77%	77%	74%
Hispanic	37,493	375	61	4%	7%	25%	39%	26%	77%	77%	72%	71%	73%	67%
African American	6,911	363	62	6%	9%	29%	36%	20%	75%	74%	68%	67%	70%	63%
White	79,695	407	63	1%	3%	14%	37%	45%	85%	84%	80%	80%	80%	77%
Two or more races	7,396	407	66	1%	3%	15%	36%	46%	85%	83%	79%	81%	80%	76%
Primary Ethnicity—Economically Disadvantaged														
American Indian	1,895	335	58	13%	15%	35%	27%	10%	66%	66%	60%	59%	62%	53%
Asian American	14,284	376	66	5%	7%	25%	35%	29%	77%	77%	72%	71%	72%	67%
Pacific Islander	1,514	341	57	9%	15%	38%	27%	11%	69%	68%	62%	59%	64%	57%
Filipino	4,183	369	57	3%	8%	28%	39%	22%	77%	76%	70%	69%	71%	66%
Hispanic	183,474	340	55	9%	15%	37%	30%	10%	67%	69%	62%	60%	63%	56%
African American	18,233	331	56	13%	17%	35%	26%	8%	66%	65%	58%	57%	61%	53%
White	29,674	365	61	5%	9%	28%	37%	21%	75%	75%	69%	69%	70%	63%
Two or more races	3,996	359	62	7%	10%	29%	36%	18%	73%	73%	67%	66%	68%	61%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Physical Science, Grade Five	Physical Science, Grade Four	Life Science, Grade Five	Life Science, Grade Four	Earth Science, Grade Five	Earth Science, Grade Four
Primary Ethnicity—Unknown Economic Status														
American Indian	9	–	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	53	361	78	9%	13%	23%	36%	19%	71%	75%	66%	71%	65%	60%
Pacific Islander	1	–	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	11	363	92	18%	9%	27%	9%	36%	69%	69%	69%	60%	67%	60%
Hispanic	204	331	55	13%	17%	38%	24%	8%	65%	66%	58%	56%	62%	51%
African American	50	309	55	26%	16%	42%	10%	6%	57%	60%	50%	52%	53%	42%
White	147	370	75	7%	11%	23%	30%	29%	75%	74%	69%	70%	71%	63%
Two or more races	146	350	71	15%	10%	23%	32%	20%	68%	71%	63%	63%	65%	61%

Table 7.C.29 Demographic Summary for Science, Grade Eight

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Motion	Forces, Density, and Buoyancy	Structure of Matter and Periodic Table	Earth in the Solar System	Reactions and the Chemistry of Living Systems	Investigation and Experimentation
All valid scores	430,581	391	97	7%	11%	16%	25%	42%	64%	72%	70%	73%	69%	78%
Male	216,293	397	102	8%	10%	14%	23%	45%	65%	74%	70%	74%	69%	78%
Female	214,130	385	91	6%	12%	17%	26%	38%	62%	71%	70%	71%	69%	78%
Gender unknown	158	327	95	22%	22%	18%	16%	22%	51%	59%	56%	59%	55%	63%
American Indian	2,777	366	91	11%	14%	17%	26%	32%	58%	68%	66%	68%	65%	72%
Asian American	38,472	460	98	2%	4%	7%	16%	71%	78%	83%	81%	82%	82%	89%
Pacific Islander	2,460	372	88	8%	14%	16%	28%	33%	59%	69%	67%	70%	65%	75%
Filipino	12,585	426	88	2%	5%	10%	25%	58%	70%	79%	77%	79%	77%	85%
Hispanic	220,589	363	86	10%	14%	20%	27%	29%	58%	68%	65%	69%	63%	74%
African American	27,330	350	87	13%	16%	20%	26%	25%	55%	64%	63%	65%	62%	70%
White	115,528	426	93	4%	5%	10%	23%	58%	71%	79%	77%	78%	76%	83%
Two or more races	10,840	413	98	5%	8%	12%	23%	52%	68%	76%	74%	75%	74%	81%
English only	241,587	403	97	6%	9%	14%	24%	48%	66%	75%	73%	74%	72%	79%
Initially fluent English prof.	33,653	428	96	3%	6%	11%	23%	57%	71%	79%	77%	79%	76%	84%
English learner	51,746	303	71	24%	28%	24%	17%	8%	46%	55%	51%	56%	48%	60%
Reclassified fluent Eng. prof.	102,985	395	83	3%	9%	18%	30%	41%	64%	74%	71%	75%	70%	82%
English prof. unknown	610	338	97	19%	20%	16%	20%	24%	54%	62%	59%	61%	57%	66%
No special ed. services	410,070	394	96	6%	10%	15%	25%	43%	64%	73%	71%	73%	70%	79%
Special ed. services	20,458	328	93	22%	20%	19%	20%	19%	50%	59%	57%	62%	55%	63%
Special ed. unknown	53	278	86	40%	32%	8%	9%	11%	41%	48%	45%	50%	44%	47%
Not econ. disadvantaged	177,785	432	95	3%	5%	10%	22%	60%	72%	80%	78%	79%	77%	84%
Economically disadvantaged	252,038	363	88	10%	14%	19%	27%	29%	58%	67%	65%	68%	63%	73%
Unknown economic status	758	340	96	19%	18%	18%	21%	24%	54%	63%	59%	62%	57%	66%
Primary Ethnicity—Not Economically Disadvantaged														
American Indian	1,134	394	90	6%	9%	13%	27%	44%	64%	74%	72%	73%	71%	77%
Asian American	23,352	487	89	1%	2%	4%	12%	81%	83%	87%	86%	86%	86%	92%
Pacific Islander	981	398	91	4%	10%	13%	28%	45%	65%	74%	72%	73%	71%	79%
Filipino	7,969	439	85	1%	3%	8%	23%	64%	73%	81%	80%	81%	79%	87%
Hispanic	43,396	393	90	6%	9%	15%	27%	43%	64%	73%	71%	74%	70%	79%
African American	8,533	378	89	8%	11%	17%	27%	37%	61%	70%	68%	71%	68%	75%
White	85,558	441	90	2%	4%	8%	21%	65%	74%	81%	80%	80%	79%	85%
Two or more races	6,862	438	94	3%	5%	8%	21%	63%	73%	81%	79%	79%	79%	85%
Primary Ethnicity—Economically Disadvantaged														
American Indian	1,638	347	86	14%	17%	20%	25%	24%	54%	64%	62%	65%	60%	68%
Asian American	15,094	419	95	4%	7%	11%	23%	55%	70%	77%	75%	77%	75%	84%
Pacific Islander	1,471	354	82	11%	16%	19%	29%	26%	56%	66%	64%	67%	62%	72%
Filipino	4,608	402	87	4%	8%	14%	27%	47%	65%	74%	73%	75%	73%	81%
Hispanic	176,881	356	84	11%	16%	21%	27%	26%	56%	66%	63%	68%	61%	73%
African American	18,732	338	83	16%	18%	22%	25%	19%	52%	62%	60%	62%	59%	67%
White	29,811	384	91	7%	10%	16%	27%	39%	63%	72%	70%	71%	68%	76%
Two or more races	3,803	372	90	9%	12%	18%	28%	33%	60%	69%	67%	69%	66%	75%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Motion	Forces, Density, and Buoyancy	Structure of Matter and Periodic Table	Earth in the Solar System	Reactions and the Chemistry of Living Systems	Investigation and Experimentation
Primary Ethnicity—Unknown Economic Status														
American Indian	5	–	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	26	402	141	19%	12%	4%	23%	42%	67%	70%	67%	73%	65%	80%
Pacific Islander	8	–	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	8	–	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	312	318	81	23%	22%	19%	22%	14%	50%	59%	54%	57%	51%	63%
African American	65	311	82	25%	17%	26%	22%	11%	48%	59%	50%	58%	54%	57%
White	159	378	102	13%	9%	16%	21%	40%	64%	71%	66%	70%	65%	74%
Two or more races	175	345	97	14%	24%	16%	20%	26%	54%	62%	62%	62%	60%	66%

Table 7.C.30 Demographic Summary for Grade Ten Life Science

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Cell Biology	Genetics	Physiology	Ecology	Evolution	Investigation and Experimentation
All valid scores	442,013	360	70	9%	11%	26%	26%	28%	62%	59%	70%	68%	66%	75%
Male	222,564	363	74	10%	11%	23%	25%	31%	63%	59%	71%	69%	66%	74%
Female	219,292	357	65	7%	12%	29%	27%	25%	60%	60%	70%	66%	66%	75%
Gender unknown	157	311	64	27%	21%	25%	15%	11%	48%	44%	55%	50%	48%	59%
American Indian	2,993	352	66	11%	12%	27%	26%	24%	59%	56%	69%	66%	64%	73%
Asian American	41,587	404	76	3%	5%	15%	24%	53%	75%	71%	80%	78%	78%	85%
Pacific Islander	2,558	344	63	10%	14%	31%	26%	19%	57%	56%	65%	62%	61%	72%
Filipino	13,533	381	63	3%	6%	23%	30%	38%	69%	66%	77%	74%	74%	81%
Hispanic	224,676	340	61	11%	15%	32%	25%	17%	56%	54%	65%	62%	60%	70%
African American	27,180	332	61	15%	16%	31%	23%	14%	53%	52%	63%	58%	57%	66%
White	118,794	386	69	5%	6%	19%	28%	43%	69%	65%	78%	76%	75%	81%
Two or more races	10,692	376	72	6%	8%	21%	26%	38%	66%	63%	75%	73%	72%	78%
English only	244,903	370	70	7%	9%	24%	27%	34%	64%	61%	74%	71%	70%	77%
Initially fluent English prof.	33,999	386	72	4%	6%	21%	28%	41%	69%	66%	77%	75%	74%	81%
English learner	52,381	296	45	27%	30%	31%	9%	3%	42%	42%	49%	45%	42%	56%
Reclassified fluent Eng. prof.	110,099	362	60	4%	9%	32%	31%	25%	63%	61%	72%	69%	67%	77%
English prof. unknown	631	327	66	20%	19%	27%	18%	15%	51%	49%	61%	56%	55%	65%
No special ed. services	417,972	363	69	7%	10%	26%	26%	30%	62%	60%	71%	69%	67%	76%
Special ed. services	23,987	311	62	27%	22%	27%	14%	10%	47%	44%	55%	51%	48%	59%
Special ed. unknown	54	294	73	41%	24%	24%	4%	7%	39%	38%	45%	43%	44%	51%
Not econ. disadvantaged	198,208	385	71	5%	6%	20%	27%	42%	69%	65%	77%	75%	74%	81%
Economically disadvantaged	243,024	340	62	12%	15%	31%	24%	18%	56%	54%	65%	62%	60%	70%
Unknown economic status	781	325	65	21%	19%	29%	17%	15%	50%	48%	60%	56%	55%	64%
Primary Ethnicity—Not Economically Disadvantaged														
American Indian	1,456	368	66	6%	9%	24%	28%	32%	64%	60%	73%	71%	70%	78%
Asian American	25,030	423	73	2%	2%	10%	22%	64%	80%	76%	85%	83%	83%	88%
Pacific Islander	1,166	359	67	7%	9%	30%	28%	26%	61%	60%	70%	67%	66%	75%
Filipino	9,083	388	61	2%	5%	20%	31%	42%	71%	67%	80%	76%	76%	83%
Hispanic	53,155	357	64	8%	11%	28%	28%	25%	60%	58%	70%	67%	66%	75%
African American	10,125	346	63	11%	12%	29%	27%	21%	58%	56%	68%	63%	62%	71%
White	91,171	395	68	3%	4%	17%	28%	48%	71%	68%	80%	78%	78%	83%
Two or more races	7,022	392	70	3%	6%	18%	27%	46%	71%	67%	80%	77%	77%	82%
Primary Ethnicity—Economically Disadvantaged														
American Indian	1,529	336	62	15%	15%	30%	23%	17%	54%	51%	64%	61%	59%	68%
Asian American	16,508	376	70	5%	8%	23%	26%	37%	68%	65%	73%	71%	70%	80%
Pacific Islander	1,391	332	58	13%	18%	32%	24%	13%	54%	53%	61%	58%	57%	69%
Filipino	4,439	366	62	5%	9%	29%	29%	29%	64%	62%	73%	69%	69%	77%
Hispanic	171,227	335	59	12%	16%	33%	24%	15%	54%	53%	63%	60%	58%	69%
African American	16,992	323	58	18%	19%	32%	20%	10%	50%	49%	60%	55%	54%	64%
White	27,445	357	66	9%	11%	27%	27%	26%	60%	57%	70%	68%	66%	74%
Two or more races	3,493	346	66	12%	13%	28%	25%	22%	57%	55%	67%	64%	62%	71%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Cell Biology	Genetics	Physiology	Ecology	Evolution	Investigation and Experimentation
Primary Ethnicity—Unknown Economic Status														
American Indian	8	–	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	49	352	80	16%	10%	24%	18%	31%	60%	57%	66%	64%	62%	71%
Pacific Islander	1	–	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	11	367	59	9%	9%	0%	45%	36%	61%	60%	75%	78%	73%	79%
Hispanic	294	308	56	26%	22%	31%	14%	7%	44%	42%	55%	50%	49%	58%
African American	63	307	48	24%	27%	27%	19%	3%	45%	46%	53%	47%	49%	58%
White	178	344	65	13%	13%	29%	22%	22%	56%	55%	66%	63%	63%	71%
Two or more races	177	331	69	18%	19%	32%	14%	18%	52%	50%	61%	58%	56%	67%

Table 7.C.31 Demographic Summary for Biology

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Cell Biology	Genetics	Ecology and Evolution	Physiology	Investigation and Experimentation
All valid scores	552,645	354	60	8%	10%	32%	27%	22%	57%	64%	61%	65%	63%
Grade 9	238,659	364	60	6%	8%	28%	30%	28%	62%	68%	65%	68%	65%
Grade 10	215,430	341	54	10%	13%	37%	26%	15%	52%	60%	57%	61%	59%
Grade 11	98,556	358	65	9%	10%	29%	26%	25%	58%	64%	61%	67%	65%
Male	274,125	353	63	10%	11%	29%	26%	23%	57%	63%	61%	66%	61%
Female	278,371	355	56	6%	10%	34%	29%	21%	58%	65%	61%	65%	64%
Gender unknown	149	317	47	23%	18%	38%	15%	6%	43%	51%	47%	51%	51%
American Indian	3,544	346	55	9%	12%	34%	27%	18%	54%	61%	59%	64%	62%
Asian American	52,360	397	67	3%	4%	18%	27%	48%	73%	77%	74%	78%	73%
Pacific Islander	3,242	342	52	10%	12%	37%	27%	14%	54%	61%	56%	61%	58%
Filipino	17,645	372	53	3%	5%	27%	36%	30%	64%	71%	67%	73%	69%
Hispanic	280,608	336	50	11%	14%	39%	25%	12%	51%	59%	55%	59%	57%
African American	35,168	329	51	15%	16%	37%	22%	10%	49%	56%	52%	57%	53%
White	146,280	376	60	4%	6%	23%	32%	34%	65%	71%	69%	73%	72%
Two or more races	13,798	370	61	6%	7%	25%	31%	31%	63%	69%	67%	71%	69%
English only	306,856	362	60	7%	8%	29%	30%	27%	60%	66%	64%	69%	66%
Initially fluent English prof.	45,326	375	63	4%	6%	26%	30%	33%	64%	71%	68%	73%	69%
English learner	64,429	300	37	26%	28%	37%	7%	2%	38%	46%	40%	42%	41%
Reclassified fluent Eng. prof.	135,317	354	51	4%	8%	39%	31%	18%	57%	65%	61%	67%	63%
English prof. unknown	717	330	53	17%	16%	35%	22%	11%	49%	55%	52%	56%	55%
No special ed. services	511,966	358	59	6%	9%	32%	29%	24%	59%	66%	63%	67%	64%
Special ed. services	40,563	303	46	31%	25%	30%	9%	5%	39%	45%	42%	44%	43%
Special ed. unknown	116	288	47	50%	21%	18%	7%	4%	34%	39%	36%	37%	35%
Not econ. disadvantaged	250,441	375	62	5%	6%	24%	31%	34%	65%	71%	69%	73%	70%
Economically disadvantaged	301,292	336	51	11%	14%	38%	25%	12%	51%	59%	55%	59%	56%
Unknown economic status	912	329	53	16%	16%	36%	20%	11%	48%	55%	52%	56%	54%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	1,742	359	57	7%	9%	28%	32%	25%	59%	65%	64%	68%	67%
Asian American	31,774	414	66	1%	2%	12%	25%	59%	78%	82%	79%	83%	79%
Pacific Islander	1,459	355	54	7%	8%	33%	31%	21%	59%	65%	62%	66%	64%
Filipino	11,786	378	52	2%	4%	24%	37%	33%	66%	73%	70%	76%	71%
Hispanic	67,276	351	54	8%	10%	34%	29%	19%	56%	63%	60%	65%	63%
African American	13,637	341	54	11%	13%	35%	26%	15%	53%	60%	57%	61%	58%
White	113,451	383	59	3%	4%	21%	33%	39%	68%	73%	72%	75%	74%
Two or more races	9,316	382	60	4%	4%	21%	32%	38%	67%	73%	71%	75%	73%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Cell Biology	Genetics	Ecology and Evolution	Physiology	Investigation and Experimentation
Primary Ethnicity—Economically Disadvantaged													
American Indian	1,797	333	50	12%	15%	39%	23%	11%	49%	56%	54%	59%	58%
Asian American	20,524	370	59	4%	7%	28%	31%	31%	64%	71%	66%	70%	65%
Pacific Islander	1,782	331	48	11%	16%	40%	23%	9%	50%	57%	52%	57%	54%
Filipino	5,837	360	52	4%	7%	33%	33%	22%	60%	68%	63%	69%	65%
Hispanic	212,993	332	48	12%	15%	40%	24%	9%	49%	57%	53%	58%	55%
African American	21,452	322	47	17%	18%	39%	19%	7%	46%	53%	49%	54%	50%
White	32,640	350	55	9%	11%	32%	30%	19%	56%	62%	60%	65%	63%
Two or more races	4,267	345	54	10%	12%	34%	29%	16%	54%	61%	58%	63%	60%
Primary Ethnicity—Unknown Economic Status													
American Indian	5	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	62	349	54	6%	13%	32%	31%	18%	56%	62%	59%	66%	60%
Pacific Islander	1	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	22	356	46	5%	9%	32%	27%	27%	61%	66%	60%	71%	66%
Hispanic	339	319	46	18%	19%	41%	17%	5%	45%	51%	48%	52%	49%
African American	79	308	47	25%	22%	34%	16%	3%	42%	47%	44%	48%	44%
White	189	346	60	14%	10%	32%	22%	22%	54%	59%	58%	63%	63%
Two or more races	215	330	53	17%	16%	35%	20%	12%	48%	55%	52%	56%	56%

Table 7.C.32 Demographic Summary for Chemistry

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Atomic and Molecular Structure	Chemical Bonds, Biochemistry	Kinetics, Thermodynamics	Chemical Reactions	Conservation of Matter and Stoichiometry	Investigation and Experimentation
All valid scores	285,233	343	53	8%	13%	39%	25%	15%	65%	68%	62%	55%	59%	76%
Grade 9	5,726	345	63	15%	12%	27%	26%	20%	66%	67%	61%	55%	61%	73%
Grade 10	146,102	351	52	6%	10%	38%	29%	17%	68%	71%	65%	58%	63%	79%
Grade 11	133,405	334	52	9%	17%	42%	21%	11%	63%	65%	59%	52%	56%	71%
Male	134,614	348	57	8%	12%	35%	26%	18%	66%	70%	65%	57%	61%	76%
Female	150,560	338	49	7%	15%	43%	24%	11%	65%	67%	60%	53%	58%	75%
Gender unknown	59	315	46	17%	29%	31%	17%	7%	58%	60%	50%	44%	46%	65%
American Indian	1,372	338	45	6%	13%	45%	25%	11%	63%	67%	62%	54%	56%	75%
Asian American	38,795	377	60	2%	6%	27%	31%	34%	73%	78%	73%	67%	75%	86%
Pacific Islander	1,570	331	48	10%	16%	43%	23%	8%	63%	64%	57%	50%	55%	71%
Filipino	11,412	350	47	3%	10%	41%	31%	15%	68%	72%	65%	58%	64%	81%
Hispanic	130,259	325	44	11%	19%	44%	19%	6%	61%	62%	55%	48%	52%	69%
African American	15,823	317	43	16%	22%	42%	16%	5%	58%	60%	52%	46%	48%	64%
White	79,253	359	51	3%	7%	36%	33%	20%	69%	74%	69%	61%	65%	83%
Two or more races	6,749	355	54	4%	10%	37%	30%	20%	68%	73%	67%	60%	64%	81%
English only	154,976	349	52	6%	11%	39%	28%	17%	67%	71%	65%	58%	61%	79%
Initially fluent English prof.	27,203	360	59	4%	9%	35%	28%	23%	70%	73%	67%	61%	66%	81%
English learner	17,840	294	38	33%	32%	28%	6%	2%	50%	48%	42%	35%	42%	48%
Reclassified fluent Eng. prof.	85,002	337	48	7%	15%	45%	23%	11%	65%	66%	59%	52%	58%	74%
English prof. unknown	212	325	46	14%	22%	34%	23%	7%	60%	62%	55%	49%	52%	68%
No special ed. services	277,195	344	53	7%	13%	40%	26%	15%	66%	69%	62%	55%	60%	76%
Special ed. services	8,027	302	48	32%	26%	28%	10%	5%	51%	52%	46%	40%	42%	53%
Special ed. unknown	11	289	32	36%	27%	27%	9%	0%	47%	48%	44%	29%	40%	45%
Not econ. disadvantaged	145,616	358	55	4%	8%	36%	30%	21%	69%	73%	68%	61%	65%	82%
Economically disadvantaged	139,337	327	46	11%	18%	43%	20%	7%	62%	63%	56%	49%	53%	69%
Unknown economic status	280	323	49	15%	23%	31%	23%	8%	58%	62%	55%	48%	50%	68%
Primary Ethnicity—Not Economically Disadvantaged														
American Indian	826	345	45	4%	10%	45%	28%	13%	65%	71%	65%	57%	59%	79%
Asian American	24,568	390	60	1%	3%	22%	32%	42%	76%	81%	77%	71%	78%	89%
Pacific Islander	798	340	51	7%	12%	42%	27%	13%	65%	68%	61%	54%	58%	76%
Filipino	7,852	354	47	2%	8%	40%	34%	16%	69%	73%	66%	59%	65%	83%
Hispanic	33,306	336	46	8%	14%	44%	24%	9%	64%	66%	60%	52%	56%	74%
African American	6,785	325	45	11%	19%	44%	19%	7%	60%	63%	56%	49%	51%	69%
White	66,360	362	51	3%	6%	35%	34%	22%	70%	75%	70%	63%	67%	84%
Two or more races	5,121	361	54	3%	8%	35%	32%	23%	69%	75%	69%	62%	67%	83%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Atomic and Molecular Structure	Chemical Bonds, Biochemistry	Kinetics, Thermodynamics	Chemical Reactions	Conservation of Matter and Stoichiometry	Investigation and Experimentation
Primary Ethnicity—Economically Disadvantaged														
American Indian	543	326	43	10%	19%	44%	20%	7%	60%	62%	57%	49%	52%	71%
Asian American	14,196	356	53	4%	9%	36%	30%	20%	68%	72%	66%	59%	68%	80%
Pacific Islander	771	320	42	13%	20%	44%	19%	4%	60%	61%	54%	46%	51%	66%
Filipino	3,546	342	47	5%	13%	45%	26%	12%	66%	68%	61%	55%	61%	76%
Hispanic	96,865	322	43	13%	20%	45%	17%	5%	60%	61%	54%	47%	51%	67%
African American	9,018	311	41	19%	24%	41%	13%	3%	56%	57%	50%	43%	45%	61%
White	12,836	341	47	6%	13%	43%	27%	12%	65%	68%	63%	55%	58%	77%
Two or more races	1,562	335	47	8%	15%	44%	24%	10%	63%	66%	60%	52%	56%	73%
Primary Ethnicity—Unknown Economic Status														
American Indian	3	–	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	31	350	58	6%	16%	29%	26%	23%	67%	73%	63%	54%	63%	81%
Pacific Islander	1	–	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	14	337	46	7%	14%	36%	29%	14%	63%	67%	59%	58%	55%	74%
Hispanic	88	303	42	26%	30%	27%	15%	2%	53%	54%	48%	40%	38%	60%
African American	20	295	33	25%	45%	20%	10%	0%	50%	43%	43%	38%	43%	53%
White	57	338	43	7%	14%	39%	33%	7%	59%	70%	65%	54%	55%	75%
Two or more races	66	330	49	11%	23%	32%	26%	9%	62%	63%	56%	52%	55%	67%

Table 7.C.33 Demographic Summary for Earth Science

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster			
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Astronomy and Cosmology	Solid Earth	The Earth's Energy	Investigation and Experimentation
All valid scores	198,865	333	48	12%	13%	37%	26%	11%	54%	60%	56%	66%
Grade 9	127,088	334	48	11%	13%	38%	27%	11%	55%	60%	56%	66%
Grade 10	30,027	330	48	15%	14%	36%	25%	10%	53%	58%	55%	64%
Grade 11	41,750	332	49	14%	14%	35%	26%	11%	53%	59%	56%	66%
Male	107,357	338	51	13%	12%	33%	28%	14%	58%	60%	58%	66%
Female	91,417	328	43	12%	15%	42%	24%	7%	51%	59%	53%	66%
Gender unknown	91	309	45	24%	24%	35%	11%	5%	45%	49%	46%	53%
American Indian	1,767	332	48	14%	12%	37%	26%	10%	54%	59%	55%	65%
Asian American	8,350	347	50	8%	10%	33%	32%	17%	59%	64%	62%	73%
Pacific Islander	1,143	327	45	15%	13%	41%	24%	7%	52%	58%	53%	64%
Filipino	3,772	349	45	4%	8%	37%	35%	15%	60%	65%	63%	74%
Hispanic	112,632	325	44	14%	16%	41%	23%	7%	51%	57%	52%	62%
African American	12,753	315	44	20%	18%	39%	18%	5%	48%	53%	48%	57%
White	53,158	352	50	8%	8%	30%	34%	19%	61%	65%	64%	74%
Two or more races	5,290	344	50	10%	11%	32%	32%	16%	58%	63%	61%	71%
English only	114,678	340	50	11%	11%	35%	30%	14%	57%	62%	59%	68%
Initially fluent English prof.	10,813	345	46	7%	9%	37%	33%	14%	59%	64%	61%	72%
English learner	34,918	300	36	27%	25%	38%	9%	1%	42%	47%	42%	49%
Reclassified fluent Eng. prof.	38,117	339	41	6%	10%	45%	30%	9%	57%	63%	59%	71%
English prof. unknown	339	316	47	21%	21%	34%	19%	6%	48%	52%	49%	56%
No special ed. services	172,950	338	47	10%	12%	38%	29%	12%	56%	61%	58%	68%
Special ed. services	25,827	304	44	30%	22%	32%	12%	4%	44%	47%	44%	49%
Special ed. unknown	88	293	35	34%	26%	33%	6%	1%	41%	41%	38%	45%
Not econ. disadvantaged	74,338	349	49	8%	9%	33%	34%	17%	60%	65%	63%	73%
Economically disadvantaged	124,091	324	45	15%	16%	40%	22%	7%	51%	56%	52%	61%
Unknown economic status	436	316	47	23%	18%	35%	19%	6%	48%	52%	49%	56%
Primary Ethnicity—Not Economically Disadvantaged												
American Indian	710	341	50	11%	11%	33%	31%	15%	58%	61%	60%	70%
Asian American	3,600	358	50	6%	7%	28%	36%	23%	62%	67%	67%	77%
Pacific Islander	420	336	45	11%	10%	39%	30%	10%	56%	61%	57%	68%
Filipino	2,302	356	44	3%	6%	34%	39%	18%	63%	68%	66%	77%
Hispanic	24,224	336	46	10%	12%	39%	29%	11%	56%	61%	57%	67%
African American	4,278	326	46	16%	14%	37%	25%	8%	52%	57%	53%	62%
White	35,830	358	49	6%	6%	28%	37%	23%	63%	68%	67%	76%
Two or more races	2,974	356	49	6%	7%	30%	36%	21%	62%	67%	66%	76%
Primary Ethnicity—Economically Disadvantaged												
American Indian	1,051	325	46	17%	14%	40%	23%	7%	51%	57%	52%	62%
Asian American	4,736	340	48	9%	12%	37%	29%	13%	56%	62%	59%	69%
Pacific Islander	720	321	44	17%	14%	42%	21%	5%	50%	55%	50%	62%
Filipino	1,460	339	45	7%	12%	42%	30%	10%	56%	61%	59%	70%
Hispanic	88,231	321	43	15%	17%	41%	21%	5%	50%	56%	51%	60%
African American	8,452	310	42	23%	20%	39%	15%	3%	46%	51%	46%	54%
White	17,242	338	49	12%	11%	35%	29%	13%	56%	61%	58%	67%
Two or more races	2,199	331	48	14%	15%	35%	27%	9%	54%	58%	55%	65%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster			
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Astronomy and Cosmology	Solid Earth	The Earth's Energy	Investigation and Experimentation
Primary Ethnicity—Unknown Economic Status												
American Indian	6	–	–	–	–	–	–	–	–	–	–	–
Asian American	14	336	53	14%	7%	50%	14%	14%	57%	56%	57%	69%
Pacific Islander	3	–	–	–	–	–	–	–	–	–	–	–
Filipino	10	–	–	–	–	–	–	–	–	–	–	–
Hispanic	177	308	44	26%	20%	35%	16%	2%	47%	50%	45%	52%
African American	23	310	44	22%	26%	26%	22%	4%	51%	48%	47%	49%
White	86	337	51	15%	7%	37%	26%	15%	53%	58%	60%	66%
Two or more races	117	310	42	23%	24%	34%	16%	3%	45%	50%	46%	56%

Table 7.C.34 Demographic Summary for Physics

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Motion and Forces	Conservation of Energy and Momentum	Heat and Thermodynamics	Waves	Electric and Magnetic Phenomena	Investigation and Experimentation
All valid scores	85,323	355	54	7%	9%	32%	31%	22%	64%	65%	65%	65%	58%	67%
Grade 9	16,385	337	52	12%	14%	36%	24%	14%	57%	57%	57%	60%	52%	58%
Grade 10	10,507	350	54	8%	10%	33%	29%	19%	63%	62%	62%	64%	56%	65%
Grade 11	58,431	362	53	5%	7%	30%	33%	25%	66%	67%	68%	67%	60%	70%
Male	46,048	363	57	6%	8%	28%	31%	28%	68%	67%	68%	67%	60%	69%
Female	39,266	347	49	7%	11%	36%	30%	16%	60%	61%	61%	63%	56%	66%
Gender unknown	9	–	–	–	–	–	–	–	–	–	–	–	–	–
American Indian	420	351	50	7%	10%	32%	32%	19%	64%	63%	64%	63%	56%	67%
Asian American	12,731	385	56	2%	4%	21%	33%	41%	75%	76%	75%	73%	68%	76%
Pacific Islander	452	340	48	9%	13%	38%	29%	12%	58%	59%	58%	60%	53%	62%
Filipino	3,642	363	47	3%	5%	32%	37%	23%	66%	69%	68%	70%	62%	70%
Hispanic	35,748	335	47	10%	14%	39%	26%	10%	56%	56%	57%	59%	52%	59%
African American	4,372	325	47	16%	17%	38%	21%	8%	52%	51%	53%	55%	48%	55%
White	25,439	373	51	3%	4%	25%	36%	32%	72%	72%	73%	70%	63%	75%
Two or more races	2,519	367	54	4%	7%	27%	34%	28%	69%	69%	70%	68%	61%	72%
English only	46,839	362	53	5%	7%	29%	33%	26%	67%	67%	68%	67%	60%	70%
Initially fluent English prof.	8,516	370	57	4%	6%	28%	33%	30%	69%	70%	70%	69%	63%	72%
English learner	4,809	299	41	32%	27%	29%	9%	3%	42%	41%	38%	44%	42%	40%
Reclassified fluent Eng. prof.	25,063	348	49	5%	10%	39%	30%	16%	61%	62%	61%	63%	57%	65%
English prof. unknown	96	341	51	6%	14%	41%	29%	10%	56%	59%	59%	60%	54%	63%
No special ed. services	82,563	357	53	6%	9%	32%	31%	23%	65%	65%	66%	66%	59%	68%
Special ed. services	2,751	308	54	32%	23%	24%	12%	8%	45%	43%	44%	47%	43%	46%
Special ed. unknown	9	–	–	–	–	–	–	–	–	–	–	–	–	–
Not econ. disadvantaged	45,936	372	54	3%	5%	26%	34%	31%	71%	71%	72%	70%	63%	74%
Economically disadvantaged	39,301	337	48	10%	13%	38%	26%	12%	57%	57%	57%	59%	53%	60%
Unknown economic status	86	330	53	15%	19%	31%	24%	10%	55%	54%	55%	55%	49%	56%
Primary Ethnicity—Not Economically Disadvantaged														
American Indian	269	358	49	5%	8%	30%	34%	23%	67%	66%	68%	66%	59%	70%
Asian American	8,185	396	56	1%	2%	16%	33%	48%	78%	80%	79%	76%	71%	80%
Pacific Islander	251	349	49	6%	11%	34%	33%	16%	62%	63%	62%	63%	56%	68%
Filipino	2,592	367	47	2%	4%	30%	38%	26%	68%	70%	70%	71%	63%	72%
Hispanic	9,275	348	49	7%	10%	36%	31%	16%	61%	62%	63%	64%	56%	65%
African American	1,844	338	47	10%	13%	38%	27%	12%	57%	58%	59%	60%	52%	61%
White	21,590	376	50	2%	4%	23%	36%	34%	73%	73%	74%	72%	64%	76%
Two or more races	1,930	374	54	3%	5%	24%	35%	32%	72%	72%	73%	70%	63%	74%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Motion and Forces	Conservation of Energy and Momentum	Heat and Thermodynamics	Waves	Electric and Magnetic Phenomena	Investigation and Experimentation
Primary Ethnicity—Economically Disadvantaged														
American Indian	151	338	49	11%	15%	35%	28%	12%	59%	57%	58%	58%	51%	62%
Asian American	4,542	366	50	3%	6%	28%	34%	27%	68%	70%	67%	69%	64%	70%
Pacific Islander	201	328	45	12%	16%	43%	23%	6%	53%	53%	53%	57%	49%	56%
Filipino	1,046	353	46	4%	8%	37%	35%	17%	62%	65%	63%	67%	60%	66%
Hispanic	26,448	331	45	12%	15%	41%	24%	8%	54%	54%	54%	57%	51%	57%
African American	2,518	315	45	21%	19%	38%	17%	5%	48%	47%	49%	51%	45%	51%
White	3,829	352	48	6%	8%	35%	33%	18%	64%	63%	65%	64%	56%	67%
Two or more races	566	345	48	8%	10%	36%	33%	14%	61%	60%	62%	61%	55%	65%
Primary Ethnicity—Unknown Economic Status														
American Indian	0	–	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	4	–	–	–	–	–	–	–	–	–	–	–	–	–
Pacific Islander	0	–	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	4	–	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	25	306	51	32%	24%	24%	12%	8%	47%	41%	44%	45%	42%	43%
African American	10	–	–	–	–	–	–	–	–	–	–	–	–	–
White	20	349	42	5%	10%	30%	40%	15%	64%	61%	66%	64%	56%	71%
Two or more races	23	332	56	9%	17%	48%	17%	9%	53%	57%	54%	54%	50%	57%

Table 7.C.35 Demographic Summary for Integrated/Coordinated Science 1

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Biology/Life Sciences	Chemistry	Earth Sciences	Physics	Investigation and Experimentation
All valid scores	39,642	319	41	16%	15%	44%	20%	4%	58%	48%	60%	45%	60%
Grade 9	28,315	321	40	14%	15%	45%	21%	5%	58%	50%	61%	46%	61%
Grade 10	3,948	307	39	23%	19%	42%	14%	2%	55%	43%	54%	40%	55%
Grade 11	7,379	314	41	21%	16%	42%	19%	3%	59%	45%	57%	42%	58%
Male	21,459	319	43	18%	14%	42%	21%	5%	59%	48%	60%	44%	59%
Female	18,172	319	38	14%	17%	47%	19%	3%	57%	49%	59%	45%	61%
Gender unknown	11	289	32	36%	27%	36%	0%	0%	48%	39%	45%	27%	48%
American Indian	381	321	40	14%	16%	45%	20%	5%	59%	49%	61%	45%	62%
Asian American	2,139	340	46	9%	10%	37%	30%	14%	66%	57%	68%	53%	71%
Pacific Islander	221	316	40	17%	15%	47%	18%	3%	57%	48%	58%	43%	61%
Filipino	904	331	38	8%	12%	47%	27%	6%	63%	53%	65%	50%	66%
Hispanic	24,302	312	38	19%	18%	46%	16%	2%	55%	46%	57%	42%	57%
African American	2,945	307	37	23%	19%	43%	13%	1%	53%	45%	53%	40%	53%
White	7,941	336	41	9%	9%	41%	33%	8%	67%	54%	68%	49%	70%
Two or more races	809	328	41	12%	11%	45%	25%	6%	64%	51%	64%	47%	65%
English only	19,934	325	41	14%	13%	43%	25%	5%	61%	51%	62%	46%	63%
Initially fluent English prof.	2,737	332	41	9%	11%	46%	26%	8%	64%	53%	66%	48%	68%
English learner	7,136	289	32	36%	27%	33%	4%	0%	43%	38%	45%	36%	42%
Reclassified fluent Eng. prof.	9,778	325	35	9%	13%	54%	21%	3%	61%	50%	63%	47%	65%
English prof. unknown	57	305	40	30%	14%	44%	9%	4%	51%	42%	52%	41%	55%
No special ed. services	34,486	323	40	13%	14%	46%	22%	4%	60%	50%	62%	46%	63%
Special ed. services	5,137	289	35	40%	25%	29%	5%	1%	44%	38%	45%	35%	42%
Special ed. unknown	19	278	17	47%	42%	11%	0%	0%	35%	35%	38%	32%	35%
Not econ. disadvantaged	13,915	331	42	11%	11%	43%	28%	7%	64%	53%	65%	48%	67%
Economically disadvantaged	25,644	312	38	19%	18%	45%	16%	2%	55%	46%	56%	42%	57%
Unknown economic status	83	301	36	29%	17%	49%	4%	1%	50%	40%	52%	37%	53%
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	155	333	42	10%	12%	39%	32%	8%	65%	53%	67%	48%	68%
Asian American	1,112	351	48	7%	7%	33%	33%	20%	71%	61%	73%	56%	75%
Pacific Islander	104	327	36	10%	12%	48%	27%	4%	63%	51%	64%	46%	68%
Filipino	526	333	39	8%	11%	46%	28%	7%	64%	54%	66%	50%	68%
Hispanic	5,037	319	39	16%	14%	47%	20%	3%	58%	48%	60%	44%	60%
African American	1,005	313	38	18%	18%	46%	16%	2%	56%	47%	56%	42%	57%
White	5,527	341	40	7%	7%	40%	36%	10%	70%	56%	70%	51%	73%
Two or more races	449	334	40	9%	9%	44%	30%	8%	67%	53%	67%	50%	68%
Primary Ethnicity—Economically Disadvantaged													
American Indian	226	313	37	17%	19%	50%	11%	3%	55%	46%	57%	42%	57%
Asian American	1,019	328	42	12%	13%	42%	26%	8%	60%	53%	63%	49%	67%
Pacific Islander	117	306	41	24%	18%	46%	10%	2%	52%	44%	53%	40%	55%
Filipino	376	327	37	9%	13%	48%	24%	5%	61%	52%	63%	49%	65%
Hispanic	19,223	310	38	20%	18%	46%	14%	2%	54%	45%	56%	42%	56%
African American	1,933	303	36	26%	20%	42%	11%	1%	51%	44%	52%	40%	51%
White	2,403	323	41	15%	13%	44%	24%	5%	61%	50%	62%	45%	63%
Two or more races	347	320	40	16%	14%	46%	20%	4%	60%	49%	60%	44%	62%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Biology/Life Sciences	Chemistry	Earth Sciences	Physics	Investigation and Experimentation
Primary Ethnicity—Unknown Economic Status													
American Indian	0	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	8	–	–	–	–	–	–	–	–	–	–	–	–
Pacific Islander	0	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	2	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	42	300	34	31%	10%	55%	2%	2%	49%	39%	52%	36%	55%
African American	7	–	–	–	–	–	–	–	–	–	–	–	–
White	11	305	45	36%	18%	36%	9%	0%	56%	39%	55%	38%	52%
Two or more races	13	305	24	15%	31%	54%	0%	0%	57%	42%	53%	35%	56%

Table 7.C.36 Demographic Summary for Integrated/Coordinated Science 2

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Biology/Life Sciences	Chemistry	Earth Sciences	Physics	Investigation and Experimentation
All valid scores	3,409	319	41	13%	18%	46%	16%	6%	59%	48%	56%	39%	53%
Grade 9	1,140	334	45	8%	15%	45%	20%	13%	65%	55%	62%	44%	60%
Grade 10	1,309	318	39	14%	17%	46%	18%	4%	59%	46%	55%	39%	52%
Grade 11	960	304	32	18%	25%	47%	9%	1%	52%	41%	49%	33%	46%
Male	1,830	321	42	14%	17%	44%	18%	6%	57%	48%	58%	40%	52%
Female	1,576	318	40	12%	20%	48%	14%	5%	60%	48%	53%	38%	54%
Gender unknown	3	–	–	–	–	–	–	–	–	–	–	–	–
American Indian	29	312	33	17%	21%	55%	7%	0%	56%	46%	54%	35%	51%
Asian American	317	367	50	3%	5%	28%	30%	34%	75%	71%	75%	59%	71%
Pacific Islander	21	303	32	19%	33%	38%	10%	0%	54%	43%	49%	31%	44%
Filipino	40	338	43	10%	13%	33%	33%	13%	68%	60%	65%	46%	60%
Hispanic	2,091	311	35	15%	22%	49%	12%	2%	56%	43%	51%	36%	49%
African American	152	296	31	28%	29%	36%	5%	1%	50%	37%	41%	30%	46%
White	670	330	39	8%	12%	49%	24%	7%	63%	54%	63%	42%	60%
Two or more races	89	315	38	17%	15%	53%	12%	3%	56%	43%	54%	39%	54%
English only	1,651	321	41	13%	16%	47%	18%	6%	59%	49%	57%	39%	56%
Initially fluent English prof.	298	345	48	5%	12%	40%	23%	20%	69%	59%	66%	48%	63%
English learner	566	291	26	27%	36%	33%	3%	1%	46%	35%	41%	31%	38%
Reclassified fluent Eng. prof.	889	325	37	8%	13%	54%	19%	5%	63%	50%	58%	41%	54%
English prof. unknown	5	–	–	–	–	–	–	–	–	–	–	–	–
No special ed. services	3,051	323	41	11%	17%	48%	18%	6%	61%	49%	57%	40%	55%
Special ed. services	358	289	32	36%	31%	27%	4%	1%	42%	35%	41%	30%	38%
Special ed. unknown	0	–	–	–	–	–	–	–	–	–	–	–	–
Not econ. disadvantaged	1,293	335	46	8%	13%	45%	22%	12%	64%	56%	63%	44%	61%
Economically disadvantaged	2,106	310	35	16%	22%	47%	13%	2%	55%	43%	51%	36%	49%
Unknown economic status	10	–	–	–	–	–	–	–	–	–	–	–	–
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	10	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	279	374	48	2%	3%	25%	33%	37%	77%	75%	77%	61%	75%
Pacific Islander	14	311	34	14%	29%	43%	14%	0%	59%	50%	50%	35%	43%
Filipino	31	344	42	10%	6%	35%	32%	16%	72%	62%	67%	47%	61%
Hispanic	351	312	32	12%	21%	55%	11%	2%	56%	44%	53%	35%	51%
African American	56	302	34	23%	27%	39%	7%	4%	52%	40%	46%	32%	47%
White	497	335	39	6%	10%	49%	26%	8%	65%	57%	65%	43%	62%
Two or more races	55	320	39	16%	9%	58%	11%	5%	57%	42%	56%	41%	57%
Primary Ethnicity—Economically Disadvantaged													
American Indian	19	306	32	26%	16%	58%	0%	0%	55%	44%	46%	34%	51%
Asian American	37	322	45	8%	24%	46%	14%	8%	61%	46%	57%	41%	43%
Pacific Islander	7	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	9	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	1,736	310	35	16%	22%	47%	13%	2%	56%	43%	51%	36%	48%
African American	96	292	28	31%	30%	34%	4%	0%	49%	34%	39%	30%	45%
White	171	317	36	13%	18%	50%	17%	3%	57%	47%	56%	38%	54%
Two or more races	31	307	36	19%	26%	39%	16%	0%	52%	42%	49%	36%	50%

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Biology/Life Sciences	Chemistry	Earth Sciences	Physics	Investigation and Experimentation
Primary Ethnicity—Unknown Economic Status													
American Indian	0	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	1	–	–	–	–	–	–	–	–	–	–	–	–
Pacific Islander	0	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	0	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	4	–	–	–	–	–	–	–	–	–	–	–	–
African American	0	–	–	–	–	–	–	–	–	–	–	–	–
White	2	–	–	–	–	–	–	–	–	–	–	–	–
Two or more races	3	–	–	–	–	–	–	–	–	–	–	–	–

Table 7.C.37 Demographic Summary for Integrated/Coordinated Science 3

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Biology/Life Sciences	Chemistry	Earth Sciences	Physics	Investigation and Experimentation
All valid scores	856	303	40	23%	31%	32%	11%	3%	49%	37%	51%	36%	48%
Grade 9	34	288	22	32%	29%	38%	0%	0%	42%	32%	48%	28%	36%
Grade 10	135	285	25	33%	43%	23%	1%	0%	41%	31%	40%	28%	39%
Grade 11	687	307	42	21%	28%	33%	14%	4%	51%	39%	53%	38%	51%
Male	485	304	42	23%	28%	31%	14%	3%	50%	38%	53%	37%	48%
Female	369	301	37	23%	33%	33%	8%	4%	48%	37%	48%	35%	48%
Gender unknown	2	–	–	–	–	–	–	–	–	–	–	–	–
American Indian	17	293	46	35%	29%	18%	12%	6%	46%	32%	45%	32%	48%
Asian American	28	330	45	11%	11%	46%	21%	11%	63%	49%	63%	42%	61%
Pacific Islander	6	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	18	308	34	11%	28%	44%	17%	0%	45%	43%	58%	39%	51%
Hispanic	443	294	31	25%	37%	30%	7%	1%	45%	34%	46%	32%	44%
African American	52	281	19	35%	46%	19%	0%	0%	40%	28%	39%	28%	34%
White	281	320	47	17%	19%	36%	20%	8%	58%	43%	59%	44%	56%
Two or more races	11	285	25	36%	45%	18%	0%	0%	40%	26%	40%	36%	47%
English only	512	308	43	21%	28%	32%	14%	5%	53%	39%	53%	38%	50%
Initially fluent English prof.	44	305	34	14%	34%	36%	14%	2%	53%	37%	53%	35%	52%
English learner	138	281	28	43%	36%	17%	4%	0%	36%	32%	37%	29%	35%
Reclassified fluent Eng. prof.	158	304	33	14%	34%	44%	7%	2%	50%	37%	54%	37%	52%
English prof. unknown	4	–	–	–	–	–	–	–	–	–	–	–	–
No special ed. services	672	309	41	17%	29%	37%	14%	4%	52%	39%	54%	38%	52%
Special ed. services	182	281	28	45%	38%	14%	2%	1%	39%	29%	38%	29%	36%
Special ed. unknown	2	–	–	–	–	–	–	–	–	–	–	–	–
Not econ. disadvantaged	359	318	44	14%	24%	38%	16%	8%	57%	42%	59%	42%	56%
Economically disadvantaged	491	292	32	29%	35%	28%	8%	0%	44%	33%	45%	33%	42%
Unknown economic status	6	–	–	–	–	–	–	–	–	–	–	–	–
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	8	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	18	344	41	6%	0%	56%	28%	11%	70%	52%	76%	48%	68%
Pacific Islander	4	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	11	307	34	9%	36%	36%	18%	0%	45%	42%	55%	41%	48%
Hispanic	128	299	31	17%	40%	34%	7%	2%	49%	36%	48%	31%	49%
African American	12	291	26	17%	42%	42%	0%	0%	49%	28%	50%	32%	39%
White	171	334	48	11%	13%	39%	25%	13%	63%	49%	67%	50%	63%
Two or more races	7	–	–	–	–	–	–	–	–	–	–	–	–
Primary Ethnicity—Economically Disadvantaged													
American Indian	9	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	10	–	–	–	–	–	–	–	–	–	–	–	–
Pacific Islander	2	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	7	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	312	291	31	29%	36%	29%	6%	0%	43%	33%	46%	33%	42%
African American	40	279	16	40%	48%	13%	0%	0%	38%	29%	36%	26%	32%
White	110	298	35	28%	29%	31%	12%	0%	49%	34%	48%	34%	45%
Two or more races	1	–	–	–	–	–	–	–	–	–	–	–	–

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Biology/Life Sciences	Chemistry	Earth Sciences	Physics	Investigation and Experimentation
Primary Ethnicity—Unknown Economic Status													
American Indian	0	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	0	–	–	–	–	–	–	–	–	–	–	–	–
Pacific Islander	0	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	0	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	3	–	–	–	–	–	–	–	–	–	–	–	–
African American	0	–	–	–	–	–	–	–	–	–	–	–	–
White	0	–	–	–	–	–	–	–	–	–	–	–	–
Two or more races	3	–	–	–	–	–	–	–	–	–	–	–	–

Table 7.C.38 Demographic Summary for Integrated/Coordinated Science 4

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Biology/Life Sciences	Chemistry	Earth Sciences	Physics	Investigation and Experimentation
All valid scores	56	282	38	48%	16%	29%	7%	0%	45%	38%	47%	31%	35%
Grade 9	29	277	36	48%	21%	24%	7%	0%	40%	35%	46%	31%	33%
Grade 10	12	268	42	75%	0%	17%	8%	0%	40%	36%	38%	27%	26%
Grade 11	15	303	31	27%	20%	47%	7%	0%	58%	46%	57%	33%	44%
Male	33	284	42	48%	9%	33%	9%	0%	46%	38%	47%	32%	36%
Female	23	280	32	48%	26%	22%	4%	0%	43%	38%	48%	28%	32%
Gender unknown	0	–	–	–	–	–	–	–	–	–	–	–	–
American Indian	1	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	1	–	–	–	–	–	–	–	–	–	–	–	–
Pacific Islander	0	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	0	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	27	271	35	56%	22%	19%	4%	0%	38%	36%	43%	26%	30%
African American	3	–	–	–	–	–	–	–	–	–	–	–	–
White	23	294	41	39%	13%	35%	13%	0%	52%	40%	53%	35%	38%
Two or more races	1	–	–	–	–	–	–	–	–	–	–	–	–
English only	34	296	39	35%	12%	41%	12%	0%	54%	44%	54%	33%	42%
Initially fluent English prof.	1	–	–	–	–	–	–	–	–	–	–	–	–
English learner	14	253	19	79%	21%	0%	0%	0%	27%	28%	33%	25%	21%
Reclassified fluent Eng. prof.	7	–	–	–	–	–	–	–	–	–	–	–	–
English prof. unknown	0	–	–	–	–	–	–	–	–	–	–	–	–
No special ed. services	34	292	38	35%	15%	41%	9%	0%	52%	42%	53%	33%	38%
Special ed. services	22	266	32	68%	18%	9%	5%	0%	35%	33%	39%	27%	29%
Special ed. unknown	0	–	–	–	–	–	–	–	–	–	–	–	–
Not econ. disadvantaged	18	294	35	33%	11%	56%	0%	0%	55%	40%	53%	33%	42%
Economically disadvantaged	38	276	38	55%	18%	16%	11%	0%	41%	37%	45%	29%	31%
Unknown economic status	0	–	–	–	–	–	–	–	–	–	–	–	–
Primary Ethnicity—Not Economically Disadvantaged													
American Indian	0	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	1	–	–	–	–	–	–	–	–	–	–	–	–
Pacific Islander	0	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	0	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	7	–	–	–	–	–	–	–	–	–	–	–	–
African American	0	–	–	–	–	–	–	–	–	–	–	–	–
White	9	–	–	–	–	–	–	–	–	–	–	–	–
Two or more races	1	–	–	–	–	–	–	–	–	–	–	–	–
Primary Ethnicity—Economically Disadvantaged													
American Indian	1	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	0	–	–	–	–	–	–	–	–	–	–	–	–
Pacific Islander	0	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	0	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	20	265	32	60%	30%	5%	5%	0%	35%	35%	42%	25%	23%
African American	3	–	–	–	–	–	–	–	–	–	–	–	–
White	14	288	47	50%	7%	21%	21%	0%	45%	40%	51%	35%	38%
Two or more races	0	–	–	–	–	–	–	–	–	–	–	–	–

				Percent in Performance Level					Mean Percent Correct in Reporting Cluster				
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Biology/Life Sciences	Chemistry	Earth Sciences	Physics	Investigation and Experimentation
Primary Ethnicity—Unknown Economic Status													
American Indian	0	–	–	–	–	–	–	–	–	–	–	–	–
Asian American	0	–	–	–	–	–	–	–	–	–	–	–	–
Pacific Islander	0	–	–	–	–	–	–	–	–	–	–	–	–
Filipino	0	–	–	–	–	–	–	–	–	–	–	–	–
Hispanic	0	–	–	–	–	–	–	–	–	–	–	–	–
African American	0	–	–	–	–	–	–	–	–	–	–	–	–
White	0	–	–	–	–	–	–	–	–	–	–	–	–
Two or more races	0	–	–	–	–	–	–	–	–	–	–	–	–

Appendix 7.D—Types of Score Reports

Table 7.D.1 Score Reports Reflecting CST Results

2013 STAR CST Printed Reports	
Description	**Distribution**
The CST Student Report	
This report provides parents/guardians and teachers with the student's results, presented in tables and graphs. Data presented include the following: • Scale scores • Performance levels (advanced, proficient, basic, below basic, and far below basic) • Number and percent correct in each reporting cluster • Comparison of the student's scores on specific reporting clusters to the range of scores of students statewide who scored proficient on the total test • Writing score and scoring rubric, for students in grades four and seven • Student's California Reading List (CRL) number	This report includes individual student results and is not distributed beyond parents/guardians and the student's school. Two copies of this report are provided for each student. One is for the student's current teacher and one is distributed by the school district to parents/ guardians.
Student Record Label	
These reports are printed on adhesive labels to be affixed to the student's permanent school records. Each student shall have an individual record of accomplishment that includes STAR testing results (see California *EC* Section 60607[a]). Data presented include the following for each content area tested: • Scale scores • Performance levels • Student's CRL Number	This report includes individual student results and is not distributed beyond the student's school.
Student Master List	
This report is an alphabetical roster that presents individual student results. Data include the following: • Percent correct for each reporting cluster within each content area tested • A scale score and performance level for each content area tested • Writing response score (CSTs in grades four and seven) • CRL number	This report provides administrators and teachers with all students' results within each grade or within each grade and year-round schedule at a school. Because this report includes individual student results, it is not distributed beyond the student's school. It is recommended that Student Master List reports be retained until the grade level exits the school.

2013 STAR CST Printed Reports	
Description	**Distribution**
Student Master List Summary	
This report summarizes student results at the school, district, county, and state levels for each grade. It does not include any individual student information. ***Note:*** Summaries for specific CSTs for mathematics, science, and history–social science across grades are provided in the Student Master List Summary—End-of-Course report. For each CST, the following data are summarized: • By content area tested: – Number of students enrolled – Number and percent of students tested – Number and percent of valid scores – Number tested with scores – Mean percent correct • Mean scale score • Scale score standard deviation • Number and percent of students scoring at each performance level • The number of items for each reporting cluster and the mean percent correct • For grades four and seven, the percent of students achieving each writing response score	This report is a resource for evaluators, researchers, teachers, parents/guardians, community members, and administrators. One copy is packaged for the school and one for the school district. This report is also produced for school districts, counties, and the state. ***Note:*** The data in this report may be shared with parents/guardians, community members, and the media only if the data are for 11 or more students. It is recommended that summary reports be retained for at least five years.
Student Master List Summary—End-of-Course	
This report summarizes Student Master List information for EOC CSTs for mathematics, science, and history–social science across grades seven through eleven at the school, district, county, and state levels. It does not include any individual student information. At grades seven through eleven, CSTs for end-of-course mathematics are given in the following content areas: • Algebra I (grades seven through eleven) • General Mathematics (grades eight and nine) • Geometry (grades eight through eleven) • Algebra II (grades eight through eleven) • Integrated Mathematics 1, 2, and 3 (grades eight through eleven) • Summative High School Mathematics (grades nine through eleven). At grades nine through eleven, CSTs for end-of-course science are offered in the following content areas: • Biology • Chemistry	This report is a resource for evaluators, researchers, teachers, parents/guardians, community members, and administrators. One copy is packaged for the school and one for the school district. This report is also produced for school districts, counties, and the state. ***Note:*** The data on this report may be shared with parents/guardians, community members, and the media only if the data are for 11 or more students. It is recommended that summary reports be retained for at least five years.

2013 STAR CST Printed Reports	
Description	**Distribution**
• Physics • Earth Science • Integrated/Coordinated Science 1, 2, 3, and 4 Students in grades nine through eleven may also take the EOC CST for World History. For each of these CSTs, the following data are summarized: • By content area tested: – Number of students enrolled – Number and percent of students tested – Number and percent of valid scores – Number tested with scores • Mean percent correct • Mean scale score • Scale score standard deviation • Number and percent of students scoring at each performance level For each reporting cluster: • Number of items • Mean percent correct	
Subgroup Summary	
This set of reports disaggregates and reports results by the following subgroups: • All students • Disability status • Economic status • Gender • English proficiency • Primary ethnicity These reports contain no individual student-identifying information and are aggregated at the school, district, county, and state levels. For each subgroup within a report and for the total number of students, the following data are included for each test: • Total number tested in the subgroup • Percent of enrollment tested in the subgroup • Number and percent of valid scores • Number tested who received scores • Mean scale score • Standard deviation of scale score • Number and percent of students scoring at each performance level	This report is a resource for evaluators, researchers, teachers, parents/guardians, community members, and administrators. One copy is packaged for the school and one for the school district. This report is also produced for school districts, counties, and the state. ***Note:*** The data on this report may be shared with parents/guardians, community members, and the media only if the data are for 11 or more students. It is recommended that summary reports be retained for at least five years.

2013 STAR CST Printed Reports	
Description	**Distribution**
Subgroup Summary—Ethnicity for Economic Status	
This report, a part of the Subgroup Summary, disaggregates and reports results by cross-referencing each ethnicity with economic status. The economic status for each student is “economically disadvantaged,” “not economically disadvantaged,” or “economic status unknown.” A student is defined as “economically disadvantaged” if the most educated parent of the student, as indicated in the answer document or Pre-ID, has not received a high school diploma or the student is eligible to participate in the free or reduced-price lunch program also known as the National School Lunch Program (NSLP). As with the standard Subgroup Summary, this disaggregation contains no individual student-identifying information and is aggregated at the school, district, county, and state levels. For each subgroup within a report, and for the total number of students, the following data are included: • Total number tested in the subgroup • Percent of enrollment tested in the subgroup • Number and percent of valid scores • Number tested who received scores • Mean scale score • Standard deviation of scale score • Number and percent of students scoring at each performance level	This report is a resource for evaluators, researchers, teachers, parents/guardians, community members, and administrators. One copy is packaged for the school, and one for the school district. This report is also produced for school districts, counties, and the state. ***Note:*** The data on this report may be shared with parents/guardians, community members, and the media only if the data are for 11 or more students. It is recommended that summary reports be retained for at least five years.

Chapter 8: Analyses

Background

This chapter summarizes the item- and test-level statistics obtained for the CSTs administered during the spring of 2013.

The statistics presented in this chapter are divided into four sections in the following order:

1. Classical Item Analyses
2. Reliability Analyses
3. Analyses in Support of Validity Evidence
4. Item Response Theory (IRT) Analyses

Prior to 2013, differential item functioning (DIF) analyses were performed based on the final item analysis (FIA) sample for all operational and field-test items to assess differences in the item performance of groups of students that differ in their demographic characteristics. In 2013, because forms were reused, DIF analyses were not performed.

Each of these sets of analyses is presented in the body of the text and in the appendixes as listed below.

1. Appendix 8.A on page 388 presents the classical item analyses, including proportion-correct value (*p*-value) and point-biserial correlation (Pt-Bis) for each item in each operational test. Because all forms were reused, *p*-values and Pt-Bis are shown for both the original and the current administration of the tests. The appendix also presents information about the distribution of scores on the writing tasks administered in grades four and seven for the overall population and for the various subgroups. In addition, the average and median *p*-value and Pt-Bis for the operational test forms based on the current administration are presented in Table 8.1 starting on page 361.
2. Appendix 8.B on page 411 presents results of the reliability analyses of total test scores and subscores for the population as a whole and for selected subgroups. Also presented are results of the analyses of the accuracy and consistency of the performance classifications. Finally, interrater reliability results for the writing tasks administered in grades four and seven are shown.
3. Appendix 8.C on page 488 presents tables showing the correlation between CST scores in different content areas, which are provided as an example of the evidence of the validity of the interpretation and uses of CST scores. The results for the overall test population are presented in Table 8.5; the tables in Appendix 8.C summarize the results for various subgroups.
4. Appendix 8.D on page 532 presents the summaries of Rasch item difficulty statistics (*b*-values) for the operational items for forms with replacement or edited items—ELA in grades ten and eleven, World History, History–Social Science in grades eight and eleven, Summative High School Mathematics, General Mathematics, Biology, and Integrated/Coordinated Science 2 and 3. (For the summaries of *b*-values for ELA in grades two through nine, all mathematics except for Summative High School Mathematics and General Mathematics, all grade-level science, EOC Chemistry, Earth Science, and Physics, refer to Appendix D of the *CST Technical Report* in the year the form was administered originally; see Table 8.4 on page 374 for administration years.) In addition, the appendix presents the scoring tables obtained as a result of the IRT equating process.

Samples Used for the Analyses

CST analyses were conducted at different times after test administration and involved varying proportions of the full CST data. The classical item analyses presented in Appendix 8.A, the reliability statistics included in Appendix 8.B, and the content-area correlations presented in Appendix 8.C were calculated using the sample of student data that was the last "daily feed" data received on July 18, 2013, which comprised approximately 90–99 percent of the full CST data for the majority of tests.

During the 2013 administration, neither IRT calibrations nor scaling are implemented because of the form reuse and pre-equating. The IRT results of the tests with items replaced or edited due to security breaches are presented in Appendix 8.D. These IRT results are derived based on FIA samples (the data received by July 1, 2013, which comprise approximately 90–99 percent of the full CST data for the majority of the tests) of the most recent administration when the items were used.

For the reused intact forms without any replacement or edited items, the IRT results were derived based on the equating sample of the previous administration which can be found in Appendix D of the *CST Technical Report* in the year the form was administered originally; see Table 8.4 on page 374 for administration years.

Following the *Standards for Educational and Psychological Testing* (American Educational Research Association [AERA], American Psychological Association [APA], & National Council on Measurement in Education [NCME], 1999, Standard 6.4), the results of the classical item analyses and reliability analyses for the four CSTs for EOC mathematics and the CST for World History are also presented for the grade-specific population in addition to the overall test-taking population. "Grade-specific population" refers to test-takers in the particular grade for which the course has been recommended by the SBE, that is, in grade eight for Algebra I, grade nine for Geometry, grade ten for Algebra II, grade eleven for Summative High School Mathematics, and grade ten for World History.

Classical Item Analyses

Multiple-Choice Items

The classical item statistics that included overall and item-by-item proportion-correct indices and the point-biserial correlation indices were computed for the operational items. The *p*-value of an item represents the proportion of examinees in the sample that answered an item correctly. The formula for *p*-value is:

$$p\text{-}value_i = \frac{N_{ic}}{N_i} \tag{8.1}$$

where,

N_{ic} is the number of examinees that answered item *i* correctly, and

N_i is the total number of examinees that attempted the item.

The point-biserial correlation is a special case of the Pearson product-moment correlation used to measure the strength of the relationship between two variables, one dichotomously and one continuously measured—in this case, the item score (right/wrong) and the total test score. The formula for the Pearson product-moment correlation is:

$$r_{X_i T} = \frac{\mathrm{cov}(X_i, T)}{s_{X_i} s_T} \tag{8.2}$$

where,

$cov(X_i, T)$ is the covariance between the score of item *i* and total score T,

s_{X_i} is the standard deviation for the score of item i, and

s_T is the standard deviation for total score T.

The classical statistics for the current administration of the overall test are presented in Table 8.1. The item-by-item values for the classical statistics, including *p*-values, point-biserial correlations, distributional percents, and mean scores are presented in Table 8.A.1 through Table 8.A.11, which start on page 388. Each set of values is presented for both the current and the original presentation of each CST.

Table 8.1 Mean and Median Proportion Correct and Point Biserial by Test Form—Current Administration

					Mean		Median	
Content Area	**CST***	**Admin. Year**	**No. of Items**	**No. of Examinees**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
English–Language Arts	2	2013	65	458,825	0.68	0.47	0.68	0.47
	3	2013	65	436,198	0.69	0.43	0.69	0.44
	4	2013	75	426,373	0.68	0.45	0.69	0.46
	5	2013	75	420,681	0.71	0.42	0.70	0.42
	6	2013	75	425,310	0.68	0.41	0.71	0.41
	7	2013	75	432,810	0.68	0.41	0.70	0.41
	8	2013	75	429,438	0.66	0.40	0.67	0.41
	9	2013	75	455,314	0.66	0.41	0.68	0.42
	10	2013	75	445,018	0.68	0.42	0.66	0.43
	11	2013	75	433,623	0.65	0.42	0.64	0.43
History–Social Science	8	2013	75	454,521	0.64	0.43	0.64	0.43
	World History	2013	60	462,509	0.63	0.43	0.64	0.44
	11	2013	60	443,241	0.63	0.43	0.63	0.43
Mathematics	2	2013	65	460,077	0.76	0.45	0.78	0.46
	3	2013	65	439,109	0.78	0.45	0.82	0.45
	4	2013	65	430,766	0.80	0.47	0.82	0.48
	5	2013	65	423,903	0.71	0.46	0.75	0.46
	6	2013	65	427,761	0.67	0.45	0.67	0.45
	7	2013	65	392,718	0.62	0.42	0.63	0.43
	General Mathematics	2013	65	188,410	0.50	0.38	0.50	0.39
	Algebra I	2013	65	681,237	0.51	0.42	0.52	0.43
	Geometry	2013	65	405,328	0.55	0.43	0.56	0.42
	Algebra II	2013	65	294,094	0.54	0.40	0.53	0.40
	Summ. H.S Math	2013	65	160,690	0.73	0.43	0.75	0.43
	Integrated Math 1	2013	65	13,504	0.41	0.30	0.40	0.32
	Integrated Math 2	2013	65	4,956	0.45	0.31	0.45	0.32
	Integrated Math 3	2013	65	745	0.49	0.39	0.50	0.41
Science	5	2013	60	422,520	0.70	0.42	0.69	0.42
	8	2013	60	430,581	0.71	0.43	0.73	0.42
	10 Life Science	2013	60	442,013	0.66	0.45	0.66	0.45
	Biology	2013	60	552,645	0.62	0.44	0.62	0.46
	Chemistry	2013	60	285,233	0.63	0.40	0.62	0.40
	Earth Science	2013	60	198,865	0.57	0.40	0.56	0.42
	Physics	2013	60	85,323	0.64	0.42	0.64	0.43

					Mean		Median	
Content Area	**CST***	**Admin. Year**	**No. of Items**	**No. of Examinees**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
Science (cont.)	Int/Coord Science 1	2013	60	39,642	0.54	0.36	0.55	0.38
	Int/Coord Science 2	2013	60	3,409	0.50	0.36	0.49	0.36
	Int/Coord Science 3	2013	60	856	0.43	0.35	0.40	0.36
	Int/Coord Science 4	2013	60	56	0.40	0.32	0.40	0.37
Grade-Specific	Algebra I – 8	2013	65	268,280	0.58	0.42	0.59	0.43
	Geometry – 9	2013	65	145,467	0.63	0.41	0.63	0.42
	Algebra II – 10	2013	65	136,611	0.57	0.38	0.57	0.39
	Summ. H.S. Math – 11	2013	65	132,528	0.71	0.42	0.73	0.43
	World History –10	2013	60	416,955	0.64	0.42	0.64	0.43

* CSTs named by number only are grade-level tests.

Writing Tasks

As described earlier, students in grades four and seven were administered two different writing prompts at different times in the STAR testing cycle. Students were given one of the two writing prompts depending upon when they were tested.

The distributions of writing scores for the overall population and for the various subgroups are presented in Table 8.A.12 and Table 8.A.13, which appear on page 408. The subgroups include gender, ethnicity, economic status, provision of special services, and English-language fluency.

The mean scores obtained on the writing test for the overall population and for various subgroups are presented in Table 8.A.14 and Table 8.A.15. To quantify the differences between mean scores of subgroups, effect sizes were calculated; Cohen's *d* (1992) was used as the measure of effect size. Cohen's *d* is defined as the difference between two means divided by the pooled standard deviation adjusted for sample size. Cohen (1992) suggested that 0.2 is indicative of a small effect, 0.5 a medium, and 0.8 a large effect size. The effect sizes for various subgroup differences are presented in Table 8.A.16 and Table 8.A.17.

In 2013, the writing score is not included in the total ELA score that is used to calculate student scale scores.

Reliability Analyses

Reliability focuses on the extent to which differences in test scores reflect true differences in the knowledge, ability, or skill being tested, rather than fluctuations due to chance or random factors. The variance in the distribution of test scores—essentially, the differences among individuals—is partly due to real differences in the knowledge, skill, or ability being tested (true-score variance) and partly due to random unsystematic errors in the measurement process (error variance).

The number used to describe reliability is an estimate of the proportion of the total variance that is true-score variance. Several different ways of estimating this proportion exist. The estimates of reliability reported here are internal-consistency measures, which are derived from analysis of the consistency of the performance of individuals on items within a test (internal-consistency reliability). Therefore, they apply only to the test form being analyzed. They do not take into account form-to-form variation due to equating limitations or lack of parallelism, nor are they responsive to day-to-day variation due, for example, to students' state of health or testing environment.

Reliability coefficients may range from 0 to 1. The higher the reliability coefficient for a set of scores, the more likely individuals would be to obtain very similar scores if they were retested. The formula for the internal-consistency reliability as measured by Cronbach's Alpha (Cronbach, 1951) is defined by equation 8.3:

$$\alpha = \frac{n}{n-1}\left[1 - \frac{\sum_{i=1}^{n} s_i^2}{s_t^2}\right] \tag{8.3}$$

where,

n is the number of items,

s_i^2 is the variance of scores on the item *i*, and

s_t^2 is the variance of the total score.

The standard error of measurement (SEM) provides a measure of score instability in the score metric. The SEM is defined by:

$$s_e = s_t\sqrt{1-\alpha} \tag{8.4}$$

where,

α is the reliability estimated in equation 8.3, and

s_t is the standard deviation of the total score (either the total raw score or scale score).

The SEM is particularly useful in determining the confidence interval (CI) that captures an examinee's true score. Assuming that measurement error is normally distributed, it can be said that upon infinite replications of the testing occasion, approximately 95 percent of the CIs of ±1.96 SEM around the observed score would contain an examinee's true score (Crocker & Algina, 1986). For example, if an examinee's observed score on a given test equals 15 points, and the SEM equals 1.92, one can be 95 percent confident that the examinee's true score lies between 11 and 19 points (15 ± 3.76 rounded to the nearest integer).

Table 8.2 shows the reliability and SEM for each of the 38 operational CSTs, along with the number of items and examinees upon which those analyses were performed. The results for the grade-specific population for the five end-of-course CSTs—grade eight for Algebra I, grade nine for Geometry, grade ten for Algebra II, grade eleven for Summative High School Mathematics, and grade ten for World History—are also presented in this table.

Reliability analyses were not conducted for these tests due to the small sample size for each accommodation or modification. (See sample sizes for all accommodations and modifications in Table 2.D.1 to Table 2.D.29.)

Table 8.2 Reliabilities and SEMs for the CSTs

					Scale Score			Raw Score		
Content Area	**CST ***	**No. of Items**	**No. of Examinees**	**Reliab.**	**Mean**	**Std. Dev.**	**SEM**	**Mean**	**Std. Dev.**	**SEM**
English–Language Arts	2	65	458,825	0.94	357	66	15.61	44.00	13.73	3.26
	3	65	436,198	0.93	346	64	16.75	44.89	12.39	3.26
	4	75	426,373	0.95	374	61	14.26	50.75	15.07	3.53
	5	75	420,681	0.93	365	56	14.41	52.91	13.37	3.45
	6	75	425,310	0.93	363	54	14.23	50.91	13.36	3.55

Content Area	CST *	No. of Items	No. of Examinees	Reliab.	Scale Score Mean	Scale Score Std. Dev.	Scale Score SEM	Raw Score Mean	Raw Score Std. Dev.	Raw Score SEM
English–Language Arts (cont.)	7	75	432,810	0.93	364	62	16.34	51.15	13.36	3.53
	8	75	429,438	0.93	361	59	15.65	49.62	13.61	3.61
	9	75	455,314	0.93	364	57	15.27	49.82	13.56	3.61
	10	75	445,018	0.94	352	57	14.29	50.77	14.22	3.58
	11	75	433,623	0.93	345	62	15.95	48.43	14.26	3.66
History–Social Science	8	75	454,521	0.94	357	70	17.34	47.87	14.89	3.69
	World History	60	462,509	0.93	347	74	20.13	37.85	12.16	3.32
	11	60	443,241	0.92	349	70	19.37	37.65	11.86	3.30
Mathematics	2	65	460,077	0.93	380	83	21.21	49.45	11.64	2.97
	3	65	439,109	0.94	399	93	23.13	50.88	11.42	2.83
	4	65	430,766	0.94	395	78	18.92	51.91	11.55	2.78
	5	65	423,903	0.94	393	93	22.66	45.98	12.79	3.11
	6	65	427,761	0.94	367	76	18.96	43.38	13.18	3.29
	7	65	392,718	0.93	358	68	18.45	40.45	12.80	3.46
	General Math	65	188,410	0.91	318	56	16.86	32.67	12.08	3.64
	Algebra I	65	681,237	0.93	334	75	20.57	33.46	13.01	3.56
	Geometry	65	405,328	0.93	321	69	18.35	35.71	13.20	3.51
	Algebra II	65	294,094	0.92	325	68	19.76	35.02	12.19	3.52
	Summ. H.S. Math	65	160,690	0.93	360	76	20.47	47.46	11.82	3.17
	Integrated Math 1	65	13,504	0.85	291	51	20.09	26.66	9.24	3.64
	Integrated Math 2	65	4,956	0.86	318	48	18.18	29.54	9.74	3.67
	Integrated Math 3	65	745	0.92	331	75	21.76	31.96	12.25	3.57
Science	5	60	422,520	0.92	367	67	19.20	42.10	11.08	3.17
	8	60	430,581	0.92	391	97	26.99	42.35	11.14	3.10
	10 Life Science	60	442,013	0.93	360	70	18.23	39.52	12.23	3.20
	Biology	60	552,645	0.93	354	60	15.90	37.39	12.34	3.30
	Chemistry	60	285,233	0.91	343	53	15.90	37.66	11.24	3.37
	Earth Science	60	198,865	0.91	333	48	14.37	34.48	11.60	3.46
	Physics	60	85,323	0.92	355	54	15.36	38.23	11.72	3.33
	Int/Coord Science 1	60	39,642	0.89	319	41	13.65	32.15	10.48	3.52
	Int/Coord Science 2	60	3,409	0.88	319	41	14.06	30.24	10.38	3.54
	Int/Coord Science 3	60	856	0.88	303	40	13.71	25.78	10.24	3.52
	Int/Coord Science 4	60	56	0.86	282	38	13.94	23.77	9.39	3.47
Grade-Specific	Algebra I – 8	65	268,280	0.93	358	76	20.72	37.87	12.85	3.49
	Geometry – 9	65	145,467	0.92	345	66	18.24	40.94	12.32	3.40
	Algebra II – 10	65	136,611	0.91	336	64	19.40	37.17	11.58	3.50
	Summ. H.S. Math – 11	65	132,528	0.93	352	74	20.16	46.18	11.93	3.24
	World History – 10	60	416,955	0.92	348	72	20.17	38.11	11.86	3.32

* CSTs named by number only are grade-level tests.

Intercorrelations, Reliabilities, and SEMs for Reporting Clusters

For each CST, number-correct scores are computed for four to six reporting clusters. The number of items within each reporting cluster is limited, and cluster scores alone should not be used in making inferences about individual students.

Intercorrelations and reliability estimates for the reporting clusters are presented in Table 8.B.1 through Table 8.B.4 starting on page 411. Results are also reported in Table 8.B.5 for grade-specific samples of four EOC mathematics tests and the CST for World History. Consistent with previous years, the reliabilities across reporting clusters varied significantly according to the number of items in each cluster.

Subgroup Reliabilities and SEMs

The reliabilities of the 38 operational CSTs and the five grade-specific CSTs were examined for various subgroups of the examinee population. The subgroups included in these analyses were defined by their gender, ethnicity, economic status, provision of special services, and English-language fluency. The reliability analyses are also presented by primary ethnicity within economic status.

Reliabilities and SEM information for the total test scores and the reporting cluster scores are reported for each subgroup analysis. Table 8.B.6 through Table 8.B.19 present the overall test reliabilities for the various subgroups. Table 8.B.20 through Table 8.B.44 present the cluster-level reliabilities for the subgroups. Table 8.B.20 through Table 8.B.24 present the cluster-level reliabilities for the subgroups based on gender and economic status.

The next set of tables, Table 8.B.25 through Table 8.B.29, shows the same analyses for the subgroups based on provision of special services and English-language fluency. Table 8.B.30 through Table 8.B.34 present results for the subgroups based on primary ethnicity of the examinees. The last set of tables, Table 8.B.35 through Table 8.B.44, present the cluster-level reliabilities for the subgroups based on primary ethnicity within economic status.

Note that the reliabilities are reported only for samples that are comprised of 11 or more examinees. Also, in some cases, score reliabilities were not estimable and are presented in the tables as hyphens. Finally, results based on samples that contain 50 or fewer examinees should be interpreted with caution due to small sample sizes.

Conditional Standard Errors of Measurement

As part of the IRT-based equating procedures, scale-score conversion tables and conditional standard errors of measurement (CSEMs) are produced. CSEMs for CST scale scores are based on IRT and are calculated by the IRTEQUATE module in a computer system called the Generalized Analysis System (GENASYS).

The CSEM is estimated as a function of measured ability. It is typically smaller in scale score units toward the center of the scale in the test metric, where more items are located, and larger at the extremes, where there are fewer items. An examinee's CSEM under the IRT framework is equal to the inverse of the square root of the test information function:

$$\mathrm{CSEM}(\hat{\theta}) = \frac{1}{\sqrt{I\left(\hat{\theta}\right)}} a \tag{8.5}$$

where,

$\mathrm{CSEM}(\hat{\theta})$ is the standard error of measurement, and

$\mathrm{I}(\hat{\theta})$ is the test information function at ability level $\hat{\theta}$.

The statistic is multiplied by a, where a is the original scaling factor needed to transform theta to the scale-score metric. The value of a varies by grade and content area.

SEMs vary across the scale. When a test has cut scores, it is important to provide CSEMs at the cut scores.

Table 8.3 presents the CSEMs at the lowest score required for a student to be classified in the below basic, basic, proficient, and advanced performance levels for each CST. Note that scale score CSEMs are not provided for the Integrated/Coordinated Science tests because

these tests were not scaled using the same procedures as the other CSTs. See Chapter 2 on page 20 for additional details. These CSEMs tend to be similar within families of tests.

The CSEMs tend to be higher at the advanced cut points for all tests. The pattern of lower values of CSEMs at the basic and proficient levels are expected since (1) more items tend to be of middle difficulty; and (2) items at the extremes still provide information toward the middle of the scale. This results in more precise scores in the middle of the scale and less precise scores at the extremes of the scale.

Table 8.3 Scale Score CSEM at Performance-level Cut Points

Content Area	CST *	Below Basic		Basic		Proficient		Advanced	
		Min SS	CSEM	Min SS	CSEM	Min SS	CSEM	Min SS	CSEM
English–Language Arts	2	262	14	300	13	350	14	402	18
	3	259	15	300	14	350	16	402	21
	4	269	14	300	13	350	12	393	14
	5	271	13	300	12	350	13	395	16
	6	268	13	300	13	350	13	394	15
	7	263	15	300	14	350	15	401	16
	8	266	15	300	14	350	14	395	17
	9	265	15	300	14	350	14	397	17
	10	263	13	300	13	350	14	392	17
	11	259	15	300	14	350	15	396	19
History–Social Science	8	271	16	300	15	350	16	396	19
	World History	275	17	300	18	350	18	400	22
	11	270	18	300	18	350	18	401	22
Mathematics	2	236	18	300	17	350	19	414	25
	3	236	17	300	17	350	18	414	23
	4	245	15	300	14	350	16	401	20
	5	248	19	300	19	350	19	430	23
	6	253	17	300	15	350	16	415	20
	7	257	17	300	16	350	17	414	20
	General Mathematics	257	17	300	16	350	17	414	20
	Algebra I	253	19	300	18	350	18	428	22
	Geometry	247	17	300	15	350	16	418	22
	Algebra II	257	18	300	18	350	17	416	22
	Summ. H.S. Mathematics	235	17	300	16	350	18	420	26
	Integrated Mathematics 1	249	21	300	19	350	19	425	23
	Integrated Mathematics 2	258	20	300	18	350	17	418	20
	Integrated Mathematics 3	252	22	300	21	350	20	428	23
Science †	5	268	16	300	16	350	17	410	22
	8	253	23	300	23	350	24	403	27
	10 Life Science	269	16	300	15	350	16	399	19
	Biology	276	15	300	14	350	14	394	16
	Chemistry	276	14	300	13	350	14	394	18
	Earth Science	277	14	300	14	350	14	393	17
	Physics	276	14	300	13	350	14	393	16

* CSTs named by number only are grade-level tests.

† CSEMS for the CSTs for Integrated/Coordinated Science are not available.

Decision Classification Analyses

The methodology used for estimating the reliability of classification decisions is described in Livingston and Lewis (1995) and is implemented using the ETS-proprietary computer program RELCLASS-COMP (Version 4.14).

Decision accuracy describes the extent to which examinees are classified in the same way as they would be on the basis of the average of all possible forms of a test. Decision accuracy answers the following question: How does the actual classification of test-takers, based on their single-form scores, agree with the classification that would be made on the basis of their true scores, if their true scores were somehow known? RELCLASS-COMP estimates decision accuracy using an estimated multivariate distribution of reported classifications on the current form of the exam and the classifications based on an all-forms average (true score).

Decision consistency describes the extent to which examinees are classified in the same way as they would be on the basis of a single form of a test other than the one for which data are available. Decision consistency answers the following question: What is the agreement between the classifications based on two nonoverlapping, equally difficult forms of the test? RELCLASS-COMP also estimates decision consistency using an estimated multivariate distribution of reported classifications on the current form of the exam and classifications on a hypothetical alternate form using the reliability of the test and strong true-score theory.

In each case, the proportion of classifications with exact agreement is the sum of the entries in the diagonal of the contingency table representing the multivariate distribution. Reliability of classification at a cut score is estimated by collapsing the multivariate distribution at the passing score boundary into an *n* by *n* table (where *n* is the number of performance levels) and summing the entries in the diagonal. Figure 8.1 and Figure 8.2 present the two scenarios graphically.

Figure 8.1 Decision Accuracy for Achieving a Performance Level

		Decision made on a form actually taken	
		Does not achieve a performance level	Achieves a performance level
True status on all-forms average	Does not achieve a performance level	Correct classification	Misclassification
	Achieves a performance level	Misclassification	Correct classification

Figure 8.2 Decision Consistency for Achieving a Performance Level

		Decision made on the alternate form taken	
		Does not achieve a performance level	Achieves a performance level
Decision made on the form taken	Does not achieve a performance level	Correct classification	Misclassification
	Achieves a performance level	Misclassification	Correct classification

The results of these analyses are presented in Table 8.B.45 through Table 8.B.82 in Appendix 8.B. For the CST for ELA in grades four and seven, the decision classification

analyses are based on scores of the multiple-choice items only because the writing score is not a part of the total ELA score.

Each table includes the contingency tables for both accuracy and consistency of the various performance-level classifications. The proportion of students being accurately classified is determined by summing across the diagonals of the upper tables. The proportion of consistently classified students is determined by summing the diagonals of the lower tables.

The classifications are collapsed to below-proficient versus proficient and above, which are the critical categories for Adequate Yearly Progress (AYP) calculations, and are also presented in the tables.

Writing Score Reliability

The reliability of the writing task can be estimated indirectly by examining the correlation between the MC and writing components in relation to the MC reliability. The lower bound reliability for a constructed response (CR) item in a test with MC items and only one CR item can be estimated using the squared correlation between the MC and writing (CR) portions of the test and dividing by the reliability of the MC portion of the test ($(Corr_{Writing\text{-}MC})^2/Rel_{MC}$) (Sax, 1989), and substituting sample estimates into it.

The SEM for writing (that is, the CR portion of the test) can then be estimated by substituting sample estimates into the following equation:

$$\sigma_{e_{CR}} = \sigma_{CR} * \sqrt{1 - reliability_{CR}} \tag{8.6}$$

where,

σ_{CR} is the standard deviation of the writing scores.

The reliability estimates for the multiple-choice scores were 0.95 for grade four and 0.93 for grade seven. The approximate lower bound reliability for the essay scores was estimated to be 0.27 and 0.31 for the two grades, respectively.

Prompt and Rater Agreement Summary

As described earlier, in order to monitor the accuracy of ratings, two raters scored approximately 10 percent of the examinees' writing responses. The two sets of ratings were used to carry out interrater agreement and generalizability analyses to assess the reliability of the writing scores.

Interrater Reliability Analyses

In the context of essay scoring, interrater reliability or consistency is defined as the degree of agreement between ratings or scores assigned by two or more readers to a given response. It is an indicator of homogeneity and is most frequently measured using intraclass correlation coefficient (ICC), which incorporates the exact agreement between raters over and above that expected by chance. The index is defined as the following:

$$ICC = r_I = (ms_{between} - ms_{within})/(ms_{between} + [k - 1]ms_{within}) \tag{8.7}$$

where,

$ms_{between}$ is the mean-square estimate of between-subjects variance, and

ms_{within} is the mean-square estimate of within-subjects variance.

For categorical ratings, Cohen's Kappa statistic has the properties of an intraclass correlation coefficient and can be used for interrater reliability. Cohen's Kappa was therefore used as a primary indicator of the interrater reliability of the writing scoring. In addition, the

percentages of ratings on which the raters were in exact agreement or differed by just one point were computed.

The reliability analyses were performed on the approximately 10 percent of the overall testing population that were scored by two raters. From those double-scored writing responses, samples were selected that had valid ratings (1, 2, 3, or 4) for both raters (see Appendix 7.A on page 269 for the writing scoring rubrics). Zero is a valid score for the writing responses but was not provided by a rater. Instead, a score of zero was assigned when the student attempted the writing task but either did not provide a response, refused to provide a response, or responded to a writing task from an earlier administration.

The results of interrater analyses are presented in Table 8.B.88 and Table 8.B.89 in Appendix 8.B. Table 8.B.90 and Table 8.B.91 provide descriptive statistics of the ratings by the two raters.

Generalizability Analyses

Generalizability analyses were performed on the writing scores to quantify the proportion of variance explained by various possible sources of variation, including raters, writing prompt, and persons (desired variance). A generalizability study (g-study) was performed to estimate variance components for selected sources of variation also known as “facets.” A d-study was performed to estimate the generalizability coefficient (Brennan, 2001a; Crocker & Algina, 1986).

The computer programs GENOVA and its extension, urGENOVA, were used to carry out these analyses (Brennan, 2001b; Crick & Brennan, 1983). Since two raters scored each student’s response but each student did not receive the same prompt, a nested unbalanced design was used (Lee & Kantor, 2005; Wang et al., 2007) as described below:

Design = (Person : Task) x Rater

The model assumes that the raters are selected from an infinite pool of raters and all the raters are randomly equivalent. The model also assumes that the writing prompts are randomly selected from a universe of prompts and that students’ writing responses are randomly assigned to the raters. The results of the study are presented in Table 8.B.92 and Table 8.B.93 on page 487.

Validity Evidence

Validity refers to the degree to which each interpretation or use of a test score is supported by evidence that is gathered (AERA, APA, & NCME, 1999; ETS, 2002). It is a central concern underlying the development, administration, and scoring of a test and the uses and interpretations of test scores.

Validation is the process of accumulating evidence to support each proposed score interpretation or use. It involves more than a single study or gathering one particular kind of evidence. Validation involves multiple investigations and various kinds of evidence (AERA, APA, & NCME, 1999; Cronbach, 1971; ETS, 2002; Kane, 2006). The process begins with test design and continues through the entire assessment process, including item development and field testing, analyses of item and test data, test scaling, scoring, and score reporting.

This section presents the evidence gathered to support the intended uses and interpretations of scores for the CST testing program. The description is organized in the manner prescribed by *The Standards for Educational and Psychological Testing* (AERA,

APA, & NCME, 1999). These standards require a clear definition of the purpose of the test, which includes a description of the qualities—called constructs—that are to be assessed by a test, the population to be assessed, as well as how the scores are to be interpreted and used.

In addition, the *Standards* identify five kinds of evidence that can provide support for score interpretations and uses, which are as follows:

1. Evidence based on test content;
2. Evidence based on relations to other variables;
3. Evidence based on response processes;
4. Evidence based on internal structure; and
5. Evidence based on the consequences of testing.

These kinds of evidence are also defined as important elements of validity information in documents developed by the U.S. Department of Education for the peer review of testing programs administered by states in response to the Elementary and Secondary Education Act (USDOE, 2001).

The next section defines the purposes of the CSTs, followed by a description and discussion of the kinds of validity evidence that have been gathered.

Purposes of the CSTs

As mentioned in Chapter 1, the 38 CSTs form the cornerstone of the STAR program. These tests carry the most weight in calculating school and district API. Additionally, the CSTs for ELA and mathematics in grades two through eight are used in determining AYP that applies toward meeting the requirement of the federal Elementary and Secondary Education Act (ESEA), which is to have all students score at proficient or above by 2014.

The Constructs to Be Measured

The 38 CSTs, given in English, are designed to show how well students perform relative to the California content standards. These content standards were approved by the SBE; they describe what students should know and be able to do at each grade level.

Test blueprints and specifications written to define the procedures used to measure the content standards provide an operational definition of the construct to which each set of standards refers—that is, they define, for each content area to be assessed, the tasks to be presented, the administration instructions to be given, and the rules used to score examinee responses. They control as many aspects of the measurement procedure as possible so that the testing conditions will remain the same over test administrations (Cronbach, 1971; Cronbach, Gleser, Nanda, & Rajaratnam, 1972) to minimize construct-irrelevant score variance (Messick, 1989). The content blueprints for the CSTs can be found on the CDE STAR CST Blueprints Web page at http://www.cde.ca.gov/ta/tg/sr/blueprints.asp. ETS has developed all CST test items to conform to the SBE-approved content standards and test blueprints.

Interpretations and Uses of the Scores Generated

Total test scores expressed as scale scores, student performance levels, and subscores for each reporting cluster are generated for each grade-level and content-area test. The total test scale score is used to draw inferences about a student's achievement in the content area and to classify the achievement into one of five performance levels: advanced, proficient, basic, below basic, and far below basic.

Reporting cluster scores, also called subscores, are used to draw inferences about a student's achievement in each of several specific knowledge or skill areas covered by each test. Reporting cluster results compare an individual student's percent-correct score to the average percent-correct for the state as a whole. The range of scores for students who scored proficient on the total test is also provided for each cluster using a percent-correct metric. The reference points for this range are: (1) the average percent-correct for students who received the lowest score qualifying for the proficient performance level; and (2) the average percent-correct for students who received the lowest score qualifying for the advanced performance level, minus one percent. A detailed description of the uses and applications of CST scores is presented in Chapter 7, which starts on page 255.

The tests that make up the STAR Program, along with other assessments, provide results or score summaries that are used for different purposes. The four major purposes are:

1. Communicating with parents and guardians;
2. Informing decisions needed to support student achievement;
3. Evaluating school programs; and
4. Providing data for state and federal accountability programs for schools.

These are the only uses and interpretations of scores for which validity evidence has been gathered. If the user wishes to interpret or use the scores in other ways, the user is cautioned that the validity of doing so has not been established (AERA, APA, & NCME, 1999, Standard 1.3). The user is advised to gather evidence to support these additional interpretations or uses (AERA, APA, & NCME, 1999, Standard 1.4).

Intended Test Population(s)

California public school students are the intended test population for the CSTs. Students in grades two through eleven are tested in ELA and mathematics. In addition, students in grades five, eight, and ten take a grade-level science test, and students in grades eight and eleven are tested in grade-level history–social science. Students in grades nine through eleven can also take an EOC World History test and an EOC science test. Beginning in 2007, students in grade seven who were enrolled in an Algebra I course took the CST for Algebra I instead of the grade-level test. Only those students whose parents/guardians have submitted written requests to exempt them from STAR Program testing do not take the tests.

Validity Evidence Collected

Evidence Based on Content

According to *The Standards for Educational and Psychological Testing* (AERA, APA, & NCME, 1999), analyses that demonstrate a strong relationship between a test's content and the construct that the test was designed to measure can provide important evidence of validity. In current K–12 testing, the construct of interest usually is operationally defined by state content standards and the test blueprints that specify the content, format, and scoring of items that are admissible measures of the knowledge and skills described in the content standards. Evidence that the items meet these specifications and represent the domain of knowledge and skills referenced by the standards supports the inference that students' scores on these items can appropriately be regarded as measures of the intended construct.

As noted in the AERA, APA, and NCME *Test Standards* (1999), evidence based on test content may involve logical analyses of test content in which experts judge the adequacy

with which the test content conforms to the test specifications and represents the intended domain of content. Such reviews can also be used to determine whether the test content contains material that is not relevant to the construct of interest. Analyses of test content may also involve the use of empirical evidence of item quality.

Also to be considered in evaluating test content are the procedures used for test administration and test scoring. As Kane (2006, p. 29) has noted, although evidence that appropriate administration and scoring procedures have been used does not provide compelling evidence to support a particular score interpretation or use, such evidence may prove useful in refuting rival explanations of test results. Evidence based on content includes the following:

Description of the state standards—As was noted in Chapter 1, the SBE adopted rigorous content standards in 1997 and 1998 in four major content areas: ELA, history–social science, mathematics, and science. These standards were designed to guide instruction and learning for all students in the state and to bring California students to world-class levels of achievement.

Specifications and blueprints—ETS maintains item specifications for each CST. The item specifications describe the characteristics of the items that should be written to measure each content standard. A thorough description of the specifications can be found in Chapter 3, starting on page 181. Once the items were developed and field-tested, ETS selected all CST test items to conform to the SBE-approved California content standards and test blueprints. Test blueprints for the CSTs were proposed by ETS and reviewed and approved by the Assessment Review Panels (ARPs), which are advisory panels to the CDE and ETS on areas related to item development for the CSTs. Test blueprints were also reviewed and approved by the CDE and presented to the SBE for adoption. There have been no recent changes in the blueprints for the CSTs. The test blueprints for the CSTs can be found on the CDE STAR CST Blueprints Web page at http://www.cde.ca.gov/ta/tg/sr/blueprints.asp.

Item development process—A detailed description of the item development process for the CSTs is presented in Chapter 3, starting on page 181.

Item review process—Chapter 3 explains in detail the extensive item review process applied to items that were written for use in the CSTs. In brief, items written for the CSTs underwent multiple review cycles and involved multiple groups of reviewers. One of the reviews was carried out by an external reviewer, that is, the ARPs. The ARPs were responsible for reviewing all newly developed items for alignment to the California content standards.

Form construction process—For each test, the content standards, blueprints, and test specifications were used as the basis for choosing items (refer to “Test Assembly” on page 10 in Chapter 2 for the replacement item selection rules). Additional targets for item difficulty and discrimination that were used for test construction were defined in light of what are desirable statistical characteristics in test items and statistical evaluations of the CST items.

Guidelines for test construction were established with the goal of maintaining parallel forms to the greatest extent possible from year to year. Details can be found in Chapter 4, starting on page 191.

Additionally, an external review panel, the Statewide Pupil Assessment Review (SPAR), was responsible for reviewing and approving the achievement tests to be used statewide for the testing of students in California public schools, grades two through eleven. More information about the SPAR is given in Chapter 3, starting on page 187.

Alignment study—Strong alignment between standards and assessments is fundamental to meaningful measurement of student achievement and instructional effectiveness. Alignment results should demonstrate that the assessments represent the full range of the content standards and that these assessments measure student knowledge in the same manner and at the same level of complexity as expected in the content standards.

Human Resource Research Organization (HumRRO) performed an alignment study for the CSTs in April 2007. HumRRO utilized the Webb alignment method to evaluate the alignment of the 2006 CSTs to the California content standards. The Webb method requires a set of raters to evaluate each test item on two different dimensions: (1) the standard(s) targeted by items, and (2) the depth of knowledge required of students to respond to items. These ratings form the basis of the four separate Webb alignment analyses: categorical concurrence, depth-of-knowledge consistency, range-of-knowledge correspondence, and balance-of-knowledge representation. Good alignment was found for the CSTs in English–language arts, mathematics, science, and history–social science.

Evidence Based on Relations to Other Variables

Empirical results concerning the relationships between the score on a test and measures of other variables external to the test can also provide evidence of validity when these relationships are found to be consistent with the definition of the construct that the test is intended to measure. As indicated in the *Test Standards* (AERA, APA, & NCME, 1999), the variables investigated can include other tests that measure the same construct and different constructs, criterion measures that scores on the test are expected to predict, as well as demographic characteristics of examinees that are expected to be related and unrelated to test performance.

Correlations Between Scores on the CSTs and Scores on the CAT/6 Survey

Convergent validity evidence was collected in 2004 by examining the relationship between CSTs and their CAT/6 Survey (TerraNova, 2nd Edition, 2000) counterparts. The CAT/6 Survey is a norm-referenced test that assesses students in reading, language, spelling, mathematics, and science and evaluates student achievement in terms of norms. The CSTs were expected to relate closely to their counterparts in the CAT/6 Survey programs when they measured similar constructs, and to correlate less well when they measured different constructs. A full description of the study can be found in the *California Standardized Testing Program Technical Report, Spring 2005 Administration* (CDE, 2005), linked on the CDE STAR Technical Reports Web page at http://www.cde.ca.gov/ta/tg/sr/technicalrpts.asp. [Note: the preceding Web address is no longer valid.]
A summary of findings follows:

Correlations Between Scores on the CST for ELA and Scores on the CAT/6 Survey

Reading/Language/Spelling—The study showed that, as expected, CST for ELA scores in all grades correlated highly with scores on both the CAT/6 Survey Reading Language tests, because these tests assessed similar skills. The correlation coefficients between the CST for ELA and CAT/6 Survey Spelling tests were somewhat lower, which is to be expected because these tests measured somewhat different skills.

Correlations Between Scores on the CST for Mathematics and Scores on the CAT/6 Survey Mathematics—In grades two through seven, student scores on the CST Mathematics tests correlated highly with their scores on CAT/6 Survey Mathematics test. This was expected because these tests assessed similar skills. In general, more moderate results were found in the upper grades when students' CAT/6 scores were correlated with the EOC CSTs and the integrated tests. This was expected since the CSTs at the upper grade levels were designed to measure more specific content defined by the state's content standards, whereas the CAT/6 tests were designed to assess content that was most commonly taught across the nation at the time that the CAT/6 tests were published.

Correlations Between Scores on the CST for Science and Scores on the CAT/6 Survey Science—All EOC science CSTs correlated moderately high with the CAT/6 Survey Science tests across grades. This was expected since the EOC tests were designed to assess a narrower range of course-related content than were the CAT/6 Survey Science tests.

Differential Item Functioning Analyses

Analyses of DIF can provide evidence of the degree to which a score interpretation or use is valid for individuals who differ in particular demographic characteristics. For the CSTs, DIF analyses were performed after the test forms' original administration on all operational items and all field-test items for which sufficient student samples were available.

The results of the DIF analyses are presented in Appendix 8.E of the *CST Technical Report* produced for the year the form was originally administered. Reports are linked on the CDE's Technical Reports and Studies Web page at http://www.cde.ca.gov/ta/tg/sr/ttechnicalrpts .asp. [Note: the preceding Web address is no longer valid.] The year of original administration for each CST is shown in Table 8.4.

Content Area	CST *	Year
English–Language Arts	2	2009
	3	2010
	4 †	2011
	5	2009
	6	2010
	7 †	2011
	8	2009
	9	2010
	10	2011
	11	2009
History–Social Science	8	2012
	World History	2012
	11	2012
Mathematics	2	2009
	3	2010
	4	2011
	5	2009
	6	2010
	7	2011
	General Mathematics	2009
	Algebra I	2009
	Geometry	2009
	Algebra II	2009
	Summative High School Mathematics	2011

Table 8.4 Original Year of Administration for CSTs

Content Area	CST *	Year
Mathematics (cont.)	Integrated Mathematics 1	2009
	Integrated Mathematics 2	2009
	Integrated Mathematics 3	2009
Science	5	2009
	8	2009
	10 Life Science	2009
	Biology	2009
	Chemistry	2011
	Earth Science	2010
	Physics	2011
	Integrated/Coordinated Science 1	2011
	Integrated/Coordinated Science 2	2010
	Integrated/Coordinated Science 3	2011
	Integrated/Coordinated Science 4	2009

* CSTs named by number only are grade-level tests.

† MC items only.

Correlations Between Content-area Test Scores

To the degree that students' content-area test scores correlate as expected, evidence of the validity in regarding those scores as measures of the intended constructs is provided. Table 8.5 on page 376 provides the correlations between scores on the 2013 CST content-area tests and the numbers of students on which these correlations were based. Sample sizes for individual tests are shown in bold font on the diagonals of the correlation matrices, and the numbers of students on which the correlations were based are shown on the lower off-diagonals. The correlations are provided in the upper off-diagonals. Results are based on all students with valid CST scores and are provided by grade to account for different course-taking patterns in the upper grades.

Results for these students appear to be consistent with expectations. In general, students' ELA scores correlated moderately with their mathematics scores. They correlated more highly with their scores on the history–social science and science CSTs.

Table 8.C.1 through Table 8.C.22 in Appendix 8.C provide the content-area test score correlations by gender, ethnicity, English-language fluency, economic status, and special service utilization. Similar patterns of correlations between students' ELA, history–social science, mathematics, and science scores were found within the subgroups.

Note that while the correlations are reported only for samples that comprise 11 or more examinees with valid scores, results based on samples that contain 50 or fewer examinees should be interpreted with caution due to small sample sizes. Correlations between scores on any two content-area tests where 10 or fewer examinees with valid scores are expressed as hyphens. Correlations between scores on two content-area tests that cannot be administered together to the same group of students are expressed as "N/A."

Note: Due to limited column space, test names were not repeated on the column heading of each correlation matrix in Table 8.5 and Table 8.C.1 through Table 8.C.22. Instead, numerical headings, such as "1." or "2." were used (in the case of Grade 2 in Table 8.5 "1." refers to "1. English–Language Arts", and "2." refers to "2. Mathematics").

Table 8.5 CST Content-area Correlations (All Valid Scores)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**458,825**	0.79					
	2. Mathematics	457,846	**460,077**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**436,198**	0.79					
	2. Mathematics	434,214	**439,109**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**426,373**	0.75					
	2. Mathematics	424,709	**430,766**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**420,681**	0.74	0.80				
	2. Mathematics	418,437	**423,903**	0.74				
	3. Science	419,434	419,753	**422,520**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**425,310**	0.78					
	2. Mathematics	422,813	**427,761**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**432,810**	0.75	0.61				
	2. Mathematics	388,838	**392,718**	N/A				
	3. Algebra I	40,910	N/A	**40,950**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**429,438**	0.81	0.64	0.64	0.58	0.64	0.79
	2. History–Social Science	427,962	**454,521**	0.63	0.61	0.55	0.62	0.81
	3. General Mathematics	126,917	145,368	**146,558**	N/A	N/A	N/A	0.70
	4. Algebra I	266,732	267,785	N/A	**268,280**	N/A	N/A	0.69
	5. Geometry	30,917	30,900	N/A	N/A	**30,958**	N/A	0.64
	6. Algebra II	1,003	1,002	N/A	N/A	N/A	**1,004**	0.66
	7. Science	426,811	429,730	128,058	266,882	30,897	1,000	**430,581**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**455,314**	0.78	0.63	0.57	0.65	0.61	0.54	0.79	0.79	0.72	0.76
	2. World History	31,565	**32,594**	0.55	0.58	0.66	0.65	0.50	0.81	0.81	0.73	0.76
	3. General Mathematics	34,120	2,140	**41,852**	N/A	N/A	N/A	N/A	0.62	0.69	0.62	0.72
	4. Algebra I	230,083	11,232	N/A	**233,942**	N/A	N/A	N/A	0.61	0.72	0.53	0.67
	5. Geometry	145,111	12,985	N/A	N/A	**145,467**	N/A	N/A	0.69	0.82	0.64	0.77
9	**6. Algebra II**	36,349	4,864	N/A	N/A	N/A	**36,454**	N/A	0.66	0.79	0.54	0.74
	7. Summ. H.S. Mathematics	1,000	193	N/A	N/A	N/A	N/A	**1,003**	0.58	0.56	0.64	0.76
	8. Biology	232,942	20,187	7,061	92,136	105,326	27,947	702	**238,659**	N/A	N/A	N/A
	9. Chemistry	5,608	1,638	48	836	2,545	1,996	117	N/A	**5,726**	N/A	N/A
	10. Earth Science	118,175	2,727	15,718	84,785	18,386	1,669	26	N/A	N/A	**127,088**	N/A
	11. Physics	16,078	1,317	78	5,422	7,600	2,828	121	N/A	N/A	N/A	**16,385**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**445,018**	0.75	0.52	0.60	0.57	0.55	0.79	0.78	0.70	0.70	0.74
	2. World History	399,310	**416,955**	0.47	0.54	0.52	0.51	0.77	0.77	0.69	0.74	0.72
	3. Algebra I	91,633	83,934	**94,055**	N/A	N/A	N/A	0.52	0.54	0.59	0.50	0.64
	4. Geometry	151,528	142,906	N/A	**152,813**	N/A	N/A	0.63	0.63	0.71	0.56	0.74
	5. Algebra II	135,996	126,807	N/A	N/A	**136,611**	N/A	0.58	0.62	0.70	0.46	0.66
10	**6. Summ. H.S. Mathematics**	27,125	24,397	N/A	N/A	N/A	**27,159**	0.58	0.62	0.68	0.56	0.66
	7. Life Science	437,122	398,422	90,121	150,622	135,486	27,068	**442,013**	0.87	0.77	0.77	0.78
	8. Biology	205,004	202,808	56,681	90,250	40,468	5,660	204,687	**215,430**	N/A	N/A	N/A
	9. Chemistry	145,196	134,650	4,770	35,870	83,484	18,950	144,848	N/A	**146,102**	N/A	N/A
	10. Earth Science	27,447	27,448	12,460	9,678	2,375	249	27,362	N/A	N/A	**30,027**	N/A
	11. Physics	10,361	9,031	719	3,296	4,500	1,638	10,312	N/A	N/A	N/A	**10,507**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**433,623**	0.56	0.79	0.50	0.53	0.47	0.60	0.80	0.70	0.71	0.71
	2. World History	12,185	**12,960**	0.63	0.37	0.39	0.24	0.30	0.59	0.35	0.60	0.42
	3. History–Social Science	426,052	11,515	**443,241**	0.47	0.48	0.44	0.52	0.78	0.67	0.76	0.69
	4. Algebra I	42,632	3,665	42,273	**44,010**	N/A	N/A	N/A	0.52	0.57	0.48	0.62
	5. Geometry	75,049	2,635	74,860	N/A	**76,090**	N/A	N/A	0.57	0.60	0.52	0.64
11	**6. Algebra II**	118,311	1,477	118,927	N/A	N/A	**120,025**	N/A	0.49	0.60	0.43	0.61
	7. Summ. H.S. Mathematics	132,234	808	131,791	N/A	N/A	N/A	**132,528**	0.63	0.75	0.49	0.70
	8. Biology	94,993	3,482	97,145	12,305	18,412	20,998	34,304	**98,556**	N/A	N/A	N/A
	9. Chemistry	131,782	1,419	132,457	3,004	19,676	60,368	42,385	N/A	**133,405**	N/A	N/A
	10. Earth Science	38,641	1,764	40,914	9,764	10,947	6,053	4,484	N/A	N/A	**41,750**	N/A
	11. Physics	57,951	488	58,060	749	4,280	13,663	37,312	N/A	N/A	N/A	**58,431**

Correlations between the reporting cluster scores are presented in Table 8.B.1 through Table 8.B.4 for the 38 CSTs. Results are also reported in Table 8.B.5 for grade-specific samples of four end-of-course mathematics tests and the World History test.

In general, moderate correlations between cluster scores should be expected since, by design, the clusters measure various aspects of the same construct. The findings given in the tables show that, in general, moderate intercorrelations were obtained. More specifically, in general they ranged between .57 and .85. As also would be expected, the correlations were higher among clusters that assessed more similar skills than they were among clusters that assessed somewhat dissimilar skills. For example, in mathematics, the clusters related to number sense correlated more highly with the cluster Algebra and Data Analysis than they did with Measurement and Geometry.

The CSTs for General Mathematics, Integrated Mathematics, and Integrated/Coordinated Science that are composed of items from other CSTs exhibited lower intercluster correlations, as expected.

Generalizability Analyses for Writing

Generalizability analyses were performed on students' writing scores for grades four and seven to assess the proportion of variance explained by raters, writing prompt, and persons. The details on the design and methodology are described in the subsection "Generalizability Analyses" in the "Writing Score Reliability" section on page 368. Details about the results can be found in Table 8.B.92 and Table 8.B.93 on page 487.

A decision study (d-study) was conducted to look at the generalizability-coefficient (g-coefficient) for the writing scores; the g-coefficient was 0.77 for grade four and 0.76 for grade seven. The largest variance component was attributed to the "person" variation, which is the desired variation to occur among the examinee or "person" scores. Variation attributable to the construct-irrelevant prompt variable was small, and the variation attributable to the rater was negligible for both grades.

Evidence Based on Response Processes

As noted in the AERA, APA, and NCME *Standards* (1999), additional support for a particular score interpretation or use can be provided by theoretical and empirical evidence indicating that examinees are using the intended response processes when responding to the items in a test. This evidence may be gathered from interacting with examinees in order to understand what processes underlie their item responses. Finally, evidence may also be derived from feedback provided by observers or judges involved in the scoring of examinee responses.

Evidence of Rater Reliability and Interrater Agreement

Rater consistency for the writing prompt is critical to the CST writing scores and their interpretations. These findings provide evidence of the degree to which raters agree in their observations about the qualities evident in students' essay responses. In order to evaluate the reliability of the student scores on the writing prompts administered in grades four and seven, two raters scored approximately 10 percent of the examinee responses. The data collected were used to evaluate interrater reliability and interrater agreement.

Interrater Reliability

Cohen's Kappa statistics findings provide evidence of the degree to which a student's score may vary from rater to rater. Without explicit criteria to guide the rating process, two independent raters may not assign the same score to a given response. Research has

shown the value of Kappa statistics between 0.41 and 0.60 as exhibiting moderate levels of agreement between the two ratings (Landis & Koch, 1977). The results in Table 8.B.88 and Table 8.B.89 showed moderate levels of agreement between raters that scored examinees' written responses to the prompts administered in grades four and seven.

Interrater Agreement

As noted previously, approximately 10 percent of the test population's responses to the writing prompts in grades four and seven were scored by two raters. The percentage of students for whom the raters were in exact agreement was 66 percent for grade four and 64 percent for grade seven. The percentage of essay responses for which there was exact or adjacent agreement between the two sets of ratings was 99 percent for both grades four and seven.

Evidence Based on Internal Structure

As suggested by the *Standards* (AERA, APA, & NCME, 1999), evidence of validity can also be obtained from studies of the properties of the item scores and the relationship between these scores and scores on components of the test. To the extent that the score properties and relationships found are consistent with the definition of the construct measured by the test, support is gained for interpreting these scores as measures of the construct.

For the CSTs, it is assumed that a single construct underlies the total scores obtained on each test. Evidence to support this assumption can be gathered from the results of item analyses, evaluations of internal consistency, and studies of model-data fit, dimensionality, and reliability.

With respect to the subscores that are reported, these scores are intended to reflect examinees' knowledge and/or skill in an area that is part of the construct underlying the total test. Analyses of the intercorrelations among the subscores themselves and between the subscores and total test score can be used for studying this aspect of the construct. Information about the internal consistency of the items on which each subscore is based is also useful to provide.

Classical Statistics

Point-biserial correlations calculated for the items in a test show the degree to which the items discriminate between students with low and high scores on a test. To the degree that the correlations are high, evidence that the items assess the same construct is provided. As shown in Table 8.1, the mean point biserial was greater than or equal to 0.40 for 30 out of 38 CSTs and was between 0.30 and 0.39 for eight CSTs. The point biserials for the individual items in the CSTs of the 2013 administration and their previous administrations are presented in Table 8.A.1 through Table 8.A.11.

Also germane to the validity of a score interpretation are the ranges of item difficulty for the items on which a test score will be based. The finding that items have difficulties that span the range of examinee ability provides evidence that examinees at all levels of ability are adequately measured by the items. Information on average item *p*-values is given in Table 8.1; individual *p*-values are presented in Table 8.A.1 through 8.A.11 side by side with the *p*-values of these items obtained when the intact forms were originally used. (The summaries of the IRT difficulty indicator b-values for operational items in tests that included replacement items—listed in Table 8.6—can be found in Table 8.D.1 through Table 8.D.8. The distributions of the *b*-values for these tests that contained replacement items are given in Table 8.D.9 through Table 8.D.12. For operational items in the other tests, the summaries

of *b*-values can be found in Appendix D of the *CST Technical Report* in the year the form was administered originally; see Table 8.4 on page 374 for administration years.)

The data in Table 8.1 indicate that 26 of the CSTs had *p*-values with means ranging from 0.50 to 0.70; out of those, 15 CSTs had mean *p*-values ranging from 0.50 to 0.65.

Reliability

Reliability is a prerequisite for validity. The finding of reliability in student scores supports the validity of the inference that the scores reflect a stable construct. This section will describe briefly findings concerning the total test level, as well as reliability results for the reporting clusters.

Overall reliability—The reliability analyses on each of the 38 operational CSTs are presented in Table 8.2. The results indicate that the reliabilities for all grade-level CSTs for ELA, history–social science, mathematics, and science were very high, ranging from 0.92 to 0.95. Reliability estimates for all but six of the EOC CSTs also tended to be high as well, ranging in the low 0.90s. The exceptions were Integrated Mathematics 1 and 2 and the Integrated/Coordinated Science 1, 2, 3, and 4 tests, ranging from 0.85 to 0.89.

Reporting cluster reliabilities—For each CST, number-correct scores are computed for the reporting clusters. The reliabilities of these scores are presented in Table 8.B.1 through Table 8.B.5 for the 38 CSTs. The reliabilities of reporting clusters invariably are lower than those for the total tests because they are based on very few items. Consistent with the findings of previous years, the cluster reliabilities also are affected by the number of items in each cluster, with cluster scores based on fewer items having somewhat lower reliabilities than cluster scores based on more items.

Because the reliabilities of scores at the cluster level are lower, schools supplement the score results with other information when interpreting the results.

Subgroup reliabilities—The reliabilities of the 38 operational CSTs and the five grade-specific CSTs were also examined for various subgroups of the examinee population that differed in their demographic characteristics. The characteristics considered were gender, ethnicity, economic status, provision of special services, English-language fluency, and ethnicity-by-economic status. The results of these analyses can be found in Table 8.B.6 through Table 8.B.19.

Reliability of performance classifications—The methodology used for estimating the reliability of classification decisions is described in the section “Decision Classification Analyses” on page 366. The results of these analyses are presented in Table 8.B.45 through Table 8.B.87 in Appendix 8.B; these tables start on page 472. When the classifications are collapsed to below-proficient versus proficient and above, which are the critical categories for AYP analyses, the proportion of students that were classified accurately ranged from 0.91 to 0.94 across all CSTs. Similarly, the proportion of students that were classified consistently ranged from 0.87 to 0.93 for students classified into below-proficient versus proficient and advanced.

These levels of accuracy and consistency are high and they are consistent with levels seen in previous years.

Dimensionality

Dimensionality analyses were conducted by a CDE psychometrics team (Gaffney et al., 2010; Gaffney & Perryman, 2009). The study investigated the factor structures of the CSTs in grades three and five as part of peer review for ESEA.

Two factors corresponding to the ELA and mathematics domain were found for the CSTs in these grades, as would be expected, since these tests were designed to measure different constructs.

Evidence Based on Consequences of Testing

As observed in the *Standards*, tests are usually administered "with the expectation that some benefit will be realized from the intended use of the scores" (AERA, APA, & NCME, 1999, p. 18). When this is the case, evidence that the expected benefits accrue will provide support for intended use of the scores. The CDE and ETS are in the process of determining what kinds of information can be gathered to assess the consequences of administration of the CSTs.

IRT Analyses

Post-Equating

Prior to 2013, the CSTs were equated to a reference form using a common-item nonequivalent groups design and post-equating methods based on IRT. The "base" or "reference" calibrations for the CSTs were established by calibrating samples of data from a specific administration. Doing so established a scale to which subsequent item calibrations could be linked.

The procedures used for post-equating the CSTs prior to 2013 involved three steps: item calibration, item parameter scaling, and true-score equating. ETS used GENASYS for the IRT item calibration and equating work. As part of this system, a proprietary version of the PARSCALE computer program (Muraki & Bock, 1995) was used and parameterized to result in one-parameter calibrations. Research at ETS has suggested that PARSCALE calibrations done in this manner produce results that are virtually identical to results based on WINSTEPS (Way, Kubiak, Henderson, & Julian, 2002). The post-equating procedures were applied to all CSTs except for the four CSTs for Integrated/Coordinated Science. Special scaling procedures were employed for these CSTs.

Pre-Equating

During the 2013 administration, because all the test forms were used in previous STAR operational administrations, pre-equating was conducted prior to administration of the tests. Based on the sample invariant property of item response theory (IRT), all the item parameter estimates were placed on the reference scale in their previous administrations through the post-equating procedure described above. For all CSTs using reuse forms without any edits or replacement to items, the conversion tables from previous administrations when the forms were originally used are directly applied to the current administration. Otherwise, in the cases where replacement or edited items are used, conversion tables are generated using the true-score equating method described in Chapter 2, page 17. The item parameters used for true-score equating are post-equating item parameters from the reused forms for the unchanged items and the post-equating item parameters from the most recent administration for the replacement or edited items.

Descriptions of IRT analyses such as the model-data fit analyses can be found in Chapter 8 of the original-year technical report. The results of the IRT analyses are presented in Appendix 8.D of the *CST Technical Report* produced for the year the form was originally administered. Reports are linked on the CDE's Technical Reports and Studies Web page at http://www.cde.ca.gov/ta/tg/sr/technicalrpts.asp. [Note: the preceding Web address is no longer valid.] The year of original administration for each multiple-choice CST is shown in Table 8.4.

The following CSTs have IRT *b*-value and distribution tables available in Appendix 8.D starting on page 532 because they contain replacement or edited items.

Table 8.6 CSTs with Replacement Items

Content Area	CST *	# Repl. Items
English–Language Arts	10	1
	11	2
History–Social Science	8	1
	World History	5
	11	1
Mathematics	General Mathematics	1 **
	Summative High School Mathematics	2
Science	Biology	2
	Integrated/Coordinated Science 2	1
	Integrated/Coordinated Science 3	1

* CSTs named by number only are grade-level tests.

** The item was edited and used again operationally since it appeared originally in the reused forms.

The details on all equating procedures are given in Chapter 2 starting on page 15.

Summaries of Scaled IRT *b*-values

For the post-equating procedure prior to the 2013 administration, once the IRT *b*-values were placed on the item bank scale, analyses were performed to assess the overall test difficulty, the difficulty level of reporting clusters, and the distribution of items in a particular range of item difficulty.

During the 2013 administration, IRT calibrations or scaling are not implemented, but scaled *b*-value parameters derived through the post-equating procedure from their previous administrations are used for pre-equating the CSTs. In the tests where items are replaced or edited, the scaled *b*-values of these items from the most recent administration are adopted to develop the pre-equated score conversion tables.

Table 8.D.1 through Table 8.D.8 present univariate statistics (mean, standard deviation, minimum, and maximum) for the scaled IRT *b*-values for the tests containing replacement or edited items. The results for the overall test are presented separately for the operational items and for each reporting cluster (operational items). (For operational items of the other tests, the summaries of *b*-values can be found in Appendix D of the *CST Technical Report* in the year the form was administered originally; see Table 8.4 on page 374 for administration years.)

Table 8.D.9 and Table 8.D.12 show the distributions of operational items for tests containing replacement items across 16 intervals of *b*-values. In these tables, the intervals range from “greater than or equal to 3.5” to “less than –3.5” points within each interval. (For operational items of the other tests, the distributions of *b*-values can be found in Appendix D of the *CST Technical Report* in the year the form was administered originally; see Table 8.4 on page 374 for administration years.)

Evaluation of Pre-Equating

Pre-equating is performed on the basis of the assumption of item response theory (IRT) models that item parameters remain invariant across samples given a similar ability distribution. To produce results that are sufficiently accurate for high-stakes decisions, previously administered operational forms were reused so that item parameters were obtained from large, representative samples, and factors that may affect item parameter

estimations, such as context effects (e.g., item positions) and speededness, were well controlled.

To ensure that items performed similarly in the current administration as in the year they were originally administered in the intact forms, comparisons of classical statistics such as *p*-values and point-biserial correlations are made between the current administration and the item bank values in the year of the original administration.

Equating Results

During the 2013 administration, for all operational CSTs using reuse forms without any edits, the conversion tables from their original administrations (listed in Table 8.4 on page 374) are directly applied to the current administration. For operational CSTs with replacement items or edits, new conversion tables were developed based on equating parameters (item parameters used to develop conversion tables for reused forms) for the unchanged items and the item parameters based on FIA samples of the most recent administration for the replacement or edited. Specifically, IRT true-score equating procedures were used to transform the new form number-correct scores to their respective reference form number-correct scale. These converted raw scores were then transformed to scale scores through table lookup and linear interpolation. The reference conversions for the forms used in 2013 were taken from one of the 2002, 2003, 2004, or 2006 forms (see Chapter 10 starting on page 570 for specifics on the base years).

Complete raw-score-to-scale-score conversion tables for the CSTs administered in 2013 are presented in Table 8.D.13 through Table 8.D.35 starting on page 536. The raw scores and corresponding transformed scale scores are listed in those tables. The scale scores were truncated at both ends of the scale so that the minimum reported scale score was 150 and the maximum reported scale score was 600. The scale scores defining the various performance-level cut points are presented in Table 2.1, which is in Chapter 2 on page 18.

Differential Item Functioning Analyses

Analyses of DIF assess differences in the item performance of groups of students who differ in their demographic characteristics. Prior to the 2013 administration, DIF analyses were performed based on FIA sample, and were performed on all operational items and all field-test items for which sufficient student samples were available. DIF analyses are not implemented during the 2013 administration because forms are reused and all items have been evaluated for DIF during the previous administration when the intact forms were originally used. These DIF results can be found in Appendix E of the *CST Technical Report* in the year the form was administered originally; see Table 8.4 on page 374 for administration years.

The statistical procedure of DIF analysis that was conducted prior to the 2013 administration is described as follows.

The sample size requirements for the DIF analyses were 100 in the focal group and 400 in the combined focal and reference groups. These sample sizes were based on standard operating procedures with respect to DIF analyses at ETS. The DIF analyses utilized the Mantel-Haenszel (MH) DIF statistic (Mantel & Haenszel, 1959; Holland & Thayer, 1985). This statistic is based on the estimate of constant odds ratio and is described as the following:

The α_{MH} is the constant odds ratio taken from Dorans and Holland (1993, equation 7) and computed as:

$$\alpha_{MH} = \frac{\left(\sum_m R_{rm} \frac{W_{fm}}{N_{tm}}\right)}{\left(\sum_m R_{fm} \frac{W_{rm}}{N_{tm}}\right)} \tag{8.8}$$

$$MH\ D\text{-}DIF = -2.35 \ln[\alpha_{MH}] \tag{8.9}$$

where,

R = number right,

W = number wrong,

N = total in:

fm = focal group at ability m,

rm = reference group at ability m, and

tm = total group at ability m.

Items analyzed for DIF at ETS are classified into one of three categories: A, B, or C. Category A contains items with negligible DIF. Category B contains items with slight to moderate DIF. Category C contains items with moderate to large values of DIF.

These categories have been used by ETS testing programs for more than 15 years. The definitions of the categories based on evaluations of the item-level MH D-DIF statistics are as follows:

DIF Category	Definition
A (negligible)	• Absolute value of MH D-DIF is not significantly different from zero, or is less than one. • Positive values are classified as “A+” and negative values as “A-.”
B (moderate)	• Absolute value of MH D-DIF is significantly different from zero but not from one, and is at least one; OR • Absolute value of MH D-DIF is significantly different from one, but is less than 1.5. • Positive values are classified as “B+” and negative values as “B-.”
C (large)	• Absolute value of MH D-DIF is significantly different from one, and is at least 1.5. • Positive values are classified as “C+” and negative values as “C-.”

The factors considered in the DIF analyses included gender, ethnicity, level of English-language fluency, and primary disability. Note, however, that analyses of English learners on the CST for ELA were presented for readers’ interest. Differential performance on an ELA item that is due to the language difficulties of nonnative speakers did not indicate that an item is unfair or biased.

Tables also listed the operational and field-test items exhibiting significant DIF (C-DIF). Test developers are instructed to avoid selecting field-test items flagged as having shown DIF that disadvantages a focal group (C-DIF) for future operational test forms unless their inclusion is deemed essential to meeting test-content specifications.

Tables showed the distributions of operational and field-test items across the DIF category classifications for the CSTs. In these tables, classifications of B- or C- indicated DIF against a focal group; classifications of B+ and C+ indicate DIF in favor of a focal group. The last two columns of each table showed the total number of items flagged for DIF in one or more comparisons.

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Appendix 8.A—Classical Analyses

Table 8.A.1 Item-by-item *p*-value and Point Biserial for ELA, Grades Two through Six—Current Year (2013) and Original Year of Administration

Item-by-item *p*-value and Point Biserial for ELA, Grades Two through Six																				
CSTs	**Grade 2**				**Grade 3**				**Grade 4**				**Grade 5**				**Grade 6**			
Years	**2013**		**2009**		**2013**		**2010**		**2013**		**2011**		**2013**		**2009**		**2013**		**2010**	
Items	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
1	0.67	0.45	0.64	0.45	0.85	0.30	0.84	0.30	0.80	0.50	0.79	0.50	0.70	0.51	0.68	0.51	0.82	0.45	0.80	0.47
2	0.51	0.35	0.49	0.32	0.71	0.45	0.68	0.44	0.57	0.38	0.57	0.38	0.66	0.38	0.64	0.39	0.70	0.49	0.67	0.49
3	0.84	0.42	0.84	0.39	0.78	0.43	0.76	0.42	0.71	0.45	0.67	0.44	0.81	0.37	0.79	0.38	0.67	0.34	0.64	0.34
4	0.52	0.43	0.50	0.42	0.68	0.54	0.66	0.54	0.86	0.38	0.85	0.40	0.53	0.33	0.50	0.33	0.70	0.37	0.66	0.37
5	0.76	0.41	0.74	0.41	0.69	0.42	0.65	0.40	0.63	0.45	0.62	0.46	0.81	0.47	0.77	0.48	0.83	0.38	0.82	0.40
6	0.55	0.44	0.54	0.43	0.61	0.47	0.62	0.46	0.69	0.48	0.67	0.47	0.77	0.33	0.74	0.36	0.79	0.48	0.76	0.49
7	0.85	0.34	0.84	0.33	0.87	0.42	0.86	0.41	0.74	0.45	0.73	0.46	0.44	0.32	0.43	0.31	0.77	0.41	0.75	0.42
8	0.74	0.31	0.72	0.32	0.77	0.47	0.75	0.46	0.67	0.36	0.66	0.35	0.82	0.53	0.79	0.54	0.58	0.36	0.57	0.36
9	0.86	0.52	0.86	0.51	0.68	0.47	0.66	0.47	0.49	0.41	0.47	0.40	0.92	0.45	0.90	0.47	0.83	0.40	0.81	0.42
10	0.70	0.47	0.70	0.47	0.80	0.34	0.82	0.34	0.88	0.47	0.88	0.47	0.88	0.36	0.86	0.39	0.67	0.48	0.65	0.47
11	0.67	0.43	0.67	0.42	0.66	0.45	0.67	0.44	0.71	0.53	0.67	0.52	0.41	0.39	0.41	0.39	0.68	0.47	0.68	0.47
12	0.57	0.38	0.56	0.38	0.79	0.33	0.78	0.33	0.47	0.35	0.46	0.35	0.76	0.49	0.72	0.49	0.45	0.41	0.43	0.42
13	0.60	0.38	0.59	0.37	0.81	0.36	0.80	0.36	0.62	0.40	0.63	0.40	0.70	0.44	0.66	0.46	0.45	0.28	0.43	0.27
14	0.49	0.32	0.47	0.30	0.57	0.31	0.58	0.31	0.61	0.49	0.56	0.47	0.77	0.42	0.74	0.42	0.77	0.46	0.76	0.46
15	0.68	0.45	0.67	0.42	0.57	0.46	0.56	0.45	0.65	0.53	0.63	0.53	0.28	0.36	0.26	0.33	0.67	0.36	0.63	0.35
16	0.67	0.38	0.66	0.35	0.66	0.54	0.68	0.54	0.66	0.51	0.64	0.50	0.81	0.48	0.74	0.50	0.74	0.45	0.72	0.44
17	0.58	0.48	0.59	0.47	0.31	0.32	0.32	0.32	0.69	0.54	0.67	0.53	0.86	0.52	0.83	0.55	0.72	0.28	0.70	0.29
18	0.60	0.42	0.57	0.39	0.85	0.49	0.83	0.50	0.40	0.32	0.38	0.31	0.76	0.51	0.74	0.52	0.45	0.33	0.44	0.33
19	0.71	0.51	0.70	0.51	0.62	0.43	0.61	0.44	0.58	0.45	0.58	0.47	0.68	0.50	0.64	0.48	0.54	0.39	0.52	0.37
20	0.80	0.60	0.79	0.58	0.78	0.45	0.78	0.44	0.62	0.39	0.64	0.42	0.61	0.54	0.59	0.56	0.49	0.27	0.49	0.28
21	0.68	0.47	0.64	0.45	0.54	0.45	0.52	0.45	0.60	0.47	0.61	0.47	0.87	0.49	0.85	0.53	0.81	0.44	0.77	0.47
22	0.73	0.50	0.72	0.49	0.54	0.35	0.55	0.34	0.57	0.44	0.58	0.45	0.58	0.38	0.54	0.35	0.79	0.45	0.76	0.47
23	0.63	0.49	0.63	0.49	0.60	0.42	0.59	0.41	0.80	0.45	0.78	0.46	0.53	0.34	0.54	0.36	0.72	0.50	0.69	0.51
24	0.45	0.37	0.44	0.37	0.81	0.42	0.78	0.42	0.79	0.54	0.78	0.53	0.65	0.41	0.63	0.42	0.80	0.52	0.78	0.53
25	0.44	0.43	0.42	0.41	0.77	0.48	0.76	0.48	0.80	0.52	0.79	0.52	0.87	0.39	0.84	0.42	0.64	0.45	0.60	0.45
26	0.71	0.41	0.69	0.38	0.88	0.44	0.87	0.44	0.64	0.53	0.62	0.53	0.79	0.55	0.75	0.56	0.73	0.45	0.72	0.46
27	0.88	0.51	0.88	0.49	0.87	0.49	0.86	0.49	0.76	0.41	0.74	0.41	0.73	0.52	0.70	0.52	0.76	0.51	0.69	0.50
28	0.78	0.59	0.76	0.58	0.66	0.60	0.66	0.59	0.77	0.47	0.75	0.47	0.61	0.48	0.57	0.49	0.90	0.42	0.87	0.44
29	0.66	0.40	0.65	0.39	0.85	0.39	0.84	0.40	0.78	0.45	0.78	0.46	0.63	0.49	0.60	0.49	0.78	0.30	0.76	0.32
30	0.80	0.52	0.80	0.51	0.77	0.47	0.76	0.47	0.93	0.38	0.92	0.38	0.80	0.55	0.76	0.57	0.82	0.50	0.81	0.52
31	0.70	0.53	0.64	0.49	0.80	0.40	0.80	0.40	0.73	0.47	0.73	0.47	0.62	0.37	0.57	0.38	0.54	0.38	0.53	0.39
32	0.80	0.51	0.79	0.50	0.87	0.33	0.88	0.34	0.60	0.40	0.58	0.39	0.45	0.38	0.42	0.37	0.50	0.39	0.48	0.38
33	0.66	0.52	0.64	0.50	0.78	0.46	0.77	0.46	0.56	0.44	0.55	0.44	0.75	0.46	0.70	0.45	0.59	0.40	0.57	0.39
34	0.72	0.58	0.68	0.57	0.67	0.38	0.62	0.37	0.45	0.34	0.42	0.32	0.71	0.43	0.69	0.46	0.56	0.35	0.56	0.38
35	0.82	0.38	0.86	0.37	0.57	0.38	0.56	0.39	0.65	0.38	0.62	0.35	0.66	0.42	0.64	0.43	0.75	0.52	0.72	0.52
36	0.57	0.46	0.54	0.43	0.84	0.52	0.83	0.51	0.40	0.41	0.41	0.42	0.73	0.35	0.70	0.35	0.75	0.56	0.71	0.56
37	0.68	0.53	0.66	0.52	0.72	0.49	0.70	0.48	0.65	0.40	0.65	0.39	0.76	0.31	0.72	0.34	0.58	0.44	0.57	0.44
38	0.81	0.57	0.82	0.55	0.68	0.44	0.67	0.44	0.37	0.30	0.37	0.29	0.82	0.29	0.80	0.30	0.52	0.37	0.51	0.38
39	0.71	0.54	0.70	0.53	0.71	0.41	0.69	0.40	0.53	0.39	0.51	0.38	0.46	0.30	0.38	0.29	0.48	0.32	0.45	0.33
40	0.80	0.57	0.80	0.55	0.46	0.33	0.47	0.32	0.71	0.40	0.69	0.41	0.67	0.29	0.67	0.31	0.52	0.24	0.51	0.26
41	0.76	0.57	0.75	0.56	0.69	0.46	0.69	0.47	0.74	0.47	0.72	0.47	0.67	0.37	0.64	0.38	0.87	0.52	0.86	0.53
42	0.83	0.53	0.83	0.51	0.57	0.44	0.52	0.43	0.80	0.54	0.79	0.54	0.70	0.44	0.69	0.44	0.84	0.47	0.82	0.49
43	0.79	0.61	0.77	0.61	0.78	0.48	0.76	0.49	0.64	0.41	0.63	0.40	0.89	0.47	0.87	0.50	0.63	0.40	0.58	0.40
44	0.76	0.43	0.78	0.41	0.51	0.50	0.49	0.50	0.80	0.46	0.80	0.46	0.88	0.52	0.86	0.53	0.71	0.48	0.69	0.47

Item-by-item *p*-value and Point Biserial for ELA, Grades Two through Six

CSTs	Grade 2				Grade 3				Grade 4				Grade 5				Grade 6			
Years	2013		2009		2013		2010		2013		2011		2013		2009		2013		2010	
Items	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis
45	0.63	0.44	0.59	0.42	0.79	0.40	0.79	0.40	0.58	0.46	0.58	0.46	0.82	0.47	0.79	0.49	0.79	0.47	0.75	0.47
46	0.49	0.40	0.48	0.38	0.66	0.44	0.63	0.43	0.56	0.46	0.56	0.45	0.74	0.42	0.70	0.45	0.49	0.29	0.49	0.31
47	0.57	0.52	0.54	0.50	0.60	0.50	0.59	0.49	0.53	0.38	0.53	0.37	0.58	0.44	0.57	0.44	0.47	0.38	0.42	0.35
48	0.53	0.44	0.52	0.43	0.73	0.55	0.71	0.54	0.88	0.39	0.88	0.39	0.68	0.38	0.63	0.38	0.68	0.46	0.68	0.47
49	0.75	0.48	0.75	0.49	0.57	0.35	0.57	0.35	0.89	0.50	0.88	0.50	0.62	0.37	0.57	0.36	0.74	0.38	0.73	0.39
50	0.61	0.41	0.57	0.39	0.85	0.45	0.84	0.44	0.84	0.51	0.83	0.51	0.72	0.33	0.70	0.33	0.72	0.46	0.69	0.46
51	0.78	0.57	0.79	0.55	0.73	0.52	0.72	0.53	0.76	0.50	0.75	0.51	0.69	0.48	0.66	0.47	0.49	0.28	0.46	0.28
52	0.49	0.43	0.47	0.41	0.61	0.48	0.60	0.47	0.76	0.52	0.73	0.52	0.60	0.29	0.60	0.31	0.56	0.37	0.51	0.34
53	0.43	0.36	0.42	0.35	0.60	0.40	0.58	0.40	0.73	0.57	0.72	0.58	0.59	0.26	0.58	0.29	0.79	0.47	0.75	0.47
54	0.79	0.49	0.79	0.48	0.65	0.44	0.62	0.43	0.67	0.36	0.65	0.36	0.81	0.45	0.77	0.47	0.73	0.36	0.71	0.37
55	0.76	0.56	0.76	0.55	0.64	0.38	0.62	0.36	0.83	0.52	0.81	0.52	0.51	0.43	0.46	0.41	0.62	0.43	0.60	0.44
56	0.65	0.48	0.65	0.48	0.78	0.53	0.77	0.53	0.62	0.50	0.62	0.50	0.77	0.51	0.73	0.52	0.70	0.42	0.67	0.43
57	0.58	0.42	0.56	0.40	0.56	0.44	0.59	0.44	0.77	0.55	0.77	0.54	0.95	0.35	0.93	0.40	0.58	0.23	0.57	0.25
58	0.60	0.50	0.58	0.50	0.50	0.38	0.47	0.37	0.78	0.50	0.76	0.50	0.68	0.47	0.63	0.46	0.48	0.36	0.48	0.38
59	0.55	0.49	0.52	0.47	0.51	0.32	0.51	0.32	0.71	0.50	0.69	0.50	0.53	0.37	0.50	0.38	0.44	0.31	0.41	0.30
60	0.73	0.46	0.70	0.44	0.39	0.38	0.39	0.38	0.69	0.54	0.68	0.53	0.43	0.29	0.42	0.29	0.84	0.52	0.81	0.54
61	0.64	0.43	0.65	0.43	0.57	0.48	0.59	0.48	0.57	0.41	0.55	0.38	0.88	0.40	0.86	0.43	0.65	0.53	0.63	0.53
62	0.61	0.51	0.60	0.50	0.85	0.44	0.84	0.44	0.86	0.42	0.86	0.43	0.69	0.56	0.63	0.56	0.25	0.29	0.30	0.31
63	0.67	0.57	0.66	0.56	0.87	0.34	0.86	0.34	0.75	0.19	0.75	0.20	0.80	0.47	0.77	0.50	0.73	0.41	0.71	0.43
64	0.78	0.56	0.78	0.54	0.72	0.50	0.71	0.50	0.73	0.49	0.72	0.50	0.95	0.36	0.93	0.41	0.86	0.49	0.85	0.50
65	0.81	0.57	0.81	0.55	0.69	0.36	0.69	0.36	0.78	0.59	0.77	0.58	0.93	0.43	0.90	0.47	0.40	0.33	0.36	0.30
66	.	.	.	.	.	.	.	.	0.62	0.45	0.61	0.44	0.54	0.35	0.53	0.37	0.66	0.51	0.61	0.50
67	.	.	.	.	.	.	.	.	0.73	0.51	0.72	0.51	0.65	0.33	0.63	0.33	0.85	0.42	0.83	0.45
68	.	.	.	.	.	.	.	.	0.64	0.37	0.64	0.37	0.63	0.46	0.60	0.46	0.87	0.46	0.86	0.48
69	.	.	.	.	.	.	.	.	0.57	0.46	0.56	0.45	0.79	0.52	0.76	0.54	0.58	0.44	0.59	0.46
70	.	.	.	.	.	.	.	.	0.65	0.37	0.65	0.37	0.62	0.49	0.56	0.48	0.88	0.38	0.86	0.42
71	.	.	.	.	.	.	.	.	0.57	0.50	0.55	0.50	0.69	0.41	0.66	0.41	0.82	0.40	0.81	0.43
72	.	.	.	.	.	.	.	.	0.57	0.33	0.55	0.33	0.82	0.40	0.78	0.42	0.91	0.36	0.89	0.40
73	.	.	.	.	.	.	.	.	0.70	0.54	0.68	0.53	0.63	0.36	0.56	0.36	0.71	0.40	0.69	0.42
74	.	.	.	.	.	.	.	.	0.74	0.51	0.72	0.52	0.89	0.45	0.86	0.48	0.77	0.35	0.76	0.36
75	.	.	.	.	.	.	.	.	0.56	0.46	0.55	0.45	0.86	0.39	0.84	0.42	0.92	0.35	0.91	0.38

Table 8.A.2 Item-by-item *p*-value and Point Biserial for ELA, Grades Seven through Eleven—Current Year (2013) and Original Year of Administration

Item-by-item *p*-value and Point Biserial for ELA, Grades Seven through Eleven																				
CSTs	**Grade 7**				**Grade 8**				**Grade 9**				**Grade 10**				**Grade 11**			
Years	**2013**		**2011**		**2013**		**2009**		**2013**		**2010**		**2013**		**2011**		**2013**		**2009**	
Items	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
1	0.81	0.36	0.81	0.35	0.55	0.46	0.52	0.45	0.30	0.31	0.28	0.30	0.63	0.36	0.62	0.36	0.45	0.41	0.42	0.40
2	0.84	0.36	0.83	0.37	0.69	0.38	0.64	0.39	0.65	0.50	0.60	0.51	0.60	0.36	0.61	0.38	0.59	0.37	0.55	0.38
3	0.84	0.41	0.83	0.42	0.37	0.25	0.37	0.27	0.64	0.37	0.60	0.35	0.66	0.35	0.64	0.37	0.73	0.38	0.73	0.42
4	0.73	0.32	0.71	0.32	0.43	0.43	0.39	0.40	0.70	0.37	0.63	0.36	0.57	0.27	0.57	0.29	0.90	0.46	0.87	0.48
5	0.69	0.40	0.65	0.40	0.56	0.42	0.53	0.42	0.81	0.49	0.77	0.50	0.65	0.41	0.63	0.43	0.83	0.42	0.80	0.44
6	0.46	0.28	0.46	0.29	0.86	0.46	0.81	0.49	0.88	0.46	0.84	0.49	0.71	0.51	0.68	0.51	0.85	0.27	0.80	0.29
7	0.52	0.35	0.51	0.34	0.57	0.34	0.53	0.34	0.55	0.39	0.51	0.40	0.88	0.41	0.87	0.44	0.72	0.39	0.66	0.41
8	0.42	0.27	0.40	0.26	0.73	0.40	0.66	0.39	0.61	0.45	0.59	0.45	0.69	0.42	0.68	0.43	0.53	0.28	0.52	0.30
9	0.59	0.42	0.58	0.41	0.73	0.33	0.64	0.36	0.74	0.38	0.70	0.40	0.73	0.35	0.70	0.37	0.25	0.12	0.28	0.12
10	0.32	0.39	0.31	0.38	0.67	0.45	0.65	0.46	0.55	0.32	0.53	0.32	0.64	0.43	0.61	0.43	0.60	0.32	0.56	0.34
11	0.72	0.38	0.71	0.39	0.68	0.52	0.63	0.53	0.88	0.45	0.85	0.48	0.61	0.48	0.59	0.49	0.74	0.50	0.66	0.53
12	0.79	0.50	0.77	0.50	0.75	0.38	0.72	0.42	0.71	0.44	0.67	0.45	0.74	0.43	0.73	0.46	0.57	0.39	0.53	0.38
13	0.59	0.51	0.57	0.50	0.67	0.38	0.63	0.39	0.48	0.41	0.42	0.38	0.64	0.50	0.63	0.49	0.61	0.49	0.57	0.47
14	0.87	0.45	0.85	0.45	0.81	0.29	0.78	0.34	0.52	0.25	0.49	0.27	0.90	0.46	0.88	0.47	0.47	0.35	0.47	0.34
15	0.79	0.45	0.78	0.46	0.51	0.41	0.48	0.38	0.71	0.46	0.65	0.45	0.74	0.35	0.73	0.37	0.32	0.21	0.32	0.19
16	0.75	0.38	0.74	0.39	0.50	0.28	0.45	0.27	0.66	0.49	0.62	0.49	0.65	0.37	0.64	0.38	0.71	0.48	0.66	0.51
17	0.62	0.38	0.61	0.39	0.43	0.33	0.39	0.33	0.78	0.51	0.73	0.54	0.83	0.31	0.81	0.33	0.64	0.40	0.61	0.41
18	0.87	0.52	0.86	0.53	0.44	0.26	0.46	0.31	0.64	0.40	0.61	0.41	0.65	0.37	0.63	0.37	0.69	0.47	0.62	0.47
19	0.80	0.43	0.79	0.44	0.54	0.38	0.51	0.38	0.85	0.45	0.82	0.49	0.79	0.54	0.76	0.55	0.87	0.51	0.82	0.54
20	0.70	0.47	0.68	0.48	0.79	0.33	0.72	0.35	0.74	0.45	0.70	0.44	0.74	0.41	0.73	0.42	0.61	0.44	0.55	0.46
21	0.71	0.42	0.69	0.43	0.84	0.46	0.80	0.50	0.64	0.41	0.59	0.41	0.53	0.40	0.50	0.40	0.60	0.36	0.57	0.36
22	0.81	0.52	0.79	0.53	0.75	0.55	0.70	0.57	0.66	0.49	0.61	0.51	0.74	0.43	0.71	0.44	0.77	0.48	0.72	0.50
23	0.80	0.47	0.79	0.49	0.75	0.45	0.70	0.47	0.56	0.37	0.52	0.36	0.72	0.47	0.70	0.49	0.71	0.55	0.64	0.58
24	0.50	0.39	0.48	0.40	0.75	0.40	0.70	0.42	0.67	0.45	0.63	0.46	0.68	0.53	0.65	0.54	0.66	0.49	0.61	0.51
25	0.67	0.50	0.66	0.50	0.80	0.49	0.74	0.53	0.73	0.53	0.70	0.53	0.83	0.51	0.81	0.53	0.61	0.39	0.55	0.42
26	0.73	0.47	0.71	0.47	0.58	0.41	0.54	0.41	0.76	0.40	0.73	0.43	0.67	0.52	0.64	0.52	0.68	0.43	0.62	0.48
27	0.74	0.39	0.71	0.40	0.48	0.36	0.42	0.32	0.80	0.51	0.77	0.52	0.65	0.42	0.61	0.41	0.48	0.20	0.49	0.24
28	0.68	0.49	0.67	0.49	0.54	0.42	0.51	0.42	0.71	0.45	0.66	0.46	0.80	0.51	0.78	0.53	0.63	0.37	0.60	0.40
29	0.86	0.41	0.85	0.41	0.69	0.46	0.64	0.47	0.67	0.47	0.65	0.48	0.58	0.33	0.56	0.35	0.76	0.44	0.70	0.45
30	0.86	0.48	0.83	0.52	0.63	0.42	0.56	0.44	0.77	0.45	0.77	0.48	0.67	0.44	0.64	0.45	0.80	0.45	0.75	0.48
31	0.79	0.47	0.76	0.48	0.72	0.37	0.68	0.39	0.51	0.42	0.45	0.41	0.60	0.36	0.59	0.36	0.63	0.46	0.56	0.47
32	0.72	0.46	0.69	0.45	0.41	0.41	0.43	0.45	0.45	0.37	0.42	0.37	0.79	0.55	0.76	0.56	0.53	0.38	0.47	0.39
33	0.83	0.45	0.82	0.47	0.66	0.50	0.59	0.51	0.43	0.27	0.43	0.29	0.51	0.34	0.51	0.35	0.65	0.43	0.60	0.45
34	0.55	0.31	0.55	0.31	0.48	0.32	0.46	0.32	0.54	0.50	0.51	0.49	0.66	0.47	0.64	0.49	0.81	0.47	0.75	0.49
35	0.87	0.41	0.86	0.44	0.58	0.51	0.53	0.50	0.73	0.32	0.68	0.38	0.41	0.30	0.38	0.28	0.64	0.39	0.57	0.40
36	0.84	0.24	0.82	0.25	0.76	0.35	0.74	0.38	0.69	0.45	0.65	0.45	0.59	0.47	0.57	0.47	0.43	0.39	0.40	0.38
37	0.67	0.40	0.64	0.40	0.80	0.37	0.79	0.38	0.76	0.48	0.72	0.51	0.72	0.48	0.67	0.48	0.76	0.42	0.70	0.45
38	0.52	0.51	0.52	0.50	0.50	0.36	0.47	0.37	0.61	0.21	0.61	0.24	0.89	0.41	0.85	0.44	0.62	0.41	0.60	0.43
39	0.88	0.39	0.86	0.40	0.83	0.36	0.78	0.40	0.40	0.24	0.38	0.25	0.78	0.41	0.76	0.43	0.64	0.50	0.57	0.52
40	0.87	0.38	0.86	0.39	0.89	0.37	0.86	0.40	0.90	0.47	0.86	0.51	0.82	0.40	0.79	0.43	0.65	0.36	0.61	0.37
41	0.64	0.38	0.61	0.36	0.69	0.43	0.66	0.43	0.70	0.42	0.67	0.45	0.76	0.47	0.72	0.48	0.75	0.51	0.70	0.53
42	0.45	0.37	0.45	0.36	0.85	0.28	0.83	0.36	0.78	0.43	0.76	0.45	0.59	0.43	0.55	0.42	0.57	0.48	0.51	0.49
43	0.79	0.42	0.78	0.43	0.79	0.42	0.75	0.45	0.68	0.39	0.64	0.42	0.60	0.39	0.57	0.41	0.78	0.49	0.72	0.51
44	0.71	0.40	0.69	0.42	0.83	0.31	0.80	0.37	0.85	0.43	0.83	0.46	0.83	0.30	0.79	0.32	0.63	0.41	0.60	0.43
45	0.47	0.33	0.46	0.31	0.60	0.33	0.56	0.32	0.81	0.42	0.77	0.45	0.58	0.34	0.55	0.33	0.64	0.48	0.58	0.49

Item-by-item *p*-value and Point Biserial for ELA, Grades Seven through Eleven

CSTs	Grade 7				Grade 8				Grade 9				Grade 10				Grade 11			
Years	**2013**		**2011**		**2013**		**2009**		**2013**		**2010**		**2013**		**2011**		**2013**		**2009**	
Items	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
46	0.91	0.45	0.90	0.46	0.73	0.41	0.68	0.43	0.50	0.30	0.46	0.30	0.82	0.52	0.78	0.55	0.52	0.45	0.49	0.42
47	0.69	0.50	0.67	0.49	0.75	0.48	0.72	0.50	0.80	0.54	0.76	0.55	0.63	0.46	0.62	0.44	0.54	0.39	0.49	0.37
48	0.41	0.39	0.38	0.36	0.56	0.54	0.50	0.53	0.53	0.39	0.53	0.40	0.54	0.37	0.54	0.36	0.72	0.52	0.66	0.56
49	0.53	0.47	0.52	0.47	0.65	0.49	0.61	0.49	0.51	0.33	0.47	0.32	0.68	0.53	0.65	0.55	* 0.62	* 0.27	0.62	0.27
50	0.45	0.42	0.45	0.41	0.81	0.45	0.75	0.49	0.61	0.39	0.60	0.40	0.80	0.43	0.77	0.46	0.74	0.43	0.69	0.43
51	0.48	0.33	0.46	0.32	0.56	0.52	0.51	0.50	0.74	0.43	0.70	0.47	0.38	0.44	0.37	0.43	0.61	0.35	0.58	0.39
52	0.69	0.47	0.67	0.46	0.82	0.45	0.78	0.49	0.69	0.48	0.64	0.48	0.61	0.36	0.59	0.35	0.56	0.44	0.52	0.45
53	0.66	0.43	0.65	0.43	0.64	0.47	0.59	0.50	0.76	0.55	0.73	0.56	0.88	0.45	0.86	0.49	0.61	0.47	0.56	0.50
54	0.57	0.41	0.53	0.40	0.63	0.35	0.57	0.36	0.47	0.39	0.44	0.39	0.77	0.53	0.76	0.54	0.59	0.43	0.55	0.43
55	0.70	0.40	0.69	0.40	0.77	0.29	0.75	0.34	0.75	0.47	0.70	0.50	0.69	0.48	0.66	0.48	0.66	0.46	0.59	0.49
56	0.84	0.33	0.83	0.37	0.57	0.42	0.53	0.42	0.49	0.27	0.46	0.26	0.70	0.50	0.67	0.51	0.67	0.43	0.62	0.46
57	0.80	0.30	0.79	0.33	0.68	0.50	0.62	0.51	0.62	0.33	0.58	0.33	0.88	0.51	0.85	0.54	0.77	0.48	0.71	0.53
58	0.70	0.42	0.69	0.42	0.55	0.46	0.49	0.42	0.58	0.39	0.55	0.39	0.65	0.41	0.61	0.41	0.65	0.46	0.60	0.48
59	0.84	0.48	0.84	0.50	0.54	0.40	0.48	0.39	0.74	0.46	0.70	0.47	0.48	0.35	0.48	0.36	0.51	0.47	0.45	0.43
60	0.52	0.45	0.51	0.44	0.32	0.27	0.31	0.24	0.60	0.36	0.57	0.38	0.57	0.41	0.54	0.42	0.72	0.50	0.64	0.50
61	0.74	0.45	0.69	0.46	0.49	0.44	0.45	0.44	0.33	0.28	0.31	0.28	0.65	0.42	0.64	0.44	0.63	0.43	0.58	0.46
62	0.82	0.46	0.79	0.47	0.58	0.42	0.54	0.43	0.61	0.44	0.57	0.44	0.55	0.45	0.53	0.50	0.72	0.59	0.62	0.64
63	0.70	0.45	0.70	0.46	0.50	0.26	0.47	0.26	0.74	0.39	0.73	0.41	0.87	0.52	0.84	0.56	0.66	0.37	0.60	0.41
64	0.60	0.38	0.59	0.37	0.55	0.45	0.49	0.47	0.68	0.33	0.65	0.38	0.38	0.26	0.39	0.28	0.88	0.41	0.81	0.47
65	0.87	0.31	0.87	0.33	0.59	0.35	0.53	0.36	0.59	0.33	0.58	0.34	0.56	0.38	0.54	0.38	0.78	0.43	0.73	0.48
66	0.51	0.36	0.50	0.36	0.86	0.42	0.82	0.47	0.46	0.29	0.43	0.28	0.83	0.48	0.80	0.51	0.47	0.47	0.45	0.45
67	0.66	0.42	0.64	0.43	0.91	0.36	0.87	0.44	0.79	0.45	0.76	0.49	0.61	0.44	0.60	0.46	* 0.55	* 0.34	0.48	0.38
68	0.81	0.52	0.80	0.53	0.79	0.48	0.73	0.52	0.46	0.21	0.44	0.19	0.55	0.38	0.52	0.39	0.59	0.35	0.57	0.39
69	0.40	0.33	0.38	0.33	0.76	0.48	0.71	0.50	0.76	0.51	0.71	0.52	0.81	0.49	0.78	0.51	0.85	0.46	0.79	0.49
70	0.54	0.41	0.53	0.43	0.80	0.49	0.74	0.52	0.71	0.40	0.68	0.43	* 0.66	* 0.44	0.61	0.47	0.83	0.53	0.77	0.56
71	0.52	0.31	0.51	0.31	0.87	0.39	0.82	0.44	0.81	0.55	0.76	0.59	0.56	0.35	0.55	0.36	0.45	0.35	0.42	0.32
72	0.54	0.30	0.52	0.29	0.73	0.34	0.69	0.37	0.89	0.43	0.85	0.47	0.72	0.48	0.69	0.49	0.60	0.35	0.58	0.37
73	0.67	0.44	0.66	0.46	0.63	0.42	0.58	0.43	0.89	0.50	0.85	0.54	0.62	0.46	0.58	0.46	0.80	0.51	0.75	0.56
74	0.72	0.35	0.70	0.36	0.67	0.49	0.62	0.50	0.86	0.42	0.82	0.47	0.54	0.37	0.52	0.36	0.33	0.28	0.46	0.51
75	0.59	0.33	0.58	0.33	0.78	0.39	0.72	0.43	0.63	0.26	0.63	0.31	0.73	0.40	0.69	0.42	0.66	0.45	0.64	0.47

* Replacement item due to item exposure on social media Web sites

Table 8.A.3 Item-by-item *p*-value and Point Biserial for History–Social Science—Current Year (2013) and Original Year of Administration

Item-by-item *p*-value and Point Biserial for History–Social Science												
CSTs	**Grade 8**				**World History**				**Grade 11**			
Years	**2013**		**2012**		**2013**		**2012**		**2013**		**2012**	
Items	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
1	0.80	0.31	0.81	0.31	0.75	0.47	0.75	0.47	0.78	0.35	0.78	0.35
2	0.69	0.41	0.69	0.41	0.74	0.44	0.73	0.45	0.57	0.38	0.57	0.39
3	0.56	0.27	0.56	0.28	* 0.45	* 0.34	0.31	0.27	0.58	0.41	0.57	0.42
4	0.41	0.22	0.41	0.22	0.74	0.30	0.74	0.31	0.60	0.46	0.59	0.47
5	0.69	0.39	0.70	0.40	0.44	0.36	0.46	0.35	0.53	0.47	0.53	0.47
6	0.56	0.39	0.58	0.40	0.61	0.40	0.60	0.39	0.37	0.27	0.36	0.26
7	0.51	0.43	0.51	0.42	0.62	0.44	0.62	0.44	0.46	0.29	0.46	0.29
8	0.56	0.35	0.56	0.34	* 0.57	* 0.36	0.50	0.37	0.78	0.54	0.76	0.54
9	0.60	0.30	0.59	0.31	0.81	0.40	0.82	0.40	0.84	0.45	0.84	0.45
10	0.82	0.41	0.80	0.40	0.38	0.35	0.37	0.34	0.68	0.52	0.68	0.52
11	0.51	0.36	0.50	0.35	0.61	0.27	0.59	0.26	0.53	0.30	0.53	0.30
12	0.62	0.44	0.62	0.45	* 0.50	* 0.32	0.48	0.28	0.63	0.43	0.64	0.45
13	0.60	0.45	0.60	0.44	0.72	0.55	0.73	0.55	0.72	0.46	0.71	0.46
14	0.78	0.45	0.78	0.46	0.84	0.47	0.83	0.48	0.70	0.33	0.69	0.34
15	0.86	0.39	0.86	0.39	0.48	0.39	0.48	0.38	0.68	0.53	0.68	0.53
16	0.57	0.42	0.57	0.42	0.54	0.44	0.56	0.45	0.58	0.42	0.57	0.41
17	0.57	0.43	0.57	0.43	0.66	0.49	0.66	0.49	* 0.55	* 0.45	0..47	0.37
18	0.68	0.28	0.69	0.31	0.69	0.42	0.68	0.43	0.79	0.58	0.78	0.59
19	0.64	0.31	0.63	0.32	0.74	0.49	0.73	0.50	0.57	0.44	0.56	0.42
20	0.53	0.51	0.54	0.51	0.77	0.56	0.76	0.57	0.42	0.30	0.42	0.30
21	0.53	0.33	0.51	0.33	0.63	0.43	0.63	0.43	0.72	0.57	0.72	0.57
22	0.39	0.31	0.40	0.31	0.66	0.32	0.67	0.33	0.91	0.44	0.90	0.44
23	0.58	0.45	0.59	0.45	0.59	0.36	0.57	0.36	0.63	0.47	0.62	0.47
24	0.71	0.50	0.70	0.50	0.77	0.49	0.77	0.51	0.44	0.42	0.43	0.42
25	0.75	0.55	0.74	0.56	0.59	0.46	0.59	0.46	0.51	0.36	0.50	0.35
26	0.67	0.43	0.67	0.44	0.60	0.55	0.60	0.55	0.62	0.51	0.62	0.52
27	0.74	0.41	0.74	0.42	0.61	0.38	0.61	0.39	0.75	0.51	0.75	0.52
28	0.65	0.53	0.65	0.54	0.55	0.50	0.55	0.49	0.67	0.44	0.68	0.44
29	0.84	0.50	0.84	0.50	0.67	0.40	0.65	0.41	0.82	0.41	0.81	0.42
30	0.59	0.37	0.60	0.37	0.69	0.45	0.69	0.45	0.61	0.42	0.61	0.43
31	0.85	0.52	0.85	0.52	0.77	0.48	0.76	0.50	0.73	0.53	0.74	0.55
32	0.73	0.41	0.73	0.42	0.64	0.48	0.64	0.49	0.62	0.39	0.61	0.38
33	0.56	0.44	0.56	0.43	0.67	0.47	0.67	0.47	0.36	0.26	0.36	0.27
34	0.69	0.52	0.69	0.52	0.68	0.42	0.67	0.42	0.66	0.35	0.66	0.37
35	0.72	0.34	0.72	0.34	0.49	0.41	0.49	0.40	0.64	0.43	0.63	0.44
36	0.65	0.43	0.65	0.44	0.61	0.25	0.60	0.26	0.58	0.37	0.60	0.38
37	0.55	0.34	0.54	0.36	0.69	0.60	0.68	0.60	0.39	0.30	0.39	0.30
38	0.78	0.51	0.77	0.51	0.66	0.53	0.66	0.53	0.45	0.36	0.45	0.37
39	0.60	0.39	0.61	0.39	* 0.51	* 0.47	0.46	0.39	0.68	0.54	0.68	0.54
40	0.53	0.43	0.53	0.43	* 0.47	* 0.31	0.44	0.36	0.69	0.53	0.68	0.53
41	0.38	0.31	0.39	0.31	0.53	0.36	0.53	0.35	0.80	0.43	0.79	0.44
42	0.51	0.43	0.50	0.43	0.80	0.42	0.79	0.43	0.70	0.62	0.70	0.62
43	0.79	0.45	0.79	0.45	0.64	0.44	0.65	0.44	0.63	0.45	0.62	0.46
44	0.58	0.39	0.59	0.39	0.67	0.47	0.67	0.47	0.52	0.27	0.50	0.28
45	0.53	0.42	0.53	0.42	0.65	0.52	0.64	0.52	0.58	0.55	0.56	0.54
46	0.65	0.51	0.65	0.51	0.63	0.43	0.63	0.44	0.61	0.31	0.62	0.31
47	0.61	0.49	0.61	0.49	0.58	0.42	0.57	0.42	0.74	0.42	0.74	0.43
48	0.60	0.38	0.61	0.38	0.51	0.41	0.53	0.43	0.85	0.57	0.84	0.57
49	0.70	0.49	0.70	0.49	0.69	0.42	0.68	0.42	0.63	0.44	0.61	0.44
50	0.69	0.43	0.69	0.44	0.77	0.55	0.76	0.56	0.63	0.27	0.63	0.29
51	0.52	0.50	0.52	0.50	0.65	0.47	0.64	0.48	0.65	0.53	0.65	0.54
52	0.60	0.53	0.60	0.53	0.68	0.47	0.67	0.48	0.67	0.39	0.65	0.38
53	0.68	0.45	0.67	0.44	0.57	0.44	0.57	0.45	0.41	0.24	0.40	0.22
54	0.65	0.46	0.65	0.47	0.56	0.34	0.56	0.35	0.54	0.47	0.53	0.46
55	0.59	0.33	0.58	0.33	0.71	0.59	0.70	0.60	0.62	0.54	0.61	0.54
56	0.80	0.52	0.80	0.53	0.40	0.36	0.40	0.35	0.86	0.49	0.85	0.50
57	0.36	0.31	0.37	0.31	0.51	0.35	0.51	0.35	0.56	0.37	0.57	0.39
58	0.54	0.32	0.52	0.32	0.66	0.45	0.66	0.46	0.42	0.33	0.42	0.34
59	0.71	0.38	0.71	0.39	0.63	0.56	0.62	0.55	0.63	0.43	0.62	0.43
60	0.83	0.51	0.83	0.52	0.82	0.48	0.81	0.48	0.69	0.55	0.69	0.56
61	0.75	0.54	0.74	0.54	.	.	.	.	.	.	.	.
62	0.65	0.39	0.64	0.40	.	.	.	.	.	.	.	.
63	* 0.70	* 0.53	0.61	0.42	.	.	.	.	.	.	.	.
64	0.67	0.44	0.65	0.44	.	.	.	.	.	.	.	.
65	0.60	0.38	0.59	0.39	.	.	.	.	.	.	.	.
66	0.76	0.55	0.75	0.55	.	.	.	.	.	.	.	.
67	0.56	0.56	0.55	0.55	.	.	.	.	.	.	.	.
68	0.62	0.46	0.60	0.46	.	.	.	.	.	.	.	.
69	0.71	0.50	0.71	0.50	.	.	.	.	.	.	.	.
70	0.67	0.46	0.66	0.46	.	.	.	.	.	.	.	.

Item-by-item *p*-value and Point Biserial for History–Social Science												
CSTs	**Grade 8**				**World History**				**Grade 11**			
Years	**2013**		**2012**		**2013**		**2012**		**2013**		**2012**	
Items	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
71	0.70	0.54	0.70	0.55	.	.	.	.	.	.	.	.
72	0.57	0.49	0.57	0.48	.	.	.	.	.	.	.	.
73	0.64	0.49	0.63	0.49	.	.	.	.	.	.	.	.
74	0.46	0.43	0.47	0.43	.	.	.	.	.	.	.	.
75	0.81	0.52	0.81	0.53	.	.	.	.	.	.	.	.

* Replacement item due to item exposure on social media Web sites

Table 8.A.4 Item-by-item *p*-value and Point Biserial for Mathematics, Grades Two through Six—Current Year (2013) and Original Year of Administration

Item-by-item *p*-value and Point Biserial for Mathematics, Grades Two through Six																				
CSTs	**Grade 2**				**Grade 3**				**Grade 4**				**Grade 5**				**Grade 6**			
Years	**2013**		**2009**		**2013**		**2010**		**2013**		**2011**		**2013**		**2009**		**2013**		**2010**	
Items	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
1	0.84	0.44	0.83	0.43	0.92	0.41	0.92	0.41	0.93	0.32	0.92	0.32	0.79	0.45	0.77	0.45	0.91	0.25	0.91	0.25
2	0.85	0.46	0.85	0.45	0.91	0.43	0.90	0.43	0.69	0.40	0.67	0.38	0.84	0.38	0.81	0.37	0.92	0.27	0.90	0.28
3	0.85	0.46	0.86	0.43	0.87	0.37	0.87	0.37	0.89	0.37	0.89	0.37	0.55	0.63	0.48	0.62	0.58	0.45	0.59	0.45
4	0.84	0.56	0.82	0.55	0.88	0.40	0.87	0.39	0.90	0.33	0.89	0.34	0.86	0.44	0.84	0.44	0.62	0.40	0.59	0.40
5	0.80	0.48	0.79	0.47	0.65	0.54	0.62	0.53	0.78	0.47	0.76	0.47	0.60	0.47	0.56	0.43	0.57	0.41	0.56	0.40
6	0.74	0.42	0.73	0.40	0.75	0.57	0.74	0.57	0.85	0.40	0.84	0.40	0.81	0.41	0.76	0.42	0.85	0.45	0.83	0.47
7	0.86	0.42	0.87	0.40	0.68	0.51	0.67	0.50	0.81	0.50	0.81	0.50	0.56	0.51	0.56	0.51	0.77	0.49	0.74	0.50
8	0.85	0.40	0.86	0.37	0.96	0.39	0.95	0.39	0.78	0.54	0.78	0.54	0.88	0.39	0.85	0.42	0.75	0.39	0.75	0.39
9	0.86	0.55	0.85	0.53	0.83	0.42	0.83	0.41	0.75	0.54	0.74	0.54	0.81	0.52	0.79	0.53	0.68	0.45	0.67	0.46
10	0.57	0.48	0.51	0.47	0.90	0.45	0.91	0.44	0.92	0.46	0.92	0.46	0.53	0.53	0.47	0.52	0.70	0.44	0.69	0.43
11	0.40	0.48	0.38	0.46	0.89	0.43	0.89	0.43	0.84	0.40	0.84	0.40	0.75	0.47	0.73	0.46	0.66	0.33	0.66	0.35
12	0.88	0.41	0.89	0.40	0.89	0.43	0.88	0.43	0.90	0.37	0.90	0.38	0.80	0.41	0.77	0.42	0.64	0.55	0.62	0.54
13	0.92	0.46	0.92	0.44	0.42	0.49	0.42	0.48	0.92	0.40	0.92	0.40	0.85	0.45	0.83	0.47	0.67	0.43	0.63	0.43
14	0.78	0.55	0.75	0.54	0.93	0.44	0.92	0.45	0.91	0.44	0.91	0.44	0.82	0.41	0.78	0.41	0.44	0.42	0.43	0.41
15	0.84	0.47	0.83	0.46	0.92	0.36	0.93	0.36	0.79	0.58	0.78	0.58	0.57	0.58	0.54	0.57	0.70	0.47	0.68	0.46
16	0.72	0.47	0.71	0.45	0.58	0.53	0.58	0.52	0.90	0.42	0.90	0.42	0.44	0.54	0.41	0.52	0.83	0.44	0.81	0.46
17	0.75	0.51	0.72	0.51	0.91	0.45	0.90	0.45	0.77	0.51	0.77	0.51	0.83	0.40	0.81	0.39	0.56	0.50	0.55	0.49
18	0.73	0.47	0.72	0.47	0.88	0.46	0.88	0.46	0.69	0.51	0.69	0.50	0.52	0.39	0.49	0.37	0.71	0.53	0.68	0.53
19	0.89	0.45	0.88	0.44	0.65	0.53	0.66	0.53	0.76	0.51	0.75	0.51	0.47	0.40	0.43	0.38	0.47	0.44	0.45	0.42
20	0.77	0.58	0.78	0.56	0.63	0.61	0.61	0.60	0.91	0.41	0.90	0.40	0.57	0.48	0.56	0.47	0.72	0.42	0.71	0.44
21	0.60	0.52	0.59	0.51	0.34	0.48	0.35	0.48	0.78	0.43	0.77	0.43	0.81	0.44	0.78	0.45	0.43	0.43	0.42	0.42
22	0.91	0.46	0.89	0.46	0.92	0.42	0.92	0.42	0.73	0.58	0.73	0.57	0.64	0.56	0.58	0.57	0.74	0.43	0.72	0.43
23	0.55	0.44	0.55	0.44	0.61	0.54	0.58	0.53	0.76	0.53	0.74	0.53	0.64	0.47	0.59	0.46	0.74	0.42	0.73	0.43
24	0.72	0.42	0.70	0.42	0.93	0.43	0.93	0.44	0.79	0.53	0.78	0.53	0.66	0.56	0.61	0.56	0.60	0.55	0.59	0.54
25	0.86	0.45	0.85	0.43	0.75	0.55	0.74	0.54	0.78	0.55	0.77	0.55	0.70	0.52	0.66	0.50	0.59	0.47	0.57	0.47
26	0.69	0.38	0.63	0.36	0.87	0.46	0.87	0.45	0.91	0.45	0.90	0.45	0.71	0.50	0.67	0.50	0.64	0.49	0.62	0.48
27	0.76	0.43	0.75	0.43	0.61	0.53	0.61	0.53	0.89	0.46	0.89	0.47	0.79	0.41	0.74	0.41	0.67	0.60	0.66	0.61
28	0.87	0.33	0.87	0.34	0.73	0.57	0.72	0.56	0.78	0.57	0.77	0.57	0.43	0.51	0.41	0.48	0.67	0.49	0.66	0.49
29	0.88	0.52	0.87	0.52	0.80	0.54	0.78	0.54	0.50	0.36	0.49	0.36	0.75	0.46	0.69	0.46	0.74	0.39	0.74	0.41
30	0.62	0.53	0.61	0.53	0.60	0.48	0.59	0.47	0.85	0.50	0.85	0.49	0.92	0.37	0.88	0.41	0.64	0.42	0.62	0.43
31	0.88	0.47	0.88	0.45	0.70	0.41	0.69	0.41	0.78	0.58	0.77	0.58	0.82	0.46	0.79	0.47	0.65	0.39	0.62	0.40
32	0.74	0.50	0.75	0.49	0.71	0.55	0.71	0.54	0.87	0.49	0.87	0.48	0.51	0.37	0.48	0.36	0.61	0.50	0.59	0.49
33	0.76	0.48	0.74	0.47	0.77	0.52	0.76	0.52	0.86	0.58	0.85	0.58	0.79	0.46	0.73	0.48	0.81	0.49	0.80	0.49
34	0.63	0.48	0.63	0.47	0.62	0.55	0.60	0.55	0.81	0.49	0.79	0.49	0.74	0.46	0.70	0.47	0.71	0.55	0.68	0.55
35	0.82	0.50	0.82	0.48	0.76	0.53	0.75	0.53	0.88	0.50	0.88	0.50	0.71	0.33	0.70	0.32	0.67	0.54	0.68	0.54
36	0.67	0.31	0.67	0.31	0.83	0.52	0.82	0.51	0.81	0.37	0.81	0.37	0.84	0.44	0.81	0.46	0.82	0.46	0.82	0.45
37	0.78	0.51	0.80	0.50	0.60	0.53	0.60	0.52	0.78	0.50	0.78	0.50	0.85	0.51	0.80	0.52	0.37	0.50	0.35	0.48
38	0.82	0.54	0.84	0.53	0.82	0.45	0.83	0.44	0.85	0.48	0.84	0.48	0.80	0.44	0.75	0.45	0.75	0.54	0.73	0.54
39	0.62	0.49	0.60	0.49	0.61	0.46	0.61	0.45	0.62	0.50	0.62	0.50	0.59	0.41	0.55	0.41	0.80	0.49	0.78	0.49
40	0.89	0.47	0.90	0.45	0.87	0.45	0.87	0.46	0.90	0.48	0.90	0.48	0.78	0.55	0.73	0.55	0.75	0.49	0.73	0.49
41	0.63	0.49	0.62	0.48	0.59	0.40	0.59	0.40	0.82	0.54	0.81	0.54	0.66	0.56	0.61	0.55	0.87	0.20	0.88	0.24
42	0.86	0.45	0.85	0.46	0.90	0.40	0.90	0.40	0.82	0.58	0.81	0.58	0.72	0.42	0.68	0.48	0.78	0.41	0.75	0.41
43	0.76	0.52	0.75	0.51	0.87	0.47	0.86	0.47	0.86	0.48	0.86	0.48	0.85	0.45	0.82	0.46	0.68	0.40	0.67	0.40

Item-by-item *p*-value and Point Biserial for Mathematics, Grades Two through Six

CSTs	Grade 2				Grade 3				Grade 4				Grade 5				Grade 6			
Years	2013		2009		2013		2010		2013		2011		2013		2009		2013		2010	
Items	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis
44	0.79	0.41	0.79	0.41	0.71	0.47	0.69	0.47	0.85	0.58	0.84	0.58	0.91	0.42	0.87	0.47	0.77	0.55	0.75	0.55
45	0.79	0.38	0.77	0.37	0.91	0.40	0.91	0.40	0.86	0.55	0.86	0.55	0.65	0.43	0.61	0.40	0.78	0.39	0.76	0.41
46	0.89	0.38	0.89	0.34	0.64	0.56	0.60	0.54	0.90	0.55	0.89	0.55	0.59	0.54	0.54	0.52	0.54	0.41	0.52	0.41
47	0.76	0.47	0.76	0.47	0.62	0.56	0.58	0.54	0.92	0.49	0.92	0.49	0.47	0.47	0.42	0.44	0.61	0.51	0.60	0.50
48	0.78	0.37	0.80	0.35	0.81	0.40	0.81	0.39	0.82	0.60	0.82	0.60	0.70	0.54	0.65	0.53	0.47	0.49	0.44	0.47
49	0.78	0.40	0.79	0.39	0.77	0.53	0.77	0.53	0.63	0.48	0.62	0.47	0.40	0.49	0.38	0.48	0.70	0.53	0.68	0.53
50	0.51	0.18	0.50	0.18	0.82	0.32	0.81	0.32	0.84	0.37	0.84	0.36	0.85	0.34	0.80	0.37	0.46	0.43	0.45	0.41
51	0.87	0.40	0.89	0.39	0.89	0.40	0.90	0.40	0.64	0.39	0.64	0.39	0.78	0.51	0.73	0.51	0.61	0.49	0.59	0.47
52	0.67	0.40	0.68	0.40	0.92	0.23	0.92	0.22	0.38	0.36	0.36	0.34	0.61	0.47	0.56	0.48	0.52	0.37	0.50	0.34
53	0.82	0.48	0.82	0.47	0.94	0.26	0.94	0.28	0.63	0.44	0.62	0.44	0.32	0.46	0.28	0.42	0.74	0.53	0.71	0.54
54	0.86	0.37	0.88	0.35	0.80	0.38	0.79	0.38	0.75	0.48	0.74	0.49	0.40	0.38	0.37	0.37	0.79	0.40	0.78	0.40
55	0.53	0.32	0.49	0.34	0.90	0.39	0.90	0.38	0.81	0.50	0.80	0.50	0.79	0.38	0.77	0.37	0.52	0.35	0.51	0.35
56	0.68	0.51	0.72	0.49	0.89	0.37	0.89	0.36	0.91	0.46	0.91	0.46	0.82	0.51	0.77	0.53	0.65	0.44	0.63	0.45
57	0.84	0.34	0.82	0.33	0.86	0.42	0.86	0.43	0.88	0.33	0.87	0.33	0.91	0.30	0.87	0.32	0.34	0.27	0.34	0.26
58	0.34	0.32	0.35	0.32	0.83	0.40	0.81	0.40	0.76	0.54	0.76	0.53	0.75	0.32	0.72	0.33	0.77	0.45	0.75	0.45
59	0.91	0.45	0.91	0.44	0.83	0.36	0.84	0.35	0.67	0.44	0.67	0.44	0.75	0.58	0.69	0.59	0.49	0.38	0.47	0.37
60	0.68	0.64	0.67	0.62	0.65	0.48	0.65	0.46	0.83	0.36	0.83	0.37	0.54	0.50	0.49	0.47	0.65	0.59	0.63	0.59
61	0.92	0.40	0.92	0.40	0.74	0.45	0.72	0.46	0.59	0.37	0.58	0.37	0.82	0.41	0.78	0.42	0.79	0.49	0.77	0.50
62	0.85	0.46	0.83	0.46	0.93	0.20	0.93	0.23	0.94	0.37	0.93	0.39	0.87	0.41	0.85	0.44	0.47	0.44	0.46	0.43
63	0.62	0.42	0.60	0.40	0.75	0.40	0.75	0.39	0.68	0.38	0.68	0.38	0.88	0.42	0.84	0.43	0.79	0.52	0.76	0.54
64	0.96	0.35	0.95	0.37	0.87	0.39	0.88	0.39	0.64	0.43	0.63	0.42	0.70	0.52	0.66	0.52	0.61	0.44	0.59	0.44
65	0.59	0.38	0.57	0.36	0.94	0.37	0.93	0.39	0.90	0.39	0.90	0.39	0.88	0.46	0.86	0.47	0.81	0.48	0.79	0.50

Table 8.A.5 Item-by-item *p*-value and Point Biserial for Mathematics, Grade Seven through General Mathematics—Current Year (2013) and Original Year of Administration

CSTs	Grade 7				General Mathematics			
Years	2013		2011		2013		2009	
Items	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis
1	0.65	0.44	0.65	0.43	0.51	0.37	0.51	0.37
2	0.60	0.45	0.61	0.43	0.36	0.41	0.35	0.39
3	0.77	0.33	0.77	0.34	0.73	0.44	0.72	0.44
4	0.55	0.49	0.56	0.49	0.39	0.34	0.38	0.32
5	0.59	0.24	0.60	0.26	0.55	0.49	0.53	0.49
6	0.66	0.54	0.65	0.54	0.54	0.50	0.55	0.50
7	0.59	0.36	0.57	0.36	0.66	0.38	0.66	0.38
8	0.53	0.43	0.52	0.43	0.77	0.29	0.78	0.31
9	0.57	0.57	0.56	0.56	0.37	0.36	0.37	0.37
10	0.81	0.31	0.81	0.31	0.47	0.41	0.45	0.40
11	0.38	0.40	0.37	0.40	0.62	0.45	0.60	0.47
12	0.84	0.40	0.83	0.41	0.37	0.44	0.35	0.42
13	0.65	0.51	0.65	0.51	0.52	0.42	0.51	0.42
14	0.56	0.47	0.56	0.48	0.52	0.47	0.50	0.46
15	0.56	0.41	0.56	0.41	0.43	0.34	0.43	0.35
16	0.46	0.36	0.46	0.35	0.42	0.46	0.45	0.47
17	0.66	0.46	0.65	0.47	0.53	0.44	0.50	0.43
18	0.68	0.33	0.67	0.32	0.50	0.43	0.49	0.44
19	0.58	0.54	0.57	0.54	0.57	0.42	0.55	0.42
20	0.51	0.46	0.49	0.46	0.42	0.43	0.45	0.44
21	0.53	0.51	0.52	0.49	0.58	0.37	0.53	0.36
22	0.46	0.50	0.44	0.50	0.34	0.42	0.31	0.41
23	0.54	0.43	0.53	0.41	0.47	0.26	0.45	0.25
24	0.76	0.39	0.76	0.40	0.41	0.41	0.37	0.40
25	0.70	0.48	0.68	0.49	0.57	0.28	0.54	0.29
26	0.48	0.49	0.48	0.48	0.63	0.38	0.64	0.39
27	0.64	0.35	0.62	0.35	0.58	0.51	0.57	0.53
28	0.41	0.24	0.41	0.24	0.44	0.31	0.45	0.32
29	0.64	0.40	0.63	0.40	0.32	0.33	0.33	0.34
30	0.66	0.45	0.66	0.45	* 0.68	* 0.42	0.69	0.43
31	0.74	0.47	0.73	0.48	0.57	0.36	0.56	0.36
32	0.63	0.45	0.62	0.45	0.56	0.45	0.57	0.46
33	0.61	0.39	0.61	0.39	0.44	0.34	0.43	0.32
34	0.54	0.40	0.52	0.39	0.52	0.39	0.53	0.41
35	0.65	0.53	0.64	0.54	0.30	0.28	0.29	0.28
36	0.73	0.50	0.71	0.50	0.50	0.37	0.45	0.36
37	0.83	0.44	0.82	0.44	0.59	0.49	0.57	0.49
38	0.45	0.36	0.45	0.37	0.76	0.47	0.74	0.46
39	0.78	0.35	0.77	0.36	0.51	0.32	0.51	0.33
40	0.45	0.45	0.43	0.44	0.58	0.40	0.51	0.37
41	0.66	0.45	0.65	0.46	0.73	0.46	0.72	0.47
42	0.83	0.40	0.81	0.41	0.33	0.22	0.30	0.20
43	0.66	0.49	0.66	0.49	0.49	0.28	0.47	0.24
44	0.67	0.37	0.64	0.38	0.38	0.39	0.40	0.42
45	0.54	0.34	0.52	0.32	0.50	0.41	0.53	0.41
46	0.58	0.30	0.58	0.32	0.49	0.45	0.52	0.46

CSTs	Grade 7				General Mathematics			
Years	2013		2011		2013		2009	
Items	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis
47	0.59	0.42	0.57	0.41	0.55	0.35	0.55	0.34
48	0.63	0.30	0.63	0.31	0.47	0.44	0.49	0.45
49	0.44	0.38	0.43	0.37	0.28	0.22	0.29	0.22
50	0.67	0.48	0.66	0.48	0.41	0.52	0.41	0.53
51	0.76	0.48	0.76	0.49	0.50	0.30	0.52	0.30
52	0.80	0.43	0.78	0.44	0.41	0.37	0.39	0.36
53	0.47	0.36	0.45	0.35	0.42	0.38	0.43	0.38
54	0.38	0.31	0.38	0.30	0.37	0.37	0.38	0.38
55	0.50	0.32	0.50	0.32	0.46	0.44	0.44	0.44
56	0.65	0.40	0.65	0.39	0.36	0.23	0.35	0.22
57	0.63	0.50	0.62	0.50	0.44	0.21	0.44	0.22
58	0.77	0.52	0.77	0.52	0.64	0.40	0.63	0.41
59	0.51	0.44	0.50	0.43	0.37	0.40	0.35	0.40
60	0.82	0.48	0.81	0.48	0.37	0.30	0.38	0.30
61	0.57	0.35	0.58	0.36	0.77	0.44	0.74	0.44
62	0.77	0.46	0.75	0.47	0.35	0.32	0.37	0.34
63	0.78	0.50	0.76	0.51	0.65	0.36	0.63	0.36
64	0.50	0.41	0.50	0.41	0.64	0.48	0.63	0.49

* Replacement item due to item exposure on social media Web sites

Table 8.A.6 Item-by-item *p*-value and Point Biserial for Mathematics, Algebra I through EOC Summative High School Mathematics—Current Year (2013) and Original Year of Administration

CSTs	Algebra I				Geometry				Algebra II				Summ. H.S. Mathematics			
Years	2013		2009		2013		2009		2013		2009		2013		2011	
Items	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis
1	0.82	0.36	0.77	0.37	0.79	0.37	0.77	0.38	0.84	0.36	0.83	0.36	0.85	0.36	0.83	0.37
2	0.75	0.40	0.73	0.41	0.81	0.34	0.80	0.36	0.85	0.38	0.82	0.40	0.69	0.36	0.69	0.36
3	0.58	0.41	0.55	0.40	0.63	0.44	0.60	0.44	0.83	0.33	0.83	0.31	0.83	0.49	0.83	0.49
4	0.44	0.41	0.45	0.42	0.18	0.24	0.17	0.22	0.35	0.21	0.35	0.22	0.79	0.39	0.79	0.38
5	0.58	0.37	0.56	0.40	0.50	0.51	0.49	0.50	0.72	0.47	0.71	0.47	0.65	0.30	0.66	0.29
6	0.59	0.43	0.55	0.39	0.56	0.39	0.55	0.39	0.67	0.41	0.65	0.40	0.63	0.55	0.62	0.54
7	0.74	0.45	0.69	0.46	0.49	0.40	0.48	0.40	0.84	0.45	0.82	0.46	0.90	0.32	0.89	0.33
8	0.65	0.51	0.62	0.51	0.55	0.39	0.56	0.38	0.57	0.47	0.56	0.45	0.80	0.47	0.79	0.48
9	0.65	0.49	0.60	0.50	0.73	0.41	0.71	0.44	0.71	0.50	0.67	0.51	0.84	0.39	0.84	0.39
10	0.57	0.46	0.54	0.43	0.49	0.51	0.46	0.50	0.41	0.43	0.37	0.40	0.87	0.17	0.86	0.17
11	0.60	0.47	0.57	0.46	0.74	0.45	0.72	0.47	0.59	0.50	0.56	0.50	0.68	0.42	0.68	0.43
12	0.79	0.38	0.75	0.39	0.61	0.54	0.57	0.55	0.38	0.31	0.37	0.31	0.85	0.44	0.84	0.44
13	0.51	0.46	0.44	0.46	0.53	0.29	0.52	0.29	0.55	0.46	0.53	0.45	* 0.58	* 0.44	0.55	0.43
14	0.52	0.34	0.53	0.36	0.44	0.58	0.43	0.57	0.50	0.50	0.50	0.50	0.76	0.50	0.74	0.51
15	0.39	0.34	0.36	0.33	0.78	0.39	0.76	0.43	0.50	0.45	0.48	0.42	0.80	0.44	0.79	0.44
16	0.49	0.47	0.43	0.47	0.70	0.52	0.67	0.54	0.57	0.40	0.56	0.38	0.71	0.53	0.72	0.53
17	0.68	0.41	0.66	0.41	0.59	0.48	0.56	0.50	0.36	0.38	0.37	0.38	0.81	0.40	0.81	0.41
18	0.68	0.44	0.65	0.43	0.45	0.31	0.41	0.32	0.85	0.35	0.83	0.36	0.66	0.42	0.64	0.39
19	0.40	0.51	0.38	0.50	0.49	0.39	0.47	0.39	0.62	0.48	0.59	0.47	0.82	0.38	0.83	0.39
20	0.62	0.31	0.57	0.32	0.33	0.47	0.30	0.45	0.41	0.40	0.41	0.40	0.62	0.30	0.61	0.30
21	0.54	0.43	0.51	0.41	0.61	0.31	0.59	0.32	0.46	0.42	0.42	0.38	0.76	0.46	0.75	0.47
22	0.43	0.39	0.38	0.34	0.63	0.49	0.59	0.49	0.62	0.38	0.59	0.38	0.89	0.38	0.88	0.37
23	0.53	0.51	0.47	0.50	0.68	0.42	0.66	0.45	0.40	0.33	0.41	0.34	0.70	0.51	0.70	0.49
24	0.52	0.49	0.48	0.46	0.59	0.54	0.58	0.53	0.52	0.43	0.49	0.43	0.65	0.45	0.65	0.45
25	0.43	0.34	0.42	0.32	0.65	0.47	0.62	0.48	0.60	0.41	0.58	0.40	0.66	0.43	0.67	0.43
26	0.61	0.46	0.56	0.45	0.53	0.50	0.52	0.48	0.74	0.39	0.69	0.39	0.78	0.26	0.78	0.26
27	0.47	0.46	0.43	0.44	0.35	0.49	0.35	0.49	0.37	0.40	0.35	0.35	0.58	0.49	0.59	0.49
28	0.42	0.53	0.37	0.52	0.26	0.48	0.24	0.43	0.46	0.31	0.44	0.29	0.78	0.47	0.77	0.46
29	0.60	0.48	0.55	0.45	0.52	0.42	0.49	0.40	0.30	0.45	0.29	0.41	* 0.67	* 0.29	0.67	0.24
30	0.50	0.42	0.43	0.42	0.59	0.45	0.56	0.44	0.32	0.29	0.31	0.23	0.70	0.48	0.72	0.47
31	0.43	0.49	0.38	0.47	0.46	0.56	0.43	0.53	0.38	0.55	0.35	0.54	0.53	0.28	0.53	0.27
32	0.75	0.40	0.67	0.42	0.61	0.53	0.58	0.52	0.51	0.40	0.49	0.36	0.78	0.50	0.78	0.51
33	0.45	0.35	0.43	0.32	0.47	0.34	0.47	0.32	0.36	0.44	0.34	0.42	0.84	0.48	0.84	0.49
34	0.69	0.46	0.62	0.48	0.62	0.29	0.60	0.32	0.66	0.42	0.65	0.43	0.83	0.51	0.83	0.51
35	0.39	0.50	0.35	0.47	0.36	0.32	0.35	0.32	0.75	0.41	0.73	0.41	0.72	0.31	0.73	0.29
36	0.66	0.45	0.61	0.45	0.69	0.33	0.67	0.36	0.61	0.36	0.58	0.36	0.87	0.36	0.88	0.36
37	0.30	0.43	0.28	0.39	0.63	0.44	0.61	0.45	0.50	0.37	0.47	0.36	0.78	0.53	0.78	0.52
38	0.52	0.39	0.45	0.37	0.49	0.53	0.47	0.53	0.61	0.42	0.59	0.42	0.87	0.43	0.86	0.43
39	0.59	0.55	0.53	0.53	0.70	0.53	0.66	0.55	0.53	0.49	0.48	0.48	0.73	0.49	0.71	0.49
40	0.68	0.49	0.63	0.50	0.79	0.38	0.75	0.42	0.64	0.46	0.60	0.45	0.75	0.50	0.75	0.51
41	0.52	0.46	0.45	0.40	0.32	0.39	0.31	0.36	0.69	0.28	0.65	0.28	0.74	0.48	0.74	0.47
42	0.38	0.48	0.36	0.47	0.39	0.40	0.41	0.40	0.42	0.35	0.39	0.36	0.88	0.34	0.88	0.34
43	0.53	0.47	0.48	0.43	0.51	0.41	0.49	0.42	0.68	0.45	0.65	0.44	0.71	0.40	0.70	0.40
44	0.33	0.29	0.31	0.29	0.34	0.25	0.34	0.22	0.63	0.42	0.62	0.42	0.39	0.33	0.40	0.33
45	0.53	0.32	0.49	0.31	0.46	0.38	0.44	0.36	0.26	0.48	0.24	0.46	0.76	0.47	0.75	0.47
46	0.58	0.48	0.53	0.48	0.57	0.31	0.56	0.31	0.47	0.46	0.46	0.47	0.83	0.49	0.84	0.48

CSTs	Algebra I				Geometry				Algebra II				Summ. H.S. Mathematics			
Years	2013		2009		2013		2009		2013		2009		2013		2011	
Items	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis
47	0.73	0.37	0.66	0.40	0.67	0.47	0.64	0.50	0.29	0.20	0.29	0.21	0.71	0.54	0.70	0.54
48	0.33	0.38	0.31	0.35	0.63	0.52	0.60	0.51	0.59	0.38	0.56	0.38	0.76	0.46	0.75	0.47
49	0.50	0.48	0.46	0.46	0.53	0.46	0.50	0.44	0.47	0.44	0.48	0.43	0.83	0.42	0.81	0.44
50	0.47	0.41	0.42	0.41	0.36	0.38	0.35	0.37	0.57	0.47	0.55	0.47	0.78	0.45	0.78	0.45
51	0.32	0.32	0.28	0.27	0.73	0.48	0.68	0.50	0.66	0.44	0.63	0.43	0.73	0.55	0.72	0.55
52	0.40	0.39	0.39	0.36	0.56	0.50	0.54	0.49	0.66	0.40	0.66	0.39	0.74	0.52	0.73	0.51
53	0.46	0.33	0.43	0.31	0.83	0.44	0.80	0.46	0.39	0.35	0.39	0.37	0.58	0.42	0.57	0.42
54	0.52	0.40	0.44	0.38	0.44	0.34	0.42	0.35	0.49	0.44	0.46	0.42	0.48	0.42	0.49	0.43
55	0.32	0.43	0.26	0.37	0.41	0.39	0.39	0.40	0.69	0.36	0.67	0.37	0.84	0.42	0.83	0.44
56	0.25	0.28	0.23	0.23	0.62	0.32	0.59	0.33	0.77	0.33	0.76	0.33	0.73	0.45	0.72	0.47
57	0.43	0.53	0.36	0.48	0.45	0.53	0.42	0.52	0.65	0.28	0.61	0.30	0.76	0.59	0.76	0.60
58	0.34	0.47	0.29	0.39	0.49	0.29	0.46	0.32	0.32	0.43	0.31	0.40	0.73	0.44	0.73	0.44
59	0.24	0.19	0.23	0.14	0.64	0.49	0.58	0.49	0.28	0.27	0.27	0.28	0.63	0.31	0.62	0.31
60	0.31	0.33	0.29	0.31	0.39	0.41	0.34	0.38	0.37	0.33	0.36	0.31	0.52	0.42	0.51	0.42
61	0.46	0.31	0.44	0.31	0.33	0.51	0.33	0.50	0.49	0.48	0.46	0.45	0.55	0.41	0.55	0.40
62	0.54	0.39	0.49	0.36	0.60	0.49	0.55	0.48	0.37	0.37	0.33	0.33	0.66	0.47	0.66	0.47
63	0.49	0.31	0.47	0.30	0.55	0.38	0.54	0.38	0.31	0.38	0.27	0.35	0.50	0.34	0.50	0.35
64	0.55	0.50	0.49	0.49	0.57	0.42	0.54	0.42	0.71	0.30	0.69	0.31	0.81	0.43	0.81	0.44
65	0.38	0.26	0.38	0.24	0.68	0.47	0.62	0.48	0.33	0.34	0.30	0.30	0.79	0.41	0.80	0.40

* Replacement item due to item exposure on social media Web sites

Table 8.A.7 Item-by-item *p*-value and Point Biserial for Mathematics, Integrated Mathematics—Current Year (2013) and Original Year of Administration

Item-by-item *p*-value and Point Biserial for Mathematics, Integrated Mathematics												
CSTs	**Integrated Mathematics 1**				**Integrated Mathematics 2**				**Integrated Mathematics 3**			
Years	**2013**		**2009**		**2013**		**2009**		**2013**		**2009**	
Items	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
1	0.77	0.33	0.74	0.33	0.73	0.38	0.74	0.39	0.59	0.26	0.64	0.23
2	0.80	0.33	0.75	0.34	0.52	0.32	0.53	0.37	0.38	0.24	0.44	0.29
3	0.38	0.33	0.41	0.36	0.49	0.32	0.40	0.39	0.57	0.17	0.60	0.23
4	0.65	0.35	0.65	0.35	0.54	0.34	0.57	0.42	0.27	0.40	0.37	0.40
5	0.53	0.32	0.53	0.32	0.55	0.43	0.52	0.46	0.81	0.42	0.83	0.45
6	0.48	0.33	0.50	0.35	0.52	0.20	0.55	0.27	0.75	0.47	0.75	0.47
7	0.66	0.38	0.68	0.38	0.25	0.36	0.26	0.37	0.56	0.50	0.60	0.42
8	0.48	0.36	0.48	0.39	0.53	0.27	0.49	0.33	0.76	0.52	0.71	0.52
9	0.59	0.43	0.57	0.45	0.53	0.32	0.53	0.35	0.49	0.48	0.49	0.44
10	0.55	0.47	0.57	0.48	0.75	0.31	0.69	0.34	0.36	0.21	0.34	0.23
11	0.51	0.40	0.50	0.38	0.45	0.33	0.42	0.36	0.49	0.49	0.48	0.38
12	0.44	0.40	0.40	0.44	0.30	0.26	0.33	0.32	0.34	0.18	0.29	0.17
13	0.69	0.42	0.66	0.41	0.40	0.38	0.39	0.49	0.73	0.43	0.76	0.44
14	0.54	0.40	0.54	0.40	0.21	0.12	0.23	0.14	0.54	0.51	0.51	0.52
15	0.48	0.30	0.49	0.35	0.40	0.42	0.42	0.49	0.54	0.36	0.51	0.43
16	0.55	0.36	0.53	0.36	0.44	0.28	0.45	0.31	0.73	0.43	0.77	0.45
17	0.33	0.22	0.32	0.24	0.51	0.32	0.53	0.36	0.55	0.56	0.52	0.56
18	0.58	0.27	0.53	0.28	0.45	0.20	0.47	0.27	0.65	0.43	0.65	0.43
19	0.29	0.37	0.31	0.39	0.39	0.25	0.41	0.35	0.47	0.48	0.49	0.51
20	0.54	0.39	0.52	0.39	0.81	0.35	0.74	0.37	0.39	0.48	0.42	0.48
21	0.39	0.31	0.36	0.33	0.17	0.20	0.21	0.32	0.33	0.33	0.37	0.39
22	0.44	0.34	0.44	0.34	0.37	0.25	0.36	0.25	0.32	0.33	0.37	0.33
23	0.40	0.36	0.38	0.37	0.54	0.48	0.52	0.51	0.70	0.52	0.69	0.55
24	0.41	0.36	0.40	0.35	0.64	0.41	0.58	0.43	0.59	0.51	0.56	0.44
25	0.63	0.42	0.59	0.44	0.42	0.24	0.44	0.30	0.65	0.47	0.66	0.36
26	0.40	0.30	0.40	0.30	0.42	0.23	0.37	0.23	0.55	0.40	0.61	0.42
27	0.36	0.28	0.35	0.24	0.52	0.48	0.52	0.52	0.51	0.40	0.49	0.38
28	0.59	0.45	0.55	0.46	0.56	0.42	0.56	0.49	0.57	0.44	0.57	0.40
29	0.24	0.17	0.26	0.20	0.45	0.33	0.44	0.45	0.66	0.51	0.68	0.48
30	0.40	0.36	0.37	0.32	0.72	0.43	0.69	0.48	0.36	0.32	0.38	0.39
31	0.26	0.20	0.26	0.27	0.58	0.43	0.56	0.46	0.61	0.41	0.63	0.49
32	0.40	0.32	0.37	0.34	0.42	0.46	0.40	0.49	0.48	0.39	0.47	0.37
33	0.29	0.37	0.30	0.41	0.56	0.40	0.55	0.46	0.37	0.35	0.33	0.36
34	0.22	0.10	0.20	0.14	0.14	0.07	0.16	0.13	0.27	0.24	0.32	0.37
35	0.53	0.48	0.46	0.47	0.63	0.43	0.61	0.48	0.30	0.31	0.36	0.31
36	0.25	0.32	0.27	0.37	0.22	0.33	0.23	0.34	0.43	0.36	0.48	0.35
37	0.30	0.27	0.33	0.29	0.46	0.16	0.48	0.25	0.29	0.22	0.29	0.24
38	0.60	0.42	0.57	0.42	0.45	0.29	0.43	0.35	0.33	0.54	0.34	0.53
39	0.27	0.26	0.25	0.28	0.45	0.33	0.43	0.37	0.49	0.48	0.51	0.41
40	0.25	0.29	0.21	0.28	0.34	0.31	0.33	0.41	0.36	0.42	0.42	0.38
41	0.39	0.26	0.34	0.26	0.37	0.36	0.40	0.40	0.61	0.53	0.67	0.51
42	0.34	0.38	0.30	0.37	0.44	0.23	0.50	0.33	0.61	0.55	0.64	0.47
43	0.25	0.33	0.23	0.30	0.55	0.40	0.51	0.40	0.60	0.46	0.61	0.40
44	0.52	0.41	0.48	0.42	0.58	0.24	0.56	0.32	0.50	0.46	0.44	0.50
45	0.48	0.29	0.45	0.29	0.23	0.22	0.24	0.22	0.54	0.49	0.57	0.46
46	0.43	0.33	0.44	0.38	0.54	0.44	0.53	0.46	0.49	0.53	0.52	0.47
47	0.23	0.19	0.26	0.25	0.28	0.20	0.32	0.25	0.49	0.48	0.55	0.49
48	0.24	0.11	0.24	0.17	0.69	0.43	0.66	0.44	0.66	0.45	0.67	0.47
49	0.29	0.23	0.30	0.19	0.46	0.21	0.48	0.28	0.63	0.38	0.60	0.35
50	0.18	0.29	0.22	0.33	0.54	0.46	0.50	0.47	0.29	0.42	0.23	0.49
51	0.36	0.34	0.37	0.36	0.31	0.20	0.31	0.22	0.54	0.40	0.53	0.40
52	0.24	0.13	0.24	0.14	0.40	0.33	0.39	0.38	0.35	0.19	0.31	0.25
53	0.26	0.09	0.27	0.11	0.30	0.26	0.31	0.32	0.35	0.33	0.33	0.29
54	0.31	0.12	0.31	0.14	0.34	0.24	0.32	0.26	0.54	0.46	0.58	0.45
55	0.46	0.29	0.47	0.31	0.45	0.38	0.43	0.39	0.57	0.38	0.58	0.38
56	0.12	0.15	0.13	0.19	0.50	0.40	0.48	0.41	0.44	0.43	0.46	0.42
57	0.22	0.26	0.23	0.30	0.62	0.46	0.59	0.46	0.35	0.36	0.36	0.33
58	0.33	0.19	0.35	0.21	0.34	0.29	0.34	0.34	0.22	0.06	0.25	0.18
59	0.48	0.13	0.46	0.16	0.65	0.49	0.61	0.55	0.33	0.29	0.36	0.35
60	0.40	0.30	0.41	0.32	0.38	0.25	0.39	0.32	0.26	0.29	0.24	0.23
61	0.23	0.22	0.26	0.26	0.45	0.32	0.52	0.39	0.34	0.22	0.30	0.35
62	0.39	0.27	0.39	0.27	0.26	0.19	0.32	0.32	0.60	0.39	0.60	0.35
63	0.37	0.23	0.37	0.21	0.18	–0.02	0.23	0.14	0.25	0.20	0.22	0.23
64	0.33	0.15	0.32	0.15	0.61	0.30	0.56	0.33	0.60	0.41	0.59	0.36
65	0.36	0.28	0.39	0.30	0.23	0.18	0.30	0.33	0.70	0.40	0.69	0.40

Table 8.A.8 Item-by-item *p*-value and Point Biserial for Science, Grades Five, Eight, and Ten—Current Year (2013) and Original Year of Administration

Item-by-item *p*-value and Point Biserial for Science, Grades Five, Eight, and Ten												
CSTs	**Grade 5**				**Grade 8**				**Life Science (Grade 10)**			
Years	**2013**		**2009**		**2013**		**2009**		**2013**		**2009**	
Items	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
1	0.87	0.35	0.83	0.37	0.45	0.39	0.41	0.37	0.72	0.43	0.67	0.46
2	0.68	0.34	0.67	0.35	0.73	0.35	0.70	0.36	0.66	0.43	0.62	0.41
3	0.86	0.31	0.84	0.35	0.86	0.39	0.81	0.41	0.77	0.44	0.73	0.46
4	0.70	0.33	0.66	0.34	0.80	0.48	0.76	0.50	0.48	0.43	0.43	0.40
5	0.84	0.38	0.83	0.39	0.72	0.48	0.66	0.49	0.45	0.39	0.41	0.37
6	0.84	0.36	0.82	0.38	0.62	0.40	0.58	0.39	0.46	0.39	0.42	0.37
7	0.80	0.42	0.75	0.42	0.88	0.47	0.83	0.51	0.73	0.49	0.67	0.49
8	0.67	0.37	0.63	0.38	0.38	0.38	0.35	0.35	0.61	0.35	0.58	0.34
9	0.76	0.51	0.70	0.52	0.57	0.40	0.51	0.37	0.70	0.51	0.65	0.52
10	0.82	0.42	0.79	0.43	0.83	0.40	0.80	0.45	0.71	0.42	0.65	0.45
11	0.61	0.49	0.55	0.47	0.76	0.33	0.73	0.35	0.65	0.40	0.60	0.40
12	0.70	0.45	0.64	0.45	0.60	0.42	0.54	0.36	0.57	0.42	0.50	0.40
13	0.62	0.35	0.60	0.36	0.68	0.47	0.63	0.48	0.83	0.29	0.80	0.33
14	0.76	0.42	0.72	0.43	0.56	0.47	0.48	0.43	0.54	0.45	0.48	0.44
15	0.76	0.36	0.75	0.37	0.70	0.37	0.68	0.40	0.47	0.33	0.42	0.33
16	0.87	0.47	0.83	0.50	0.87	0.45	0.81	0.48	0.55	0.44	0.50	0.44
17	0.66	0.45	0.62	0.46	0.82	0.43	0.77	0.45	0.50	0.54	0.45	0.51
18	0.62	0.38	0.58	0.37	0.62	0.32	0.60	0.33	0.62	0.44	0.54	0.43
19	0.71	0.50	0.66	0.50	0.56	0.42	0.51	0.40	0.53	0.36	0.48	0.35
20	0.68	0.52	0.64	0.50	0.80	0.43	0.74	0.44	0.39	0.31	0.38	0.30
21	0.66	0.52	0.62	0.50	0.61	0.42	0.59	0.46	0.86	0.51	0.80	0.54
22	0.86	0.49	0.81	0.53	0.82	0.40	0.77	0.43	0.74	0.51	0.67	0.55
23	0.55	0.41	0.44	0.36	0.76	0.45	0.68	0.46	0.69	0.37	0.64	0.40
24	0.69	0.51	0.65	0.51	0.57	0.49	0.50	0.46	0.63	0.45	0.57	0.44
25	0.77	0.50	0.73	0.51	0.73	0.45	0.67	0.49	0.47	0.43	0.45	0.41
26	0.81	0.28	0.80	0.29	0.89	0.47	0.84	0.50	0.46	0.38	0.42	0.37
27	0.68	0.51	0.65	0.52	0.77	0.41	0.70	0.43	0.67	0.43	0.61	0.44
28	0.66	0.36	0.62	0.37	0.58	0.40	0.53	0.39	0.77	0.47	0.70	0.49
29	0.61	0.55	0.50	0.52	0.55	0.36	0.50	0.34	0.50	0.35	0.47	0.34
30	0.55	0.31	0.53	0.33	0.84	0.51	0.78	0.54	0.80	0.52	0.74	0.54
31	0.80	0.46	0.78	0.47	0.79	0.49	0.74	0.49	0.83	0.41	0.78	0.43
32	0.56	0.40	0.53	0.35	0.88	0.47	0.82	0.51	0.75	0.40	0.71	0.40
33	0.82	0.34	0.79	0.36	0.65	0.41	0.60	0.38	0.86	0.40	0.82	0.43
34	0.70	0.37	0.67	0.37	0.90	0.40	0.83	0.42	0.79	0.57	0.72	0.61
35	0.84	0.40	0.81	0.41	0.50	0.41	0.44	0.37	0.70	0.49	0.65	0.50
36	0.61	0.50	0.54	0.48	0.55	0.36	0.49	0.30	0.87	0.51	0.82	0.54
37	0.72	0.47	0.67	0.47	0.51	0.47	0.49	0.46	0.89	0.46	0.83	0.49
38	0.53	0.33	0.51	0.33	0.86	0.39	0.81	0.41	0.45	0.38	0.40	0.38
39	0.58	0.52	0.54	0.51	0.60	0.33	0.59	0.36	0.71	0.48	0.63	0.49
40	0.67	0.45	0.65	0.47	0.74	0.44	0.68	0.46	0.52	0.45	0.45	0.44
41	0.59	0.42	0.57	0.43	0.88	0.40	0.81	0.46	0.69	0.55	0.66	0.58
42	0.69	0.37	0.68	0.38	0.68	0.48	0.63	0.48	0.69	0.50	0.64	0.52
43	0.51	0.42	0.48	0.39	0.84	0.46	0.77	0.49	0.64	0.41	0.59	0.43
44	0.58	0.30	0.56	0.30	0.79	0.43	0.73	0.43	0.87	0.46	0.82	0.49
45	0.78	0.44	0.75	0.45	0.76	0.51	0.70	0.52	0.65	0.47	0.60	0.47
46	0.66	0.44	0.61	0.44	0.71	0.48	0.63	0.47	0.58	0.47	0.53	0.48
47	0.80	0.46	0.78	0.47	0.69	0.46	0.62	0.47	0.77	0.48	0.73	0.51
48	0.66	0.46	0.65	0.45	0.78	0.42	0.72	0.44	0.78	0.38	0.74	0.41
49	0.66	0.33	0.64	0.33	0.57	0.35	0.52	0.37	0.62	0.48	0.55	0.47
50	0.63	0.41	0.61	0.42	0.81	0.48	0.72	0.51	0.67	0.51	0.60	0.52
51	0.65	0.46	0.57	0.43	0.75	0.55	0.69	0.55	0.59	0.48	0.55	0.43
52	0.53	0.36	0.49	0.36	0.78	0.49	0.70	0.52	0.58	0.38	0.53	0.39
53	0.76	0.43	0.73	0.43	0.68	0.53	0.62	0.53	0.74	0.59	0.64	0.61
54	0.86	0.28	0.82	0.31	0.60	0.50	0.52	0.47	0.76	0.45	0.70	0.47
55	0.70	0.53	0.65	0.51	0.62	0.35	0.61	0.39	0.66	0.54	0.59	0.58
56	0.80	0.32	0.77	0.38	0.75	0.40	0.68	0.43	0.55	0.47	0.47	0.51
57	0.55	0.45	0.50	0.45	0.71	0.39	0.66	0.41	0.63	0.56	0.55	0.56
58	0.52	0.40	0.50	0.41	0.74	0.42	0.65	0.44	0.79	0.45	0.73	0.48
59	0.81	0.43	0.79	0.43	0.78	0.45	0.72	0.48	0.71	0.56	0.65	0.55
60	0.84	0.37	0.80	0.39	0.52	0.36	0.47	0.33	0.63	0.51	0.57	0.49

Table 8.A.9 Item-by-item *p*-value and Point Biserial for Science, EOC Biology, Chemistry, Earth Science, and Physics

Item-by-item *p*-value and Point Biserial for Science, EOC Biology, Chemistry, Earth Science, and Physics																
CSTs	**Biology**				**Chemistry**				**Earth Science**				**Physics**			
Years	**2013**		**2009**		**2013**		**2011**		**2013**		**2010**		**2013**		**2011**	
Items	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
1	0.48	0.46	0.45	0.44	0.83	0.32	0.82	0.33	0.68	0.37	0.65	0.38	0.84	0.42	0.85	0.41
2	0.37	0.47	0.35	0.47	0.57	0.34	0.56	0.34	0.65	0.40	0.64	0.39	0.66	0.56	0.66	0.56
3	0.47	0.31	0.44	0.32	0.76	0.44	0.74	0.45	0.36	0.27	0.34	0.24	0.57	0.35	0.57	0.35
4	0.64	0.49	0.61	0.48	0.62	0.29	0.61	0.28	0.49	0.28	0.48	0.30	0.79	0.42	0.78	0.42
5	0.80	0.54	0.74	0.57	0.92	0.20	0.91	0.21	0.75	0.44	0.71	0.45	0.63	0.52	0.64	0.52
6	0.69	0.44	0.66	0.45	0.73	0.48	0.72	0.49	0.49	0.43	0.47	0.43	0.64	0.27	0.64	0.29
7	0.45	0.38	0.40	0.37	0.51	0.30	0.49	0.29	0.49	0.33	0.48	0.34	0.44	0.35	0.45	0.35
8	0.51	0.43	0.46	0.40	0.52	0.30	0.50	0.29	0.69	0.53	0.66	0.54	0.63	0.41	0.63	0.41
9	0.47	0.48	0.43	0.47	0.53	0.29	0.51	0.27	0.65	0.51	0.62	0.52	0.76	0.43	0.75	0.43
10	0.65	0.32	0.60	0.33	0.79	0.39	0.79	0.39	0.74	0.33	0.72	0.35	0.67	0.42	0.67	0.42
11	0.75	0.33	0.71	0.35	0.80	0.40	0.79	0.41	0.45	0.26	0.42	0.24	0.75	0.43	0.75	0.44
12	* 0.71	* 0.43	0.62	0.40	0.73	0.37	0.71	0.38	0.35	0.40	0.34	0.38	0.48	0.41	0.48	0.43
13	0.59	0.46	0.57	0.45	0.59	0.32	0.57	0.32	0.48	0.31	0.46	0.32	0.64	0.39	0.65	0.39
14	* 0.88	* 0.46	0.84	0.49	0.72	0.44	0.69	0.45	0.49	0.32	0.47	0.32	0.68	0.48	0.67	0.49
15	0.43	0.45	0.38	0.39	0.65	0.43	0.62	0.44	0.61	0.44	0.59	0.44	0.55	0.50	0.56	0.50
16	0.63	0.53	0.57	0.54	0.61	0.46	0.60	0.46	0.60	0.42	0.56	0.43	0.62	0.46	0.61	0.46
17	0.65	0.42	0.63	0.42	0.61	0.27	0.61	0.27	0.48	0.41	0.48	0.40	0.86	0.51	0.86	0.51
18	0.48	0.45	0.46	0.45	0.64	0.30	0.64	0.31	0.67	0.40	0.62	0.41	0.60	0.43	0.60	0.41
19	0.89	0.41	0.85	0.43	0.82	0.42	0.81	0.44	0.63	0.35	0.62	0.38	0.62	0.49	0.62	0.50
20	0.53	0.31	0.50	0.32	0.64	0.42	0.63	0.42	0.76	0.36	0.72	0.37	0.69	0.46	0.69	0.47
21	0.77	0.46	0.70	0.47	0.57	0.40	0.56	0.41	0.70	0.42	0.66	0.43	0.63	0.49	0.63	0.50
22	0.46	0.45	0.43	0.44	0.59	0.46	0.58	0.46	0.51	0.35	0.49	0.35	0.53	0.47	0.53	0.47
23	0.71	0.51	0.66	0.51	0.62	0.37	0.61	0.38	0.66	0.46	0.63	0.45	0.70	0.45	0.70	0.45
24	0.58	0.49	0.54	0.51	0.69	0.41	0.67	0.42	0.60	0.36	0.56	0.36	0.51	0.43	0.50	0.43
25	0.59	0.51	0.55	0.51	0.65	0.46	0.64	0.46	0.54	0.23	0.50	0.24	0.66	0.55	0.66	0.55
26	0.81	0.50	0.77	0.51	0.49	0.26	0.49	0.26	0.54	0.38	0.52	0.40	0.67	0.33	0.66	0.34
27	0.74	0.30	0.71	0.32	0.56	0.45	0.55	0.45	0.70	0.33	0.66	0.34	0.70	0.50	0.70	0.50
28	0.60	0.33	0.56	0.31	0.63	0.41	0.62	0.42	0.53	0.44	0.53	0.45	0.66	0.45	0.66	0.47
29	0.59	0.48	0.54	0.47	0.68	0.34	0.67	0.36	0.72	0.46	0.67	0.48	0.65	0.48	0.65	0.48
30	0.69	0.43	0.65	0.45	0.49	0.35	0.48	0.35	0.70	0.53	0.68	0.53	0.47	0.46	0.47	0.46
31	0.58	0.34	0.56	0.34	0.70	0.57	0.70	0.57	0.66	0.36	0.64	0.38	0.67	0.43	0.65	0.42
32	0.47	0.37	0.44	0.34	0.63	0.31	0.62	0.34	0.49	0.44	0.49	0.45	0.82	0.39	0.81	0.40
33	0.71	0.54	0.67	0.54	0.57	0.28	0.56	0.29	0.54	0.44	0.53	0.45	0.73	0.43	0.72	0.44
34	0.52	0.43	0.49	0.41	0.54	0.45	0.54	0.45	0.55	0.44	0.51	0.41	0.78	0.47	0.77	0.48
35	0.82	0.38	0.79	0.41	0.62	0.44	0.58	0.43	0.55	0.41	0.56	0.42	0.66	0.42	0.65	0.43
36	0.63	0.54	0.59	0.53	0.68	0.50	0.66	0.50	0.57	0.52	0.55	0.54	0.65	0.31	0.64	0.32
37	0.63	0.54	0.55	0.53	0.44	0.42	0.44	0.42	0.76	0.53	0.73	0.54	0.57	0.43	0.56	0.44
38	0.67	0.50	0.64	0.50	0.53	0.41	0.52	0.41	0.41	0.25	0.41	0.24	0.67	0.49	0.67	0.50
39	0.78	0.52	0.73	0.53	0.66	0.38	0.64	0.39	0.50	0.44	0.47	0.43	0.61	0.45	0.60	0.44
40	0.61	0.47	0.55	0.45	0.59	0.51	0.57	0.51	0.62	0.44	0.62	0.47	0.54	0.37	0.51	0.35
41	0.58	0.32	0.55	0.33	0.68	0.36	0.66	0.35	0.63	0.47	0.62	0.47	0.60	0.31	0.60	0.33
42	0.70	0.46	0.66	0.47	0.36	0.36	0.35	0.36	0.48	0.44	0.46	0.45	0.64	0.51	0.64	0.51
43	0.50	0.34	0.46	0.31	0.67	0.38	0.66	0.40	0.62	0.48	0.60	0.47	0.49	0.47	0.50	0.47
44	0.54	0.45	0.49	0.43	0.65	0.50	0.62	0.52	0.51	0.34	0.51	0.36	0.62	0.32	0.60	0.33
45	0.76	0.52	0.72	0.53	0.76	0.51	0.73	0.52	0.56	0.49	0.52	0.49	0.79	0.49	0.79	0.48

Item-by-item *p*-value and Point Biserial for Science, EOC Biology, Chemistry, Earth Science, and Physics

CSTs	Biology				Chemistry				Earth Science				Physics			
Years	2013		2009		2013		2011		2013		2010		2013		2011	
Items	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis	*p*-value	Pt-Bis
46	0.40	0.32	0.39	0.32	0.35	0.32	0.34	0.32	0.63	0.44	0.59	0.45	0.47	0.29	0.48	0.31
47	0.54	0.45	0.51	0.44	0.62	0.45	0.60	0.46	0.54	0.52	0.53	0.54	0.64	0.32	0.64	0.34
48	0.71	0.52	0.67	0.54	0.53	0.40	0.52	0.41	0.55	0.44	0.52	0.45	0.76	0.45	0.75	0.45
49	0.42	0.46	0.39	0.41	0.67	0.43	0.66	0.44	0.41	0.27	0.39	0.26	0.62	0.38	0.61	0.36
50	0.60	0.46	0.56	0.47	0.55	0.37	0.53	0.37	0.60	0.47	0.57	0.49	0.72	0.53	0.71	0.53
51	0.58	0.30	0.57	0.32	0.62	0.59	0.61	0.58	0.75	0.50	0.72	0.50	0.81	0.48	0.80	0.48
52	0.69	0.53	0.64	0.53	0.52	0.38	0.51	0.38	0.56	0.45	0.53	0.46	0.61	0.42	0.60	0.42
53	0.58	0.46	0.53	0.47	0.70	0.49	0.69	0.49	0.55	0.31	0.51	0.31	0.51	0.35	0.52	0.35
54	0.80	0.53	0.76	0.55	0.73	0.53	0.72	0.53	0.50	0.44	0.47	0.45	0.70	0.37	0.68	0.36
55	0.68	0.53	0.62	0.54	0.62	0.50	0.61	0.49	0.64	0.47	0.63	0.47	0.64	0.31	0.62	0.29
56	0.65	0.36	0.60	0.39	0.44	0.39	0.44	0.38	0.43	0.30	0.43	0.30	0.37	0.27	0.39	0.27
57	0.74	0.31	0.70	0.34	0.72	0.51	0.70	0.52	0.61	0.42	0.56	0.42	0.43	0.30	0.44	0.29
58	0.61	0.48	0.59	0.47	0.54	0.36	0.53	0.36	0.46	0.38	0.46	0.39	0.64	0.35	0.62	0.34
59	0.63	0.51	0.59	0.51	0.55	0.37	0.54	0.38	0.68	0.34	0.64	0.34	0.61	0.34	0.62	0.34
60	0.60	0.44	0.57	0.45	0.87	0.48	0.84	0.51	0.41	0.26	0.38	0.26	0.51	0.37	0.52	0.37

* Replacement item due to item exposure on social media Web sites

Table 8.A.10 Item-by-item *p*-value and Point Biserial for Science, EOC Integrated/Coordinated

Item-by-item *p*-value and Point Biserial for Science, EOC Integrated/Coordinated																
CSTs	**Integrated/Coordinated 1**				**Integrated/Coordinated 2**				**Integrated/Coordinated 3**				**Integrated/Coordinated 4**			
Years	**2013**		**2011**		**2013**		**2010**		**2013**		**2011**		**2013**		**2009**	
Items	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
1	0.58	0.35	0.57	0.34	0.87	0.37	0.85	0.38	0.60	0.40	0.65	0.44	0.36	0.38	0.47	0.39
2	0.63	0.39	0.58	0.39	0.45	0.42	0.45	0.40	0.72	0.35	0.74	0.35	0.36	0.25	0.43	0.34
3	0.64	0.43	0.62	0.42	0.67	0.28	0.63	0.34	* 0.72	* 0.39	0.63	0.53	0.41	0.21	0.79	0.45
4	0.68	0.48	0.64	0.47	0.61	0.42	0.53	0.40	0.28	0.30	0.30	0.29	0.30	0.21	0.41	0.42
5	0.65	0.48	0.63	0.46	0.72	0.23	0.69	0.21	0.58	0.48	0.65	0.47	0.48	0.45	0.51	0.41
6	0.48	0.37	0.46	0.36	0.51	0.39	0.46	0.35	0.62	0.49	0.67	0.50	0.64	0.50	0.66	0.47
7	0.47	0.32	0.46	0.30	0.56	0.34	0.54	0.38	0.43	0.34	0.48	0.36	0.29	0.66	0.48	0.46
8	0.47	0.38	0.44	0.38	0.57	0.36	0.51	0.31	0.49	0.40	0.47	0.38	0.46	0.35	0.48	0.37
9	0.41	0.25	0.40	0.23	0.44	0.27	0.44	0.27	0.33	0.14	0.34	0.25	0.30	0.03	0.34	0.21
10	0.58	0.28	0.55	0.28	0.44	0.47	0.42	0.42	0.47	0.41	0.49	0.41	0.41	0.30	0.41	0.25
11	0.84	0.41	0.82	0.42	0.44	0.39	0.37	0.33	0.58	0.45	0.60	0.46	0.38	0.49	0.47	0.38
12	0.50	0.35	0.45	0.35	0.50	0.41	0.48	0.38	0.62	0.40	0.63	0.38	0.23	0.38	0.22	0.18
13	0.39	0.27	0.38	0.26	0.64	0.41	0.63	0.39	0.29	0.14	0.32	0.19	0.54	0.63	0.49	0.50
14	0.47	0.24	0.44	0.25	0.71	0.47	0.64	0.49	0.32	0.40	0.34	0.40	0.46	0.33	0.44	0.54
15	0.62	0.47	0.58	0.47	0.52	0.42	0.49	0.41	0.35	0.39	0.42	0.31	0.32	0.24	0.37	0.35
16	0.45	0.19	0.44	0.20	0.43	0.26	0.44	0.25	0.37	0.31	0.36	0.26	0.30	0.24	0.25	0.27
17	0.79	0.42	0.75	0.43	0.44	0.47	0.38	0.41	0.39	0.38	0.41	0.31	0.46	0.61	0.52	0.50
18	0.58	0.33	0.54	0.32	0.66	0.47	0.62	0.46	0.54	0.41	0.57	0.40	0.50	0.51	0.45	0.43
19	0.67	0.42	0.66	0.43	0.54	0.45	0.47	0.39	0.33	0.23	0.36	0.29	0.64	0.43	0.65	0.37
20	0.58	0.39	0.55	0.38	0.59	0.34	0.57	0.35	0.28	0.13	0.26	0.14	0.29	0.13	0.36	0.36
21	0.65	0.39	0.61	0.39	0.27	0.16	0.28	0.21	0.38	0.42	0.36	0.45	0.50	0.41	0.50	0.49
22	0.60	0.42	0.56	0.38	0.38	0.33	0.33	0.28	0.59	0.39	0.62	0.44	0.39	0.55	0.50	0.46
23	0.55	0.36	0.51	0.36	0.40	0.30	0.37	0.26	0.63	0.50	0.66	0.48	0.41	0.40	0.39	0.30
24	0.56	0.42	0.55	0.44	0.43	0.39	0.40	0.37	0.49	0.49	0.51	0.41	0.20	0.16	0.22	0.15
25	0.46	0.38	0.44	0.39	0.53	0.39	0.49	0.39	0.59	0.53	0.64	0.53	0.36	0.51	0.35	0.24
26	0.54	0.27	0.52	0.27	0.44	0.29	0.40	0.25	0.47	0.39	0.46	0.43	0.29	0.14	0.28	0.18
27	0.31	0.22	0.29	0.25	0.41	0.35	0.39	0.33	0.45	0.33	0.47	0.33	0.13	0.07	0.30	0.11
28	0.55	0.39	0.53	0.38	0.33	0.34	0.29	0.26	0.33	0.30	0.33	0.23	0.41	0.12	0.39	0.27
29	0.48	0.21	0.47	0.20	0.31	0.30	0.27	0.19	0.35	0.33	0.40	0.30	0.32	0.00	0.31	0.21
30	0.55	0.52	0.52	0.52	0.45	0.34	0.42	0.32	0.36	0.36	0.37	0.36	0.43	0.31	0.36	0.22
31	0.47	0.30	0.44	0.31	0.58	0.26	0.50	0.29	0.36	0.30	0.41	0.39	0.48	0.17	0.45	0.25
32	0.41	0.32	0.38	0.30	0.57	0.41	0.54	0.38	0.50	0.46	0.56	0.42	0.16	0.41	0.21	0.28
33	0.68	0.51	0.64	0.50	0.82	0.39	0.75	0.43	0.52	0.51	0.54	0.49	0.63	0.62	0.58	0.55
34	0.64	0.40	0.61	0.40	0.43	0.19	0.44	0.13	0.41	0.36	0.43	0.45	0.46	0.49	0.51	0.42
35	0.64	0.38	0.61	0.41	0.62	0.40	0.60	0.37	0.38	0.30	0.41	0.31	0.77	0.51	0.60	0.36
36	0.61	0.54	0.58	0.54	* 0.46	* 0.36	0.40	0.30	0.51	0.48	0.62	0.40	0.20	0.29	0.25	0.20
37	0.44	0.34	0.43	0.34	0.52	0.36	0.47	0.29	0.55	0.45	0.59	0.42	0.50	0.48	0.46	0.42
38	0.45	0.34	0.42	0.34	0.58	0.42	0.54	0.43	0.35	0.30	0.37	0.28	0.39	0.36	0.32	0.36
39	0.58	0.47	0.55	0.48	0.53	0.32	0.48	0.33	0.36	0.35	0.39	0.40	0.57	0.52	0.49	0.52
40	0.27	0.14	0.26	0.14	0.43	0.40	0.37	0.40	0.22	0.40	0.26	0.48	0.18	0.06	0.15	–0.04
41	0.37	0.19	0.37	0.21	0.45	0.26	0.41	0.23	0.32	0.27	0.33	0.32	0.48	0.08	0.36	0.16
42	0.37	0.33	0.35	0.32	0.60	0.43	0.55	0.44	0.37	0.25	0.38	0.20	0.25	0.04	0.29	0.15
43	0.57	0.47	0.53	0.45	0.62	0.42	0.58	0.39	0.36	0.29	0.39	0.26	0.29	0.30	0.39	0.26
44	0.50	0.33	0.46	0.31	0.65	0.43	0.59	0.40	0.28	0.36	0.30	0.39	0.46	0.51	0.50	0.56
45	0.72	0.50	0.68	0.50	0.42	0.25	0.38	0.21	0.34	0.27	0.38	0.29	0.54	0.37	0.53	0.41
46	0.60	0.44	0.59	0.46	0.58	0.27	0.55	0.36	0.40	0.37	0.41	0.40	0.38	0.50	0.52	0.33

Item-by-item *p*-value and Point Biserial for Science, EOC Integrated/Coordinated																
CSTs	**Integrated/Coordinated 1**				**Integrated/Coordinated 2**				**Integrated/Coordinated 3**				**Integrated/Coordinated 4**			
Years	**2013**		**2011**		**2013**		**2010**		**2013**		**2011**		**2013**		**2009**	
Items	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
47	0.57	0.35	0.54	0.37	0.64	0.46	0.60	0.45	0.38	0.36	0.42	0.39	0.70	0.43	0.61	0.43
48	0.79	0.47	0.76	0.47	0.43	0.42	0.38	0.29	0.37	0.22	0.36	0.25	0.43	0.36	0.47	0.38
49	0.51	0.44	0.50	0.43	0.53	0.51	0.49	0.50	0.46	0.38	0.48	0.37	0.66	0.37	0.52	0.41
50	0.53	0.49	0.50	0.48	0.48	0.41	0.47	0.39	0.45	0.34	0.42	0.38	0.36	0.47	0.27	0.16
51	0.57	0.49	0.53	0.49	0.42	0.35	0.36	0.30	0.38	0.36	0.42	0.39	0.55	0.44	0.58	0.45
52	0.66	0.41	0.63	0.43	0.34	0.34	0.32	0.26	0.43	0.35	0.41	0.40	0.34	0.46	0.42	0.21
53	0.54	0.41	0.50	0.41	0.38	0.31	0.36	0.28	0.50	0.47	0.52	0.44	0.20	–0.27	0.14	0.19
54	0.29	0.30	0.27	0.30	0.37	0.18	0.40	0.27	0.45	0.29	0.47	0.32	0.11	–0.08	0.20	0.04
55	0.27	0.13	0.27	0.13	0.32	0.40	0.27	0.29	0.38	0.16	0.34	0.19	0.52	0.47	0.47	0.37
56	0.51	0.23	0.48	0.24	0.51	0.35	0.47	0.34	0.40	0.20	0.37	0.12	0.23	–0.12	0.26	0.08
57	0.31	0.15	0.31	0.12	0.55	0.37	0.48	0.33	0.39	0.48	0.42	0.44	0.32	–0.01	0.33	0.25
58	0.55	0.43	0.52	0.43	0.45	0.39	0.41	0.32	0.41	0.31	0.41	0.28	0.13	–0.05	0.21	0.22
59	0.51	0.29	0.49	0.32	0.32	0.20	0.27	0.17	0.28	0.25	0.27	0.29	0.41	0.41	0.39	0.40
60	0.45	0.39	0.43	0.39	0.39	0.32	0.35	0.25	0.35	0.28	0.35	0.32	0.52	0.43	0.40	0.38

* Replacement item due to item exposure on social media Web sites

Table 8.A.11 Item-by-item *p*-value and Point Biserial for Grade-specific CSTs

Item-by-item *p*-value and Point Biserial for Grade-specific CSTs																				
CSTs	**Algebra I (Grade 8)**				**Geometry (Grade 9)**				**Algebra II (Grade 10)**				**Summ. H.S. Math (Grade 11)**				**World History (Grade 10)**			
Years	**2013**		**2009**		**2013**		**2009**		**2013**		**2009**		**2013**		**2011**		**2013**		**2012**	
Items	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
1	0.87	0.34	0.83	0.37	0.86	0.33	0.86	0.34	0.87	0.32	0.86	0.33	0.84	0.35	0.82	0.36	0.76	0.46	0.75	0.46
2	0.81	0.38	0.80	0.41	0.87	0.31	0.88	0.33	0.88	0.35	0.87	0.36	0.67	0.36	0.68	0.36	0.75	0.43	0.74	0.43
3	0.63	0.42	0.62	0.43	0.72	0.41	0.73	0.42	0.86	0.31	0.87	0.28	0.82	0.49	0.82	0.49	* 0.45	* 0.33	0.31	0.27
4	0.51	0.41	0.54	0.43	0.19	0.29	0.20	0.30	0.36	0.19	0.36	0.21	0.77	0.38	0.77	0.37	0.75	0.28	0.74	0.29
5	0.65	0.37	0.65	0.41	0.60	0.52	0.62	0.52	0.75	0.47	0.76	0.46	0.64	0.29	0.64	0.28	0.44	0.36	0.46	0.34
6	0.65	0.44	0.61	0.42	0.63	0.37	0.66	0.38	0.72	0.39	0.71	0.38	0.60	0.54	0.59	0.54	0.61	0.39	0.60	0.38
7	0.79	0.45	0.75	0.48	0.56	0.42	0.58	0.44	0.88	0.43	0.87	0.42	0.89	0.32	0.89	0.33	0.63	0.43	0.63	0.43
8	0.76	0.47	0.74	0.49	0.63	0.35	0.66	0.36	0.62	0.45	0.62	0.43	0.78	0.47	0.77	0.47	* 0.57	* 0.35	0.50	0.37
9	0.70	0.49	0.67	0.52	0.81	0.38	0.81	0.41	0.76	0.48	0.73	0.48	0.82	0.39	0.83	0.39	0.82	0.38	0.82	0.38
10	0.64	0.46	0.62	0.45	0.59	0.52	0.60	0.52	0.44	0.42	0.41	0.41	0.87	0.16	0.86	0.17	0.38	0.34	0.37	0.34
11	0.66	0.48	0.63	0.49	0.83	0.42	0.83	0.42	0.64	0.48	0.62	0.49	0.66	0.41	0.67	0.42	0.62	0.25	0.59	0.24
12	0.85	0.34	0.81	0.37	0.73	0.51	0.72	0.52	0.40	0.29	0.40	0.31	0.83	0.44	0.83	0.44	* 0.51	* 0.32	0.49	0.27
13	0.56	0.46	0.51	0.49	0.57	0.30	0.58	0.31	0.60	0.44	0.59	0.43	* 0.55	* 0.43	0.53	0.42	0.73	0.54	0.74	0.54
14	0.58	0.31	0.61	0.33	0.56	0.58	0.58	0.58	0.55	0.49	0.56	0.50	0.73	0.49	0.71	0.51	0.85	0.45	0.84	0.47
15	0.45	0.34	0.43	0.34	0.85	0.36	0.85	0.39	0.54	0.43	0.54	0.42	0.79	0.43	0.77	0.43	0.49	0.38	0.48	0.37
16	0.55	0.47	0.51	0.49	0.82	0.47	0.82	0.50	0.61	0.39	0.60	0.38	0.69	0.52	0.70	0.52	0.54	0.43	0.56	0.44
17	0.75	0.39	0.75	0.41	0.69	0.46	0.70	0.49	0.38	0.37	0.41	0.39	0.80	0.40	0.80	0.40	0.67	0.49	0.66	0.49
18	0.76	0.43	0.73	0.43	0.50	0.27	0.49	0.29	0.88	0.33	0.86	0.34	0.64	0.40	0.62	0.38	0.69	0.41	0.69	0.42
19	0.47	0.53	0.46	0.54	0.56	0.38	0.57	0.38	0.66	0.48	0.64	0.48	0.80	0.38	0.82	0.39	0.75	0.48	0.73	0.49
20	0.67	0.29	0.64	0.31	0.41	0.48	0.41	0.48	0.44	0.39	0.45	0.40	0.61	0.30	0.60	0.30	0.77	0.55	0.76	0.56
21	0.60	0.44	0.58	0.44	0.67	0.29	0.67	0.29	0.49	0.41	0.46	0.38	0.74	0.45	0.73	0.46	0.63	0.42	0.63	0.42
22	0.49	0.39	0.44	0.38	0.72	0.45	0.73	0.45	0.65	0.36	0.64	0.37	0.88	0.38	0.87	0.37	0.66	0.32	0.67	0.32
23	0.62	0.49	0.58	0.50	0.77	0.38	0.79	0.41	0.42	0.31	0.44	0.33	0.68	0.51	0.68	0.49	0.59	0.35	0.58	0.35
24	0.60	0.50	0.57	0.50	0.72	0.54	0.73	0.53	0.57	0.42	0.55	0.41	0.62	0.44	0.63	0.44	0.78	0.48	0.78	0.49
25	0.48	0.36	0.48	0.37	0.75	0.45	0.75	0.46	0.64	0.41	0.64	0.39	0.64	0.43	0.65	0.43	0.59	0.45	0.59	0.45
26	0.68	0.45	0.65	0.47	0.64	0.49	0.66	0.47	0.77	0.36	0.74	0.36	0.77	0.25	0.77	0.25	0.61	0.55	0.61	0.55
27	0.54	0.47	0.50	0.48	0.44	0.47	0.47	0.47	0.39	0.40	0.37	0.36	0.55	0.48	0.57	0.48	0.61	0.37	0.62	0.38
28	0.52	0.51	0.49	0.53	0.33	0.50	0.33	0.49	0.48	0.30	0.47	0.29	0.76	0.46	0.76	0.46	0.56	0.49	0.55	0.49
29	0.68	0.49	0.64	0.48	0.61	0.41	0.60	0.40	0.32	0.45	0.32	0.43	* 0.66	* 0.28	0.66	0.24	0.67	0.40	0.65	0.40
30	0.56	0.43	0.51	0.45	0.69	0.44	0.68	0.44	0.33	0.28	0.32	0.24	0.68	0.48	0.70	0.46	0.70	0.44	0.69	0.44
31	0.52	0.52	0.48	0.52	0.58	0.57	0.58	0.56	0.42	0.54	0.40	0.54	0.51	0.27	0.51	0.27	0.78	0.47	0.77	0.48
32	0.81	0.36	0.75	0.40	0.73	0.51	0.72	0.52	0.54	0.39	0.52	0.37	0.76	0.50	0.76	0.51	0.64	0.47	0.64	0.48
33	0.51	0.38	0.50	0.36	0.54	0.33	0.55	0.31	0.39	0.44	0.38	0.43	0.83	0.48	0.82	0.49	0.68	0.46	0.67	0.46
34	0.77	0.42	0.72	0.46	0.67	0.32	0.67	0.36	0.70	0.41	0.70	0.41	0.81	0.51	0.81	0.51	0.68	0.41	0.68	0.41
35	0.48	0.51	0.45	0.51	0.41	0.33	0.42	0.35	0.79	0.38	0.77	0.39	0.71	0.30	0.71	0.29	0.50	0.40	0.49	0.39
36	0.74	0.43	0.70	0.46	0.74	0.34	0.75	0.37	0.65	0.34	0.62	0.34	0.85	0.36	0.87	0.35	0.61	0.24	0.60	0.24
37	0.36	0.47	0.34	0.46	0.71	0.41	0.72	0.43	0.54	0.33	0.51	0.33	0.76	0.53	0.76	0.53	0.69	0.59	0.69	0.59
38	0.60	0.37	0.55	0.38	0.59	0.51	0.60	0.52	0.66	0.41	0.65	0.40	0.85	0.42	0.85	0.43	0.67	0.52	0.67	0.52
39	0.69	0.54	0.63	0.56	0.81	0.51	0.81	0.53	0.57	0.48	0.54	0.48	0.70	0.48	0.69	0.48	* 0.51	* 0.46	0.46	0.39
40	0.77	0.45	0.73	0.49	0.85	0.32	0.85	0.35	0.68	0.44	0.65	0.44	0.73	0.49	0.72	0.51	* 0.47	* 0.31	0.44	0.36
41	0.62	0.46	0.56	0.44	0.38	0.42	0.38	0.42	0.72	0.23	0.69	0.24	0.72	0.47	0.72	0.47	0.53	0.36	0.53	0.35
42	0.45	0.52	0.45	0.54	0.45	0.41	0.50	0.43	0.45	0.35	0.43	0.37	0.86	0.34	0.87	0.34	0.80	0.40	0.80	0.41
43	0.63	0.47	0.58	0.46	0.60	0.41	0.60	0.44	0.72	0.45	0.70	0.44	0.69	0.39	0.68	0.39	0.65	0.43	0.65	0.44
44	0.38	0.28	0.37	0.31	0.37	0.26	0.38	0.24	0.67	0.41	0.68	0.41	0.37	0.32	0.38	0.31	0.68	0.46	0.68	0.46
45	0.58	0.32	0.56	0.32	0.52	0.39	0.53	0.39	0.28	0.47	0.28	0.47	0.73	0.46	0.73	0.46	0.66	0.52	0.65	0.51
46	0.67	0.47	0.64	0.49	0.62	0.31	0.63	0.32	0.51	0.46	0.51	0.47	0.82	0.49	0.82	0.48	0.64	0.42	0.64	0.43

Item-by-item *p*-value and Point Biserial for Grade-specific CSTs

CSTs	Algebra I (Grade 8)				Geometry (Grade 9)				Algebra II (Grade 10)				Summ. H.S. Math (Grade 11)				World History (Grade 10)			
Years	**2013**		**2009**		**2013**		**2009**		**2013**		**2009**		**2013**		**2011**		**2013**		**2012**	
Items	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**	***p*-value**	**Pt-Bis**
47	0.78	0.31	0.73	0.36	0.75	0.43	0.76	0.45	0.29	0.20	0.30	0.23	0.68	0.53	0.68	0.54	0.58	0.41	0.58	0.41
48	0.39	0.41	0.39	0.40	0.73	0.50	0.73	0.49	0.63	0.37	0.61	0.37	0.74	0.46	0.73	0.47	0.51	0.41	0.53	0.42
49	0.59	0.49	0.55	0.50	0.62	0.44	0.61	0.43	0.50	0.43	0.53	0.43	0.81	0.42	0.79	0.43	0.70	0.41	0.69	0.40
50	0.54	0.42	0.50	0.43	0.42	0.39	0.44	0.39	0.61	0.45	0.61	0.44	0.76	0.44	0.76	0.44	0.77	0.54	0.77	0.55
51	0.39	0.33	0.35	0.31	0.81	0.45	0.78	0.48	0.71	0.43	0.68	0.42	0.70	0.54	0.69	0.54	0.65	0.47	0.64	0.48
52	0.47	0.41	0.46	0.40	0.66	0.50	0.67	0.51	0.69	0.38	0.71	0.37	0.71	0.51	0.71	0.51	0.68	0.45	0.68	0.46
53	0.52	0.34	0.47	0.33	0.91	0.39	0.91	0.41	0.43	0.33	0.45	0.34	0.55	0.41	0.55	0.41	0.57	0.44	0.57	0.44
54	0.60	0.41	0.54	0.40	0.50	0.30	0.50	0.30	0.53	0.43	0.50	0.42	0.46	0.41	0.47	0.42	0.56	0.33	0.56	0.34
55	0.39	0.45	0.32	0.43	0.49	0.36	0.50	0.38	0.73	0.34	0.72	0.34	0.83	0.42	0.82	0.44	0.71	0.59	0.71	0.59
56	0.27	0.32	0.26	0.29	0.68	0.31	0.66	0.32	0.80	0.30	0.81	0.29	0.71	0.45	0.70	0.46	0.40	0.35	0.40	0.35
57	0.53	0.56	0.46	0.53	0.56	0.53	0.55	0.55	0.68	0.26	0.66	0.28	0.73	0.59	0.74	0.59	0.51	0.35	0.51	0.35
58	0.41	0.52	0.35	0.48	0.54	0.25	0.54	0.28	0.35	0.44	0.35	0.42	0.71	0.42	0.71	0.43	0.67	0.44	0.66	0.44
59	0.25	0.25	0.25	0.23	0.74	0.48	0.72	0.50	0.30	0.25	0.29	0.27	0.61	0.29	0.60	0.30	0.63	0.55	0.62	0.54
60	0.37	0.35	0.35	0.35	0.46	0.43	0.43	0.42	0.39	0.31	0.40	0.30	0.50	0.41	0.49	0.41	0.82	0.46	0.81	0.47
61	0.51	0.31	0.50	0.32	0.42	0.52	0.45	0.52	0.53	0.47	0.51	0.45	0.53	0.40	0.53	0.39	.	.	.	.
62	0.61	0.40	0.56	0.39	0.70	0.48	0.68	0.49	0.40	0.37	0.36	0.33	0.64	0.46	0.64	0.46	.	.	.	.
63	0.54	0.31	0.53	0.32	0.62	0.38	0.64	0.39	0.33	0.37	0.30	0.35	0.48	0.34	0.49	0.34	.	.	.	.
64	0.64	0.50	0.59	0.51	0.66	0.43	0.65	0.44	0.73	0.27	0.73	0.28	0.80	0.43	0.79	0.44	.	.	.	.
65	0.42	0.28	0.42	0.28	0.78	0.43	0.75	0.46	0.36	0.34	0.33	0.30	0.78	0.40	0.78	0.40	.	.	.	.

* Replacement item due to item exposure on social media Web sites

Table 8.A.12 Distribution of Essay Scores for ELA (Grade Four)—Overall and by Subgroup (all %)

Score	Total	Female	Male	Eng-only	I-FEP	EL	R-FEP	Not Econ Disadv.	Econ Disadv.
0	0.24	0.09	0.16	0.13	0.00	0.10	0.01	0.09	0.15
1	1.03	0.29	0.74	0.44	0.01	0.57	0.02	0.17	0.87
2	25.58	10.62	14.96	12.33	0.69	10.20	2.35	5.77	19.81
3	55.17	28.31	26.86	31.09	2.68	12.73	8.67	21.35	33.82
4	17.97	10.84	7.13	12.42	1.48	1.28	2.79	11.91	6.06
Total*	100.0	50.15	49.85	56.41	4.87	24.88	13.84	39.29	60.71

Score	No Spec. Services	Spec. Services	American Indian	Asian	Pacific Islander	Filipino	Hispanic	African American	White
0	0.21	0.03	0.00	0.03	0.00	0.00	0.12	0.01	0.07
1	0.85	0.17	0.01	0.05	0.00	0.01	0.70	0.08	0.18
2	23.75	1.69	0.20	1.38	0.14	0.46	17.06	1.85	4.71
3	52.77	2.21	0.34	4.99	0.31	1.53	30.40	3.16	14.50
4	17.45	0.48	0.08	3.31	0.08	0.67	5.65	0.68	7.24
Total *	95.04	4.57	0.64	9.76	0.53	2.67	53.92	5.78	26.70

* Note: The marginal percentage for each subgroup is the percentage of examinees in that subgroup who obtained a valid writing score.

Table 8.A.13 Distribution of Essay Scores for ELA (Grade Seven)—Overall and by Subgroup (all %)

Score	Total	Female	Male	Eng-only	I-FEP	EL	R-FEP	Not Econ Disadv.	Econ Disadv.
0	0.22	0.07	0.14	0.12	0.01	0.08	0.02	0.08	0.14
1	0.53	0.16	0.37	0.20	0.01	0.29	0.03	0.10	0.43
2	27.93	10.87	17.06	13.35	1.22	7.95	5.41	6.97	20.96
3	53.72	27.80	25.92	30.52	4.12	5.12	13.96	22.57	31.16
4	17.60	11.18	6.42	11.28	1.91	0.42	3.99	11.10	6.50
Total *	100.0	50.08	49.92	55.47	7.27	13.86	23.40	40.81	59.19

Score	No Spec. Services	Spec. Services	American Indian	Asian	Pacific Islander	Filipino	Hispanic	African American	White
0	0.19	0.03	0.00	0.02	0.00	0.00	0.11	0.02	0.06
1	0.45	0.08	0.01	0.03	0.00	0.01	0.36	0.05	0.08
2	25.90	1.89	0.22	1.42	0.16	0.50	18.37	2.15	5.29
3	51.89	1.67	0.32	5.01	0.33	1.64	28.17	3.20	15.00
4	17.30	0.26	0.08	3.45	0.09	0.77	5.96	0.70	6.40
Total *	95.73	3.93	0.63	9.93	0.59	2.92	52.97	6.12	26.83

* Note: The marginal percentage for each subgroup is the percentage of examinees in that subgroup who obtained a valid writing score.

Table 8.A.14 Mean Scores for ELA (Grade Four Essay)—Overall and by Subgroup

Overall		Female		Male		English–only		I-FEP		EL		R-FEP		Not Econ Disadv		Econ Disadv	
N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
411,814	2.90	206,515	2.99	205,279	2.80	232,182	2.98	20,062	3.16	102,384	2.58	56,958	3.03	161,709	3.14	249,828	2.74

No Spec. Ser.		Spec. Ser.		Am. Indian		Asian		Pac. Islander		Filipino		Hispanic		Af. American		White	
N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
391,379	2.91	18,838	2.64	2,551	2.74	39,052	3.18	2,134	2.88	10,701	3.07	215,791	2.76	23,114	2.76	106,841	3.07

Table 8.A.15 Mean Scores for ELA (Grade Seven Essay)—Overall and by Subgroup

Overall		Female		Male		English–only		I-FEP		EL		R-FEP		Not Econ Disadv		Econ Disadv	
N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
419,236	2.88	209,942	3.00	209,269	2.76	232,431	2.95	30,455	3.09	58,082	2.40	98,066	2.94	170,969	3.09	247,966	2.73

No Spec. Ser.		Spec. Ser.		Am. Indian		Asian		Pac. Islander		Filipino		Hispanic		Af. American		White	
N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
401,334	2.89	16,473	2.52	2,586	2.74	40,585	3.19	2,393	2.86	11,943	3.09	216,432	2.75	25,013	2.74	109,625	3.03

Table 8.A.16 Effect Sizes for ELA (Grade Four Essay)—by Subgroup

Gender (M-F)	Econom. Disadv. (No-Yes)	Special Serv. (No-Yes)	English Fluency								
			EO–I-FEP	EO–EL	EO–R-FEP	I-FEP–EL	I-FEP–R-FEP	EL–R-FEP			
–0.27	0.60	0.38	–0.25	0.58	–0.07	0.89	0.21	–0.70			
			Primary Ethnicity								
W-Am. Ind	W-Asian	W-Pac. Isl.	W-Filipino	W-Hisp.	W-Af. Am.	Am. Ind.-Asian	Am. Ind.-Pac. Isl.	Am. Ind.-Filipino	Am. Ind.-Hisp.	Am. Ind.-Af. Am.	
0.47	–0.15	0.27	0.01	0.47	0.45	–0.61	–0.20	–0.48	–0.02	–0.03	
Asian-Pac. Isl.	Asian-Filipino	Asian-Hisp.	Asian-Af. Am.	Pac. Isl.-Filipino	Pac. Isl. -Hisp.	Pac. Isl. -Af. Am.	Filipino-Hispanic	Filipino-Af. Am.	Hisp. -Af. Am.		
0.42	0.15	0.63	0.59	–0.28	0.19	0.18	0.47	0.45	–0.01		

Table 8.A.17 Effect Sizes for ELA (Grade Seven Essay)—by Subgroup

Gender (M-F)	Econom. Disadv. (No-Yes)	Special Serv. (No-Yes)	English Fluency								
			EO–I-FEP	EO–EL	EO–R-FEP	I-FEP–EL	I-FEP–R-FEP	EL–R-FEP			
–0.34	0.53	0.54	–0.21	0.82	0.02	1.10	0.24	–0.85			
			Primary Ethnicity								
W-Am. Ind	W-Asian	W-Pac. Isl.	W-Filipino	W-Hisp.	W-Af. Am.	Am. Ind.-Asian	Am. Ind.-Pac. Isl.	Am. Ind.-Filipino	Am. Ind.-Hisp.	Am. Ind.-Af. Am.	
0.43	–0.24	0.24	–0.08	0.42	0.43	–0.65	–0.19	–0.52	–0.02	0.00	
Asian-Pac. Isl.	Asian-Filipino	Asian-Hisp.	Asian-Af. Am.	Pac. Isl.-Filipino	Pac. Isl. -Hisp.	Pac. Isl. -Af. Am.	Filipino-Hispanic	Filipino-Af. Am.	Hisp. -Af. Am.		
0.47	0.15	0.67	0.66	–0.33	0.18	0.19	0.51	0.52	0.01		

Appendix 8.B—Reliability Analyses

The reliabilities are reported only for samples that are comprised of 11 or more examinees. Also, in some cases in Appendix 8.B, score reliabilities were not estimable and are presented in the tables as hyphens.

Table 8.B.1 Subscore Reliabilities and Intercorrelations for ELA

Subscore Reliabilities and Intercorrelations for ELA								
Subscore Area	**N of Items**	**Intercorrelation**					**Reliab.**	**SEM**
Grade 2		**1**	**2**	**3**	**4**	**5**		
1. Word Analysis and Vocabulary Development	22	1.00	.	.	.	.	0.85	1.84
2. Reading Comprehension	15	0.77	1.00	.	.	.	0.79	1.62
3. Literary Response and Analysis	6	0.73	0.68	1.00	.	.	0.67	0.88
4. Written and Oral Language Conventions	14	0.80	0.74	0.67	1.00	.	0.82	1.48
5. Writing Strategies	8	0.69	0.69	0.60	0.70	1.00	0.66	1.23
Grade 3		**1**	**2**	**3**	**4**	**5**		
1. Word Analysis and Vocabulary Development	20	1.00	.	.	.	.	0.81	1.75
2. Reading Comprehension	15	0.74	1.00	.	.	.	0.75	1.57
3. Literary Response and Analysis	8	0.72	0.72	1.00	.	.	0.68	1.04
4. Written and Oral Language Conventions	13	0.72	0.66	0.63	1.00	.	0.73	1.53
5. Writing Strategies	9	0.72	0.69	0.66	0.69	1.00	0.70	1.26
Grade 4		**1**	**2**	**3**	**4**	**5**		
1. Word Analysis and Vocabulary Development	18	1.00	.	.	.	.	0.85	1.54
2. Reading Comprehension	15	0.76	1.00	.	.	.	0.79	1.61
3. Literary Response and Analysis	9	0.69	0.70	1.00	.	.	0.68	1.25
4. Written and Oral Language Conventions	18	0.78	0.72	0.66	1.00	.	0.80	1.71
5. Writing Strategies	15	0.73	0.74	0.66	0.74	1.00	0.76	1.68
Grade 5		**1**	**2**	**3**	**4**	**5**		
1. Word Analysis and Vocabulary Development	14	1.00	.	.	.	.	0.77	1.42
2. Reading Comprehension	16	0.73	1.00	.	.	.	0.75	1.68
3. Literary Response and Analysis	12	0.74	0.74	1.00	.	.	0.75	1.34
4. Written and Oral Language Conventions	17	0.66	0.63	0.64	1.00	.	0.75	1.56
5. Writing Strategies	16	0.72	0.70	0.71	0.70	1.00	0.75	1.64
Grade 6		**1**	**2**	**3**	**4**	**5**		
1. Word Analysis and Vocabulary Development	13	1.00	.	.	.	.	0.76	1.34
2. Reading Comprehension	17	0.72	1.00	.	.	.	0.74	1.77
3. Literary Response and Analysis	12	0.72	0.70	1.00	.	.	0.70	1.38
4. Written and Oral Language Conventions	16	0.70	0.64	0.65	1.00	.	0.72	1.55
5. Writing Strategies	17	0.73	0.72	0.69	0.67	1.00	0.76	1.80
Grade 7		**1**	**2**	**3**	**4**	**5**		
1. Word Analysis and Vocabulary Development	11	1.00	.	.	.	.	0.70	1.30
2. Reading Comprehension	18	0.72	1.00	.	.	.	0.80	1.63
3. Literary Response and Analysis	13	0.66	0.71	1.00	.	.	0.69	1.45
4. Written and Oral Language Conventions	16	0.65	0.67	0.60	1.00	.	0.71	1.67
5. Writing Strategies	17	0.69	0.73	0.67	0.69	1.00	0.78	1.76
Grade 8		**1**	**2**	**3**	**4**	**5**		
1. Word Analysis and Vocabulary Development	9	1.00	.	.	.	.	0.58	1.25
2. Reading Comprehension	18	0.64	1.00	.	.	.	0.76	1.77
3. Literary Response and Analysis	15	0.64	0.71	1.00	.	.	0.74	1.65
4. Written and Oral Language Conventions	16	0.60	0.69	0.67	1.00	.	0.75	1.57
5. Writing Strategies	17	0.63	0.72	0.73	0.73	1.00	0.79	1.74

Subscore Reliabilities and Intercorrelations for ELA								
Subscore Area	**N of Items**	**Intercorrelation**					**Reliab.**	**SEM**
Grade 9		**1**	**2**	**3**	**4**	**5**		
1. Word Analysis and Vocabulary Development	8	1.00	.	.	.	.	0.57	1.09
2. Reading Comprehension	18	0.60	1.00	.	.	.	0.81	1.72
3. Literary Response and Analysis	16	0.58	0.75	1.00	.	.	0.76	1.70
4. Written and Oral Language Conventions	13	0.58	0.68	0.67	1.00	.	0.71	1.53
5. Writing Strategies	20	0.60	0.73	0.71	0.71	1.00	0.76	1.88
Grade 10		**1**	**2**	**3**	**4**	**5**		
1. Word Analysis and Vocabulary Development	8	1.00	.	.	.	.	0.61	1.17
2. Reading Comprehension	18	0.67	1.00	.	.	.	0.83	1.69
3. Literary Response and Analysis	16	0.64	0.75	1.00	.	.	0.72	1.74
4. Written and Oral Language Conventions	13	0.63	0.70	0.66	1.00	.	0.73	1.45
5. Writing Strategies	20	0.68	0.77	0.73	0.74	1.00	0.81	1.84
Grade 11		**1**	**2**	**3**	**4**	**5**		
1. Word Analysis and Vocabulary Development	8	1.00	.	.	.	.	0.60	1.19
2. Reading Comprehension	19	0.66	1.00	.	.	.	0.79	1.83
3. Literary Response and Analysis	17	0.63	0.74	1.00	.	.	0.72	1.74
4. Written and Oral Language Conventions	9	0.64	0.70	0.66	1.00	.	0.70	1.20
5. Writing Strategies	22	0.68	0.77	0.72	0.75	1.00	0.82	2.01

Table 8.B.2 Subscore Reliabilities and Intercorrelations for History–Social Science

Subscore Reliabilities and Intercorrelations for History–Social Science								
Subscore Area	**N of Items**	**Intercorrelation**					**Reliab.**	**SEM**
Grade 8		**1**	**2**	**3**	**4**	**5**		
1. World History and Geography: Ancient Civilizations	16	1.00	.	.	.	.	0.71	1.73
2. Late Antiquity and the Middle Ages	14	0.70	1.00	.	.	.	0.74	1.60
3. Renaissance/Reformation	10	0.67	0.70	1.00	.	.	0.69	1.32
4. U.S. Constitution and the Early Republic	22	0.72	0.74	0.72	1.00	.	0.83	1.99
5. Civil War and Its Aftermath	13	0.68	0.71	0.69	0.79	1.00	0.79	1.48
World History		**1**	**2**	**3**	**4**	**5**		
1. Development of Modern Political Thought	13	1.00	.	.	.	.	0.68	1.57
2. Industrial Expansion and Imperialism	10	0.66	1.00	.	.	.	0.69	1.32
3. Causes and Effects of World War I	14	0.67	0.70	1.00	.	.	0.78	1.58
4. Causes and Effects of World War II	13	0.66	0.68	0.74	1.00	.	0.75	1.54
5. International Developments in the Post-World War II Era	10	0.64	0.65	0.69	0.70	1.00	0.71	1.34
Grade 11 (U.S. History)		**1**	**2**	**3**	**4**	**5**		
1. Foundations of American Political and Social Thought	10	1.00	.	.	.	.	0.66	1.34
2. Industrialization and the U.S. Role as a World Power	13	0.68	1.00	.	.	.	0.74	1.51
3. United States between the World Wars	12	0.65	0.71	1.00	.	.	0.70	1.49
4. World War II and Foreign Affairs	12	0.64	0.69	0.68	1.00	.	0.73	1.46
5. Post-World War II Domestic Affairs	13	0.66	0.71	0.70	0.69	1.00	0.72	1.55

Table 8.B.3 Subscore Reliabilities and Intercorrelations for Mathematics

Subscore Reliabilities and Intercorrelations for Mathematics									
Subscore Area	**N of Items**	**Intercorrelation**						**Reliab.**	**SEM**
Grade 2		**1**	**2**	**3**	**4**	**5**	**6**		
1. Number Sense: Place Value, Addition, and Subtraction	15	1.00	.	.	.	.	.	0.81	1.36
2. Number Sense: Multiplication, Division, and Fractions	23	0.80	1.00	.	.	.	.	0.85	1.76
3. Algebra and Functions	6	0.69	0.69	1.00	.	.	.	0.63	0.90
4. Measurement and Geometry	14	0.68	0.71	0.60	1.00	.	.	0.69	1.47
5. Statistics, Data Analysis, and Probability	7	0.68	0.70	0.60	0.62	1.00	.	0.60	0.91
Grade 3		**1**	**2**	**3**	**4**	**5**	**6**		
1. Number Sense: Place Value, Fractions, and Decimals	16	1.00	.	.	.	.	.	0.79	1.36
2. Number Sense: Addition, Subtraction, Multiplication, and Division	16	0.80	1.00	.	.	.	.	0.84	1.40
3. Algebra and Functions	12	0.75	0.76	1.00	.	.	.	0.78	1.28
4. Measurement and Geometry	16	0.72	0.71	0.69	1.00	.	.	0.77	1.36
5. Statistics, Data Analysis, and Probability	5	0.55	0.53	0.53	0.54	1.00	.	0.46	0.73
Grade 4		**1**	**2**	**3**	**4**	**5**	**6**		
1. Number Sense: Decimals, Fractions, and Negative Numbers	17	1.00	.	.	.	.	.	0.80	1.39
2. Number Sense: Operations, and Factoring	14	0.74	1.00	.	.	.	.	0.83	1.24
3. Algebra and Functions	18	0.76	0.79	1.00	.	.	.	0.86	1.36
4. Measurement and Geometry	12	0.67	0.66	0.68	1.00	.	.	0.73	1.33
5. Statistics, Data Analysis, and Probability	4	0.52	0.49	0.52	0.52	1.00	.	0.43	0.71
Grade 5		**1**	**2**	**3**	**4**	**5**	**6**		
1. Number Sense: Estimation, Percents, and Factoring	12	1.00	.	.	.	.	.	0.78	1.34
2. Number Sense: Operations with Fractions and Decimals	17	0.76	1.00	.	.	.	.	0.83	1.61
3. Algebra and Functions	17	0.72	0.75	1.00	.	.	.	0.81	1.54
4. Measurement and Geometry	15	0.71	0.74	0.73	1.00	.	.	0.79	1.51
5. Statistics, Data Analysis, and Probability	4	0.55	0.58	0.64	0.58	1.00	.	0.54	0.65
Grade 6		**1**	**2**	**3**	**4**	**5**	**6**		
1. Number Sense: Ratios, Proportions, Percentages, and Negative Fractions	15	1.00	.	.	.	.	.	0.77	1.59
2. Number Sense: Operations and Problem Solving with Fractions	10	0.68	1.00	.	.	.	.	0.70	1.27
3. Algebra and Functions	19	0.77	0.69	1.00	.	.	.	0.84	1.71
4. Measurement and Geometry	10	0.70	0.61	0.71	1.00	.	.	0.73	1.32
5. Statistics, Data Analysis, and Probability	11	0.69	0.61	0.71	0.65	1.00	.	0.73	1.37
Grade 7		**1**	**2**	**3**	**4**	**5**	**6**		
1. Number Sense: Rational Numbers	14	1.00	.	.	.	.	.	0.76	1.58
2. Number Sense: Exponent, Powers and Roots	8	0.64	1.00	.	.	.	.	0.68	1.24
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	10	0.64	0.64	1.00	.	.	.	0.64	1.38
4. Algebra and Functions: Multistep Problems, Graphing, and Functions	15	0.72	0.62	0.67	1.00	.	.	0.75	1.65
5. Measurement and Geometry	13	0.68	0.62	0.65	0.71	1.00	.	0.72	1.53
6. Statistics, Data Analysis, and Probability	5	0.51	0.50	0.52	0.54	0.55	1.00	0.58	0.89

Subscore Reliabilities and Intercorrelations for Mathematics

Subscore Area	N of Items	Intercorrelation						Reliab.	SEM
General Mathematics		**1**	**2**	**3**	**4**	**5**	**6**		
1. Number Sense: Rational Numbers	14	1.00	.	.	.	.	.	0.74	1.65
2. Number Sense: Exponent, Powers and Roots	10	0.64	1.00	.	.	.	.	0.68	1.41
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	11	0.61	0.60	1.00	.	.	.	0.61	1.51
4. Algebra and Functions: Multistep Problems, Graphing, and Functions	10	0.61	0.55	0.59	1.00	.	.	0.63	1.41
5. Measurement and Geometry	11	0.59	0.54	0.53	0.59	1.00	.	0.65	1.50
6. Statistics, Data Analysis, and Probability	9	0.52	0.48	0.53	0.55	0.54	1.00	0.60	1.31
Algebra I		**1**	**2**	**3**	**4**	**5**	**6**		
1. Number Properties, Operations, and Linear Equations	17	1.00	.	.	.	.	.	0.79	1.77
2. Graphing and Systems of Linear Equations	14	0.72	1.00	.	.	.	.	0.77	1.65
3. Quadratics and Polynomials	21	0.73	0.75	1.00	.	.	.	0.81	2.01
4. Functions and Rational Expressions	13	0.60	0.64	0.69	1.00	.	.	0.68	1.61
Geometry		**1**	**2**	**3**	**4**	**5**	**6**		
1. Logic and Geometric Proofs	23	1.00	.	.	.	.	.	0.82	2.06
2. Volume and Area Formulas	11	0.73	1.00	.	.	.	.	0.75	1.43
3. Angle Relationships, Constructions, and Lines	16	0.75	0.71	1.00	.	.	.	0.75	1.76
4. Trigonometry	15	0.75	0.70	0.72	1.00	.	.	0.77	1.68
Algebra II		**1**	**2**	**3**	**4**	**5**	**6**		
1. Polynomials and Rational Expressions	19	1.00	.	.	.	.	.	0.79	1.81
2. Quadratics, Conics, and Complex Numbers	16	0.71	1.00	.	.	.	.	0.75	1.76
3. Exponents and Logarithms	16	0.70	0.68	1.00	.	.	.	0.76	1.76
4. Series, Combinatorics, and Probability and Statistics	14	0.64	0.62	0.62	1.00	.	.	0.69	1.64
Summative High School Mathematics		**1**	**2**	**3**	**4**	**5**	**6**		
1. Algebra I	18	1.00	.	.	.	.	.	0.78	1.61
2. Geometry	19	0.72	1.00	.	.	.	.	0.79	1.71
3. Algebra II	23	0.78	0.75	1.00	.	.	.	0.85	1.88
4. Probability and Statistics	5	0.54	0.58	0.58	1.00	.	.	0.53	0.92
Integrated Mathematics 1		**1**	**2**	**3**	**4**	**5**	**6**		
1. Algebra I: Number Properties, Operations and Linear Equations	15	1.00	.	.	.	.	.	0.72	1.72
2. Algebra I: Graphing	9	0.51	1.00	.	.	.	.	0.53	1.38
3. Algebra I: Quadratics and Polynomials	14	0.56	0.50	1.00	.	.	.	0.60	1.66
4. Algebra I: Functions and Relations Expressions	7	0.39	0.38	0.49	1.00	.	.	0.52	1.15
5. Geometry	20	0.41	0.37	0.40	0.28	1.00	.	0.51	1.98
Integrated Mathematics 2		**1**	**2**	**3**	**4**	**5**	**6**		
1. Algebra I	20	1.00	.	.	.	.	.	0.67	2.03
2. Geometry: Logic and Geometric Proofs	22	0.60	1.00	.	.	.	.	0.72	2.12
3. Geometry: Angle Relationships, Construction, and Lines	8	0.43	0.55	1.00	.	.	.	0.50	1.27
4. Trigonometry	10	0.48	0.55	0.47	1.00	.	.	0.57	1.43
5. Algebra II: Probability and Statistics	5	0.26	0.27	0.20	0.23	1.00	.	0.27	0.97

Subscore Reliabilities and Intercorrelations for Mathematics									
Subscore Area	**N of Items**	**Intercorrelation**						**Reliab.**	**SEM**
Integrated Mathematics 3		**1**	**2**	**3**	**4**	**5**	**6**		
1. Geometry	5	1.00	.	.	.	.	.	0.40	0.97
2. Algebra II: Polynomials and Relations Expressions	19	0.39	1.00	.	.	.	.	0.81	1.87
3. Algebra II: Quadratics, Conics, and Complex Numbers	16	0.38	0.70	1.00	.	.	.	0.74	1.77
4. Algebra II: Exponents and Logarithms	16	0.41	0.74	0.70	1.00	.	.	0.79	1.76
5. Algebra II: Series, Combinatorics, Probability and Statistics	9	0.39	0.54	0.52	0.53	1.00	.	0.45	1.33

Table 8.B.4 Subscore Reliabilities and Intercorrelations for Science

Subscore Reliabilities and Intercorrelations for Science									
Subscore Area	**N of Items**	**Intercorrelation**						**Reliab.**	**SEM**
Grade 5 Science		**1**	**2**	**3**	**4**	**5**	**6**		
1. Physical Science (Grade 5)	11	1.00	.	.	.	.	.	0.67	1.31
2. Physical Science (Grade 4)	8	0.60	1.00	.	.	.	.	0.62	1.09
3. Life Science (Grade 5)	13	0.67	0.62	1.00	.	.	.	0.73	1.48
4. Life Science (Grade 4)	9	0.63	0.60	0.68	1.00	.	.	0.69	1.22
5. Earth Science (Grade 5)	11	0.61	0.55	0.65	0.61	1.00	.	0.63	1.37
6. Earth Science (Grade 4)	8	0.61	0.55	0.65	0.63	0.62	1.00	0.64	1.21
Grade 8 Science		**1**	**2**	**3**	**4**	**5**	**6**		
1. Motion	8	1.00	.	.	.	.	.	0.61	1.18
2. Forces, Density, and Buoyancy	13	0.64	1.00	.	.	.	.	0.71	1.43
3. Structure of Matter and Periodic Table	16	0.64	0.71	1.00	.	.	.	0.77	1.60
4. Earth in the Solar System	7	0.52	0.59	0.63	1.00	.	.	0.58	1.03
5. Reactions and the Chemistry of Living Systems	10	0.60	0.67	0.72	0.60	1.00	.	0.69	1.30
6. Investigation and Experimentation	6	0.55	0.63	0.64	0.54	0.63	1.00	0.60	0.89
Grade 10 Life Science		**1**	**2**	**3**	**4**	**5**	**6**		
1. Cell Biology	10	1.00	.	.	.	.	.	0.70	1.34
2. Genetics	12	0.68	1.00	.	.	.	.	0.71	1.50
3. Physiology	10	0.64	0.63	1.00	.	.	.	0.72	1.23
4. Ecology	11	0.66	0.65	0.71	1.00	.	.	0.75	1.32
5. Evolution	11	0.65	0.65	0.69	0.73	1.00	.	0.77	1.36
6. Investigation and Experimentation	6	0.54	0.56	0.61	0.63	0.65	1.00	0.57	0.94
Biology		**1**	**2**	**3**	**4**	**5**	**6**		
1. Cell Biology	9	1.00	.	.	.	.	.	0.66	1.31
2. Genetics	18	0.70	1.00	.	.	.	.	0.79	1.78
3. Ecology and Evolution	16	0.68	0.76	1.00	.	.	.	0.79	1.72
4. Physiology	11	0.64	0.71	0.74	1.00	.	.	0.75	1.37
5. Investigation and Experimentation	6	0.56	0.63	0.65	0.62	1.00	.	0.54	1.04
Chemistry		**1**	**2**	**3**	**4**	**5**	**6**		
1. Atomic and Molecular Structure	8	1.00	.	.	.	.	.	0.45	1.22
2. Chemical Bonds, Biochemistry	9	0.49	1.00	.	.	.	.	0.58	1.28
3. Kinetics, Thermodynamics	14	0.51	0.61	1.00	.	.	.	0.70	1.67
4. Chemical Reactions	13	0.52	0.60	0.68	1.00	.	.	0.72	1.60
5. Conservation of Matter and Stoichiometry	10	0.50	0.56	0.64	0.64	1.00	.	0.72	1.36
6. Investigation and Experimentation	6	0.48	0.58	0.63	0.61	0.58	1.00	0.64	0.91
Earth Science		**1**	**2**	**3**	**4**	**5**	**6**		
1. Astronomy and Cosmology	12	1.00	.	.	.	.	.	0.65	1.56
2. Solid Earth	14	0.60	1.00	.	.	.	.	0.66	1.68
3. The Earth's Energy	28	0.71	0.72	1.00	.	.	.	0.84	2.37
4. Investigation and Experimentation	6	0.57	0.64	0.69	1.00	.	.	0.61	1.01

Subscore Reliabilities and Intercorrelations for Science									
Subscore Area	**N of Items**	**Intercorrelation**						**Reliab.**	**SEM**
Physics		**1**	**2**	**3**	**4**	**5**	**6**		
1. Motion and Forces	12	1.00	.	.	.	.	.	0.71	1.47
2. Conservation of Energy and Momentum	12	0.70	1.00	.	.	.	.	0.76	1.45
3. Heat and Thermodynamics	9	0.66	0.68	1.00	.	.	.	0.69	1.26
4. Waves	10	0.59	0.63	0.60	1.00	.	.	0.64	1.35
5. Electric and Magnetic Phenomena	11	0.59	0.63	0.57	0.59	1.00	.	0.65	1.48
6. Investigation and Experimentation	6	0.57	0.59	0.59	0.52	0.49	1.00	0.54	1.04
Integrated/Coordinated Science 1		**1**	**2**	**3**	**4**	**5**	**6**		
1. Biology/Life Sciences	10	1.00	.	.	.	.	.	0.64	1.41
2. Chemistry	15	0.56	1.00	.	.	.	.	0.58	1.79
3. Earth Sciences	17	0.66	0.62	1.00	.	.	.	0.76	1.82
4. Physics	12	0.50	0.50	0.55	1.00	.	.	0.50	1.61
5. Investigation and Experimentation	6	0.60	0.56	0.67	0.50	1.00	.	0.61	1.05
Integrated/Coordinated Science 2		**1**	**2**	**3**	**4**	**5**	**6**		
1. Biology/Life Sciences	15	1.00	.	.	.	.	.	0.68	1.73
2. Chemistry	6	0.55	1.00	.	.	.	.	0.50	1.12
3. Earth Sciences	15	0.64	0.57	1.00	.	.	.	0.73	1.74
4. Physics	18	0.57	0.54	0.60	1.00	.	.	0.66	1.95
5. Investigation and Experimentation	6	0.50	0.43	0.53	0.46	1.00	.	0.42	1.14
Integrated/Coordinated Science 3		**1**	**2**	**3**	**4**	**5**	**6**		
1. Biology/Life Sciences	16	1.00	.	.	.	.	.	0.73	1.79
2. Chemistry	23	0.60	1.00	.	.	.	.	0.72	2.17
3. Earth Sciences	7	0.60	0.52	1.00	.	.	.	0.61	1.19
4. Physics	8	0.49	0.53	0.46	1.00	.	.	0.45	1.29
5. Investigation and Experimentation	6	0.57	0.51	0.53	0.45	1.00	.	0.49	1.11
Integrated/Coordinated Science 4		**1**	**2**	**3**	**4**	**5**	**6**		
1. Biology/Life Sciences	13	1.00	.	.	.	.	.	0.70	1.59
2. Chemistry	10	0.60	1.00	.	.	.	.	0.22	1.47
3. Earth Sciences	15	0.67	0.75	1.00	.	.	.	0.73	1.74
4. Physics	16	0.49	0.33	0.34	1.00	.	.	0.26	1.77
5. Investigation and Experimentation	6	0.69	0.64	0.62	0.48	1.00	.	0.57	1.04

Table 8.B.5 Subscore Reliabilities and Intercorrelations for Grade-specific Tests

Subscore Reliabilities and Intercorrelations for Grade-Specific Tests									
Subscore Area	**N of Items**	**Intercorrelation**						**Reliab.**	**SEM**
Algebra I – 8		**1**	**2**	**3**	**4**	**5**	**6**		
1. Number Properties, Operations, and Linear Equations	17	1.00	.	.	.	.	.	0.78	1.70
2. Graphing and Systems of Linear Equations	14	0.72	1.00	.	.	.	.	0.78	1.62
3. Quadratics and Polynomials	21	0.73	0.75	1.00	.	.	.	0.81	1.97
4. Functions and Rational Expressions	13	0.61	0.65	0.70	1.00	.	.	0.70	1.61
Geometry – 9		**1**	**2**	**3**	**4**	**5**	**6**		
1. Logic and Geometric Proofs	23	1.00	.	.	.	.	.	0.81	1.97
2. Volume and Area Formulas	11	0.72	1.00	.	.	.	.	0.75	1.39
3. Angle Relationships, Constructions, and Lines	16	0.73	0.69	1.00	.	.	.	0.74	1.71
4. Trigonometry	15	0.72	0.68	0.70	1.00	.	.	0.75	1.63
Algebra II – 10		**1**	**2**	**3**	**4**	**5**	**6**		
1. Polynomials and Rational Expressions	19	1.00	.	.	.	.	.	0.78	1.78
2. Quadratics, Conics, and Complex Numbers	16	0.69	1.00	.	.	.	.	0.74	1.76
3. Exponents and Logarithms	16	0.68	0.66	1.00	.	.	.	0.74	1.75
4. Series, Combinatorics, and Probability and Statistics	14	0.61	0.59	0.59	1.00	.	.	0.67	1.64
Summative High School Mathematics – 11		**1**	**2**	**3**	**4**	**5**	**6**		
1. Algebra I	18	1.00	.	.	.	.	.	0.77	1.66
2. Geometry	19	0.72	1.00	.	.	.	.	0.79	1.75
3. Algebra II	23	0.77	0.74	1.00	.	.	.	0.84	1.92
4. Probability and Statistics	5	0.53	0.57	0.57	1.00	.	.	0.53	0.93
World History – 10		**1**	**2**	**3**	**4**	**5**	**6**		
1. Development of Modern Political Thought	13	1.00	.	.	.	.	.	0.66	1.57
2. Industrial Expansion and Imperialism	10	0.64	1.00	.	.	.	.	0.68	1.32
3. Causes and Effects of World War I	14	0.66	0.69	1.00	.	.	.	0.77	1.59
4. Causes and Effects of World War II	13	0.65	0.67	0.73	1.00	.	.	0.74	1.55
5. International Developments in the Post-World War II Era	10	0.63	0.64	0.68	0.69	1.00	.	0.70	1.34

Table 8.B.6 Reliabilities and SEMs for the CSTs by Gender

		Male			Female		
Content Area	**CST ***	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**
English–Language Arts	2	233,509	0.95	3.30	225,084	0.94	3.22
	3	219,433	0.93	3.30	216,581	0.93	3.22
	4	213,026	0.95	3.57	213,218	0.94	3.48
	5	209,918	0.94	3.51	210,651	0.93	3.39
	6	212,371	0.93	3.58	212,795	0.93	3.51
	7	216,576	0.93	3.58	216,098	0.92	3.48
	8	215,331	0.93	3.66	213,951	0.92	3.56
	9	229,615	0.93	3.65	225,555	0.92	3.57
	10	223,768	0.94	3.62	221,084	0.93	3.54
	11	217,502	0.94	3.68	215,965	0.93	3.62
History–Social Science	8	232,256	0.95	3.65	222,064	0.93	3.73
	World History	235,098	0.94	3.25	227,257	0.91	3.38
	11	224,493	0.93	3.26	218,594	0.91	3.34
Mathematics	2	234,433	0.94	2.97	225,411	0.93	2.97
	3	221,790	0.94	2.82	217,118	0.94	2.83
	4	216,432	0.95	2.78	214,204	0.94	2.78
	5	212,599	0.94	3.10	211,191	0.94	3.11
	6	214,513	0.94	3.28	213,104	0.93	3.30
	7	196,571	0.93	3.46	196,012	0.92	3.46
	General Math	103,897	0.91	3.64	84,367	0.90	3.62
	Algebra I	351,496	0.93	3.56	329,492	0.92	3.54
	Geometry	198,798	0.93	3.49	206,427	0.93	3.52
	Algebra II	140,103	0.92	3.51	153,942	0.91	3.52
	Summ. H.S. Math	76,816	0.93	3.07	83,861	0.92	3.24
	Integrated Math 1	7,327	0.85	3.64	6,173	0.84	3.63
	Integrated Math 2	2,519	0.87	3.66	2,435	0.85	3.67
	Integrated Math 3	352	0.92	3.55	392	0.90	3.59
Science	5	211,341	0.92	3.14	211,066	0.91	3.19
	8	216,293	0.93	3.05	214,130	0.91	3.15
	10 Life Science	222,564	0.94	3.16	219,292	0.92	3.23
	Biology	274,125	0.94	3.28	278,371	0.92	3.31
	Chemistry	134,614	0.92	3.30	150,560	0.90	3.42
	Earth Science	107,357	0.92	3.41	91,417	0.89	3.51
	Physics	46,048	0.93	3.26	39,266	0.91	3.41
	Integrated Science 1	21,459	0.90	3.50	18,172	0.87	3.54
	Integrated Science 2	1,830	0.89	3.53	1,576	0.87	3.54
	Integrated Science 3	485	0.89	3.51	369	0.87	3.54
	Integrated Science 4	33	0.89	3.46	23	0.81	3.47
Grade-Specific	Algebra I – 8	131,209	0.93	3.50	136,999	0.92	3.48
	Geometry – 9	67,902	0.93	3.38	77,548	0.92	3.42
	Algebra II – 10	63,440	0.91	3.49	73,156	0.91	3.50
	Summ. H. S. Math – 11	62,156	0.93	3.16	70,365	0.92	3.31
	World History – 10	211,129	0.93	3.25	205,691	0.91	3.39

* CSTs named by number only are grade-level tests.

Table 8.B.7 Reliabilities and SEMs for the CSTs by Economic Status

		Not Econ. Disadvantaged			Econ. Disadvantaged		
Content Area	**CST ***	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**
English–Language Arts	2	169,933	0.93	2.98	287,916	0.94	3.41
	3	167,942	0.92	2.98	267,485	0.92	3.42
	4	166,474	0.94	3.22	259,189	0.94	3.71
	5	164,255	0.92	3.14	255,816	0.92	3.63
	6	166,946	0.92	3.28	257,707	0.92	3.71
	7	175,767	0.92	3.28	256,224	0.92	3.69
	8	177,733	0.92	3.39	250,948	0.92	3.76
	9	198,934	0.92	3.39	255,560	0.92	3.77
	10	199,464	0.93	3.38	244,737	0.93	3.73
	11	200,233	0.93	3.48	232,606	0.92	3.80
History–Social Science	8	183,160	0.93	3.45	270,515	0.93	3.84
	World History	205,065	0.92	3.16	256,638	0.91	3.44
	11	202,346	0.92	3.17	240,119	0.91	3.41
Mathematics	2	170,262	0.92	2.65	288,822	0.93	3.14
	3	168,711	0.93	2.51	269,592	0.93	2.99
	4	167,680	0.93	2.46	262,360	0.94	2.97
	5	164,974	0.94	2.84	258,312	0.93	3.26
	6	167,352	0.94	3.03	259,738	0.93	3.45
	7	149,927	0.92	3.29	241,994	0.92	3.56
	General Mathematics	58,936	0.92	3.59	128,860	0.90	3.66
	Algebra I	270,210	0.93	3.47	409,717	0.91	3.61
	Geometry	189,082	0.94	3.39	215,677	0.91	3.60
	Algebra II	151,729	0.92	3.47	142,055	0.90	3.56
	Summ. H.S. Mathematics	101,132	0.92	3.03	59,454	0.92	3.37
	Integrated Mathematics 1	4,659	0.87	3.62	8,821	0.83	3.64
	Integrated Mathematics 2	2,010	0.86	3.66	2,936	0.85	3.67
	Integrated Mathematics 3	379	0.92	3.54	364	0.90	3.59
Science	5	164,646	0.90	2.86	257,253	0.90	3.35
	8	177,785	0.91	2.85	252,038	0.91	3.27
	10 Life Science	198,208	0.93	3.00	243,024	0.92	3.35
	Biology	250,441	0.93	3.13	301,292	0.91	3.42
	Chemistry	145,616	0.91	3.24	139,337	0.89	3.49
	Earth Science	74,338	0.91	3.36	124,091	0.90	3.52
	Physics	45,936	0.91	3.21	39,301	0.91	3.47
	Int/Coord Science 1	13,915	0.89	3.44	25,644	0.88	3.56
	Int/Coord Science 2	1,293	0.90	3.46	2,106	0.85	3.58
	Int/Coord Science 3	359	0.90	3.49	491	0.83	3.54
	Int/Coord Science 4	18	0.84	3.51	38	0.87	3.44
Grade-Specific	Algebra I – 8	114,087	0.93	3.38	153,862	0.92	3.57
	Geometry – 9	77,258	0.92	3.27	68,065	0.91	3.54
	Algebra II – 10	73,962	0.90	3.46	62,536	0.90	3.54
	Summ. H.S. Math – 11	81,004	0.92	3.12	51,440	0.92	3.42
	World History – 10	184,984	0.92	3.17	231,265	0.91	3.44

* CSTs named by number only are grade-level tests.

Table 8.B.8 Reliabilities and SEMs for the CSTs by Special Services

		No Special Services			Special Services		
Content Area	**CST ***	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**
English–Language Arts	2	423,575	0.94	3.24	35,210	0.94	3.54
	3	411,838	0.93	3.25	24,315	0.94	3.48
	4	404,556	0.94	3.52	20,145	0.95	3.72
	5	399,395	0.93	3.44	19,630	0.94	3.70
	6	404,866	0.93	3.53	18,846	0.93	3.80
	7	412,923	0.93	3.52	18,381	0.92	3.83
	8	411,006	0.93	3.60	18,390	0.92	3.88
	9	433,729	0.93	3.59	21,558	0.92	3.92
	10	422,966	0.93	3.56	22,016	0.93	3.90
	11	412,143	0.93	3.64	21,451	0.92	3.94
History–Social Science	8	410,227	0.93	3.66	44,045	0.92	3.95
	World History	423,339	0.92	3.30	39,051	0.91	3.52
	11	407,054	0.92	3.28	36,102	0.90	3.51
Mathematics	2	423,443	0.93	2.93	36,592	0.95	3.37
	3	411,567	0.94	2.80	27,435	0.94	3.15
	4	404,360	0.94	2.76	24,566	0.95	3.12
	5	399,193	0.94	3.09	23,027	0.94	3.36
	6	404,644	0.94	3.28	21,510	0.93	3.53
	7	372,349	0.93	3.45	18,985	0.91	3.64
	General Mathematics	145,935	0.90	3.63	42,256	0.86	3.65
	Algebra I	644,104	0.93	3.55	36,955	0.88	3.64
	Geometry	390,756	0.93	3.50	14,559	0.90	3.62
	Algebra II	286,170	0.92	3.52	7,909	0.90	3.57
	Summ. H.S. Mathematics	159,215	0.93	3.17	1,475	0.95	3.35
	Integrated Mathematics 1	11,917	0.85	3.63	1,583	0.76	3.62
	Integrated Mathematics 2	4,600	0.86	3.67	356	0.81	3.62
	Integrated Mathematics 3	716	0.91	3.57	29	0.94	3.49
Science	5	399,005	0.92	3.16	21,797	0.92	3.35
	8	410,070	0.92	3.09	20,458	0.92	3.40
	10 Life Science	417,972	0.93	3.18	23,987	0.92	3.45
	Biology	511,966	0.92	3.28	40,563	0.89	3.51
	Chemistry	277,195	0.91	3.36	8,027	0.90	3.53
	Earth Science	172,950	0.91	3.45	25,827	0.89	3.55
	Physics	82,563	0.92	3.33	2,751	0.92	3.48
	Int/Coord Science 1	34,486	0.88	3.51	5,137	0.85	3.57
	Int/Coord Science 2	3,051	0.88	3.53	358	0.81	3.56
	Int/Coord Science 3	672	0.88	3.53	182	0.76	3.51
	Int/Coord Science 4	34	0.87	3.47	22	0.81	3.44
Grade-Specific	Algebra I – 8	260,312	0.93	3.49	7,949	0.91	3.61
	Geometry – 9	143,052	0.92	3.40	2,414	0.93	3.52
	Algebra II – 10	134,035	0.91	3.50	2,567	0.92	3.54
	Summ. H.S. Math – 11	131,243	0.93	3.24	1,285	0.95	3.40
	World History – 10	381,940	0.92	3.30	34,908	0.91	3.53

* CSTs named by number only are grade-level tests.

Table 8.B.9 Reliabilities and SEMs for the CSTs by English-Language Fluency

		English Only			Initially Desig. Fluent		
Content Area	**CST ***	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**
English–Language Arts	2	262,769	0.94	3.18	17,072	0.92	2.78
	3	247,648	0.93	3.17	19,186	0.91	2.87
	4	240,732	0.94	3.43	20,442	0.93	3.14
	5	235,326	0.93	3.35	19,791	0.91	3.08
	6	236,835	0.93	3.46	19,930	0.92	3.24
	7	241,087	0.93	3.46	30,992	0.92	3.27
	8	241,280	0.93	3.54	33,642	0.92	3.41
	9	255,236	0.93	3.52	37,714	0.92	3.41
	10	246,981	0.94	3.51	34,238	0.93	3.36
	11	241,413	0.94	3.58	32,542	0.93	3.46
History–Social Science	8	254,242	0.94	3.62	34,167	0.93	3.46
	World History	255,152	0.93	3.26	35,476	0.92	3.16
	11	246,423	0.92	3.25	32,631	0.91	3.16
Mathematics	2	263,494	0.93	2.89	17,077	0.91	2.46
	3	249,297	0.94	2.76	19,223	0.93	2.33
	4	243,071	0.94	2.72	20,522	0.93	2.33
	5	236,663	0.94	3.07	19,824	0.94	2.73
	6	237,562	0.94	3.24	19,952	0.94	2.96
	7	217,395	0.93	3.43	25,408	0.93	3.29
	General Mathematics	107,752	0.91	3.63	7,904	0.91	3.60
	Algebra I	374,174	0.93	3.55	49,937	0.94	3.44
	Geometry	225,714	0.93	3.48	33,888	0.94	3.37
	Algebra II	162,252	0.91	3.52	27,488	0.93	3.41
	Summ. H.S. Mathematics	90,774	0.92	3.15	20,076	0.93	2.94
	Integrated Mathematics 1	7,716	0.86	3.63	698	0.85	3.64
	Integrated Mathematics 2	2,918	0.87	3.66	285	0.85	3.67
	Integrated Mathematics 3	433	0.92	3.57	54	0.93	3.50
Science	5	236,124	0.92	3.07	19,805	0.90	2.82
	8	241,587	0.92	3.03	33,653	0.92	2.88
	10 Life Science	244,903	0.93	3.12	33,999	0.93	3.00
	Biology	306,856	0.93	3.24	45,326	0.93	3.14
	Chemistry	154,976	0.91	3.32	27,203	0.92	3.23
	Earth Science	114,678	0.92	3.41	10,813	0.90	3.40
	Physics	46,839	0.92	3.28	8,516	0.92	3.22
	Int/Coord Science 1	19,934	0.89	3.48	2,737	0.89	3.44
	Int/Coord Science 2	1,651	0.88	3.53	298	0.91	3.37
	Int/Coord Science 3	512	0.90	3.50	44	0.85	3.54
	Int/Coord Science 4	34	0.87	3.46	1	–	–
Grade-Specific	Algebra I – 8	149,190	0.92	3.48	22,479	0.93	3.38
	Geometry – 9	83,852	0.92	3.35	14,734	0.93	3.31
	Algebra II – 10	76,619	0.90	3.50	13,397	0.92	3.44
	Summ. H.S. Math – 11	75,256	0.92	3.23	15,042	0.93	3.05
	World History – 10	231,195	0.92	3.26	31,092	0.91	3.17

* CSTs named by number only are grade-level tests.

Table 8.B.10 Reliabilities and SEMs for the CSTs by English-Language Fluency

		English Learner			Redesigned Fluent		
Content Area	**CST ***	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**
English–Language Arts	2	171,606	0.94	3.43	6,697	0.88	2.82
	3	136,684	0.91	3.52	32,122	0.84	2.94
	4	106,869	0.92	3.89	57,776	0.89	3.31
	5	86,613	0.90	3.87	78,482	0.87	3.30
	6	68,839	0.89	3.95	99,196	0.88	3.49
	7	60,673	0.87	3.95	99,466	0.88	3.50
	8	50,905	0.86	3.98	103,007	0.89	3.64
	9	54,882	0.86	4.02	106,793	0.89	3.64
	10	52,403	0.88	4.00	110,740	0.90	3.59
	11	47,415	0.86	4.03	111,654	0.90	3.68
History–Social Science	8	61,101	0.88	4.01	104,351	0.91	3.70
	World History	58,026	0.87	3.59	113,221	0.90	3.34
	11	51,787	0.85	3.57	111,796	0.89	3.31
Mathematics	2	172,116	0.93	3.14	6,702	0.87	2.44
	3	137,906	0.93	3.08	32,108	0.89	2.32
	4	108,818	0.93	3.16	57,788	0.90	2.36
	5	88,410	0.92	3.44	78,532	0.92	2.89
	6	70,428	0.90	3.63	99,299	0.92	3.22
	7	60,908	0.89	3.69	88,421	0.91	3.42
	General Mathematics	44,588	0.87	3.67	27,688	0.89	3.61
	Algebra I	96,142	0.86	3.64	159,911	0.92	3.55
	Geometry	38,399	0.87	3.64	106,900	0.92	3.55
	Algebra II	18,239	0.91	3.56	85,860	0.91	3.52
	Summ. H.S. Mathematics	3,406	0.94	3.42	46,344	0.93	3.26
	Integrated Mathematics 1	2,329	0.74	3.63	2,748	0.81	3.64
	Integrated Mathematics 2	569	0.76	3.66	1,179	0.84	3.68
	Integrated Mathematics 3	41	0.82	3.59	217	0.90	3.56
Science	5	87,624	0.87	3.53	78,491	0.87	3.09
	8	51,746	0.88	3.53	102,985	0.89	3.11
	10 Life Science	52,381	0.86	3.56	110,099	0.91	3.23
	Biology	64,429	0.85	3.54	135,317	0.90	3.34
	Chemistry	17,840	0.85	3.59	85,002	0.89	3.44
	Earth Science	34,918	0.85	3.60	38,117	0.88	3.47
	Physics	4,809	0.88	3.55	25,063	0.90	3.42
	Int/Coord Science 1	7,136	0.81	3.60	9,778	0.85	3.53
	Int/Coord Science 2	566	0.73	3.61	889	0.86	3.54
	Int/Coord Science 3	138	0.76	3.52	158	0.83	3.56
	Int/Coord Science 4	14	0.33	3.40	7	–	–
Grade-Specific	Algebra I – 8	23,758	0.90	3.63	72,576	0.92	3.49
	Geometry – 9	6,816	0.92	3.58	39,946	0.92	3.49
	Algebra II – 10	5,965	0.92	3.54	40,529	0.91	3.50
	Summ. H.S. Math – 11	3,038	0.94	3.45	39,119	0.92	3.32
	World History – 10	51,251	0.86	3.60	102,866	0.89	3.34

* CSTs named by number only are grade-level tests.

Table 8.B.11 Reliabilities and SEMs for the CSTs by Primary Ethnicity

		American Indian			Asian		
Content Area	**CST ***	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**
English–Language Arts	2	3,040	0.94	3.42	39,538	0.94	2.82
	3	3,031	0.92	3.45	40,403	0.93	2.88
	4	2,705	0.94	3.68	40,001	0.94	3.10
	5	2,764	0.93	3.61	38,937	0.93	3.05
	6	2,682	0.92	3.68	39,073	0.93	3.16
	7	2,733	0.93	3.66	41,193	0.93	3.11
	8	2,782	0.92	3.72	38,429	0.93	3.24
	9	3,141	0.93	3.69	39,154	0.93	3.25
	10	3,027	0.94	3.67	41,725	0.94	3.21
	11	2,994	0.93	3.72	42,387	0.94	3.33
History–Social Science	8	2,989	0.93	3.81	39,075	0.94	3.25
	World History	3,112	0.92	3.38	42,623	0.92	3.00
	11	3,063	0.92	3.36	42,383	0.92	3.05
Mathematics	2	3,053	0.93	3.14	39,596	0.93	2.45
	3	3,061	0.93	3.07	40,499	0.93	2.24
	4	2,751	0.94	3.04	40,211	0.93	2.14
	5	2,780	0.94	3.31	39,109	0.94	2.53
	6	2,687	0.93	3.45	39,258	0.94	2.72
	7	2,598	0.92	3.55	30,387	0.93	3.03
	General Mathematics	1,859	0.91	3.66	5,700	0.93	3.50
	Algebra I	4,741	0.90	3.62	48,691	0.95	3.14
	Geometry	2,517	0.91	3.59	39,965	0.95	3.12
	Algebra II	1,492	0.90	3.58	38,293	0.93	3.27
	Summ. H. S. Mathematics	660	0.92	3.36	37,900	0.92	2.76
	Integrated Mathematics 1	113	0.88	3.60	329	0.88	3.61
	Integrated Mathematics 2	42	0.76	3.73	281	0.89	3.63
	Integrated Mathematics 3	3	–	–	106	0.93	3.49
Science	5	2,785	0.92	3.32	38,978	0.92	2.73
	8	2,777	0.92	3.24	38,472	0.92	2.63
	10 Life Science	2,993	0.93	3.25	41,587	0.93	2.83
	Biology	3,544	0.92	3.36	52,360	0.93	2.93
	Chemistry	1,372	0.89	3.43	38,795	0.91	3.05
	Earth Science	1,767	0.91	3.47	8,350	0.91	3.37
	Physics	420	0.92	3.37	12,731	0.91	3.07
	Int/Coord Science 1	381	0.88	3.52	2,139	0.91	3.37
	Int/Coord Science 2	29	0.83	3.63	317	0.91	3.17
	Int/Coord Science 3	17	0.91	3.48	28	0.90	3.51
	Int/Coord Science 4	1	–	–	1	–	–
Grade-Specific	Algebra I – 8	1,529	0.91	3.59	24,827	0.93	3.12
	Geometry – 9	766	0.91	3.49	19,308	0.93	3.10
	Algebra II – 10	641	0.90	3.55	19,881	0.91	3.32
	Summ. H.S. Math – 11	575	0.92	3.42	27,779	0.92	2.87
	World History – 10	2,820	0.92	3.38	37,142	0.92	3.02

* CSTs named by number only are grade-level tests.

Table 8.B.12 Reliabilities and SEMs for the CSTs by Primary Ethnicity

		Pacific Islander			Filipino		
Content Area	**CST ***	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**
English–Language Arts	2	2,305	0.93	3.30	9,714	0.92	2.98
	3	2,368	0.92	3.32	10,166	0.91	3.03
	4	2,227	0.94	3.60	10,959	0.93	3.32
	5	2,320	0.92	3.51	11,002	0.91	3.24
	6	2,314	0.92	3.63	11,775	0.90	3.35
	7	2,486	0.92	3.62	12,174	0.91	3.32
	8	2,461	0.92	3.70	12,590	0.91	3.44
	9	2,571	0.92	3.68	13,529	0.91	3.42
	10	2,588	0.93	3.69	13,593	0.91	3.40
	11	2,517	0.93	3.75	13,558	0.91	3.53
History–Social Science	8	2,556	0.93	3.78	12,848	0.92	3.49
	World History	2,679	0.91	3.41	14,167	0.90	3.21
	11	2,526	0.91	3.38	13,571	0.89	3.21
Mathematics	2	2,309	0.93	3.03	9,722	0.92	2.69
	3	2,367	0.93	2.90	10,172	0.92	2.51
	4	2,240	0.93	2.82	11,007	0.92	2.45
	5	2,325	0.93	3.19	11,041	0.93	2.87
	6	2,330	0.93	3.39	11,796	0.93	3.10
	7	2,305	0.91	3.54	10,237	0.92	3.32
	General Mathematics	978	0.91	3.62	2,594	0.91	3.58
	Algebra I	3,962	0.91	3.58	17,829	0.93	3.46
	Geometry	2,543	0.91	3.60	14,108	0.93	3.43
	Algebra II	1,601	0.90	3.56	11,857	0.91	3.50
	Summ. H.S. Mathematics	732	0.92	3.36	7,606	0.91	3.24
	Integrated Mathematics 1	87	0.81	3.67	230	0.82	3.65
	Integrated Mathematics 2	32	0.72	3.75	161	0.85	3.65
	Integrated Mathematics 3	2	–	–	59	0.90	3.60
Science	5	2,328	0.91	3.28	11,010	0.90	3.00
	8	2,460	0.91	3.22	12,585	0.90	2.89
	10 Life Science	2,558	0.92	3.32	13,533	0.91	3.05
	Biology	3,242	0.91	3.39	17,645	0.91	3.18
	Chemistry	1,570	0.90	3.47	11,412	0.89	3.33
	Earth Science	1,143	0.90	3.51	3,772	0.89	3.38
	Physics	452	0.91	3.46	3,642	0.89	3.31
	Int/Coord Science 1	221	0.88	3.53	904	0.87	3.47
	Int/Coord Science 2	21	0.82	3.60	40	0.91	3.41
	Int/Coord Science 3	6	–	–	18	0.85	3.58
	Int/Coord Science 4	0	–	–	0	–	–
Grade-Specific	Algebra I – 8	1,611	0.92	3.53	8,917	0.92	3.39
	Geometry – 9	871	0.91	3.52	6,458	0.91	3.36
	Algebra II – 10	712	0.90	3.54	6,160	0.90	3.48
	Summ. H.S. Math – 11	615	0.91	3.41	6,393	0.91	3.29
	World History – 10	2,437	0.90	3.42	12,740	0.89	3.22

* CSTs named by number only are grade-level tests.

Table 8.B.13 Reliabilities and SEMs for the CSTs by Primary Ethnicity

		Hispanic			African American			White		
Content Area	**CST ***	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**
English–Language Arts	2	250,247	0.94	3.40	26,221	0.94	3.39	111,954	0.94	3.07
	3	230,580	0.92	3.41	24,666	0.93	3.40	111,034	0.92	3.05
	4	223,351	0.94	3.70	24,397	0.94	3.69	110,487	0.94	3.30
	5	219,873	0.92	3.62	25,071	0.93	3.62	109,205	0.92	3.20
	6	221,274	0.92	3.70	25,993	0.92	3.71	110,536	0.92	3.33
	7	223,211	0.92	3.69	26,494	0.92	3.71	113,242	0.92	3.33
	8	219,644	0.92	3.75	27,213	0.92	3.76	115,478	0.92	3.42
	9	236,257	0.92	3.76	28,736	0.93	3.77	119,189	0.92	3.39
	10	226,046	0.93	3.73	27,546	0.93	3.76	119,646	0.93	3.39
	11	214,233	0.92	3.79	26,565	0.93	3.80	120,956	0.93	3.48
History–Social Science	8	235,845	0.93	3.83	29,988	0.93	3.86	119,916	0.94	3.50
	World History	236,622	0.91	3.44	29,043	0.92	3.47	123,120	0.92	3.16
	11	220,844	0.91	3.40	27,665	0.92	3.43	122,677	0.92	3.16
Mathematics	2	250,977	0.93	3.12	26,313	0.94	3.21	112,257	0.92	2.74
	3	232,341	0.93	2.98	24,719	0.94	3.08	111,912	0.93	2.61
	4	226,053	0.94	2.95	24,557	0.94	3.07	111,585	0.93	2.58
	5	222,153	0.93	3.25	25,140	0.93	3.34	109,787	0.94	2.94
	6	223,214	0.93	3.45	26,035	0.93	3.50	110,742	0.93	3.11
	7	211,537	0.92	3.57	25,135	0.91	3.61	100,626	0.92	3.34
	General Mathematics	109,573	0.90	3.66	14,962	0.89	3.66	47,949	0.92	3.60
	Algebra I	375,821	0.90	3.62	45,616	0.90	3.63	167,624	0.93	3.51
	Geometry	200,687	0.90	3.61	24,193	0.90	3.63	110,964	0.93	3.42
	Algebra II	132,175	0.89	3.57	15,465	0.89	3.59	85,771	0.91	3.51
	Summ. H.S. Math	50,905	0.92	3.43	5,362	0.92	3.50	53,272	0.92	3.11
	Integrated Math 1	7,974	0.82	3.64	984	0.82	3.62	3,381	0.88	3.62
	Integrated Math 2	2,616	0.84	3.67	362	0.83	3.68	1,252	0.87	3.64
	Integrated Math 3	354	0.90	3.56	48	0.89	3.66	139	0.92	3.58
Science	5	221,171	0.90	3.34	25,194	0.91	3.37	109,516	0.91	2.91
	8	220,589	0.91	3.27	27,330	0.91	3.32	115,528	0.91	2.88
	10 Life Science	224,676	0.92	3.35	27,180	0.92	3.38	118,794	0.93	2.99
	Biology	280,608	0.91	3.42	35,168	0.91	3.45	146,280	0.93	3.14
	Chemistry	130,259	0.89	3.51	15,823	0.89	3.54	79,253	0.90	3.24
	Earth Science	112,632	0.90	3.52	12,753	0.90	3.55	53,158	0.92	3.33
	Physics	35,748	0.90	3.49	4,372	0.91	3.52	25,439	0.90	3.20
	Int/Coord Science 1	24,302	0.87	3.56	2,945	0.87	3.58	7,941	0.89	3.40
	Int/Coord Science 2	2,091	0.84	3.58	152	0.80	3.57	670	0.88	3.50
	Int/Coord Science 3	443	0.82	3.56	52	0.49	3.55	281	0.91	3.46
	Int/Coord Science 4	27	0.84	3.42	3	–	–	23	0.89	3.48
Grade-Specific	Algebra I – 8	136,831	0.91	3.58	16,464	0.91	3.60	71,495	0.92	3.43
	Geometry – 9	62,424	0.91	3.55	6,814	0.91	3.57	44,424	0.91	3.28
	Algebra II – 10	57,339	0.90	3.55	6,357	0.89	3.58	42,045	0.89	3.49
	Summ. H.S. Math – 11	44,645	0.91	3.47	4,708	0.92	3.53	44,385	0.92	3.18
	World History – 10	213,368	0.91	3.44	25,962	0.91	3.47	112,591	0.92	3.16

* CSTs named by number only are grade-level tests.

Table 8.B.14 Reliabilities and SEMs for the CSTs by Primary Ethnicity-for-Not Economically Disadvantaged

		American Indian			Asian		
Content Area	**CST***	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**
English–Language Arts	2	850	0.94	3.19	25,263	0.92	2.63
	3	851	0.91	3.26	25,945	0.91	2.68
	4	856	0.94	3.47	25,478	0.93	2.88
	5	870	0.93	3.39	24,627	0.92	2.83
	6	916	0.92	3.51	24,248	0.91	2.95
	7	1,058	0.92	3.51	25,476	0.91	2.90
	8	1,137	0.92	3.60	23,344	0.92	3.04
	9	1,415	0.93	3.55	23,978	0.91	3.05
	10	1,470	0.93	3.55	25,078	0.92	3.02
	11	1,524	0.93	3.62	24,840	0.92	3.14
History–Social Science	8	1,196	0.93	3.69	23,565	0.92	3.05
	World History	1,500	0.92	3.29	25,509	0.91	2.85
	11	1,543	0.91	3.27	24,794	0.91	2.92
Mathematics	2	854	0.93	2.89	25,285	0.90	2.24
	3	859	0.93	2.86	25,988	0.91	2.00
	4	869	0.94	2.79	25,577	0.90	1.91
	5	877	0.94	3.15	24,696	0.93	2.29
	6	914	0.93	3.28	24,321	0.93	2.47
	7	978	0.93	3.45	17,263	0.92	2.85
	General Mathematics	633	0.91	3.63	2,392	0.93	3.39
	Algebra I	2,018	0.91	3.59	28,261	0.95	2.96
	Geometry	1,291	0.91	3.54	23,812	0.94	2.93
	Algebra II	895	0.89	3.57	23,597	0.93	3.18
	Summ. H.S. Mathematics	434	0.92	3.27	26,378	0.91	2.62
	Integrated Mathematics 1	62	0.86	3.64	141	0.89	3.59
	Integrated Mathematics 2	29	0.72	3.74	104	0.89	3.62
	Integrated Mathematics 3	1	–	–	78	0.93	3.44
Science	5	881	0.91	3.11	24,641	0.90	2.51
	8	1,134	0.91	3.10	23,352	0.90	2.41
	10 Life Science	1,456	0.93	3.13	25,030	0.92	2.65
	Biology	1,742	0.93	3.26	31,774	0.92	2.74
	Chemistry	826	0.88	3.38	24,568	0.91	2.91
	Earth Science	710	0.92	3.40	3,600	0.91	3.28
	Physics	269	0.91	3.32	8,185	0.90	2.95
	Int/Coord Science 1	155	0.89	3.42	1,112	0.91	3.26
	Int/Coord Science 2	10	–	–	279	0.90	3.12
	Int/Coord Science 3	8	–	–	18	0.88	3.48
	Int/Coord Science 4	0.	–	–	1	–	–
Grade-Specific	Algebra I – 8	663	0.91	3.54	14,486	0.93	2.99
	Geometry – 9	403	0.91	3.39	12,090	0.92	2.96
	Algebra II – 10	388	0.88	3.54	12,412	0.91	3.28
	Summ. H.S. Math – 11	372	0.91	3.34	18,528	0.91	2.73
	World History – 10	1,390	0.92	3.29	21,749	0.91	2.87

* CSTs named by number only are grade-level tests.

Table 8.B.15 Reliabilities and SEMs for the CSTs by Primary Ethnicity-for-Not Economically Disadvantaged

		Pacific Islander			Filipino		
Content Area	**CST ***	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**
English–Language Arts	2	725	0.93	3.14	6,137	0.91	2.88
	3	749	0.92	3.16	6,320	0.90	2.94
	4	801	0.94	3.42	6,811	0.92	3.20
	5	811	0.92	3.34	6,810	0.90	3.14
	6	777	0.91	3.45	7,293	0.90	3.26
	7	924	0.91	3.46	7,645	0.90	3.22
	8	984	0.92	3.59	7,972	0.90	3.35
	9	1,144	0.92	3.56	8,932	0.89	3.34
	10	1,174	0.93	3.57	9,119	0.90	3.33
	11	1,181	0.93	3.63	9,101	0.90	3.47
History–Social Science	8	1,009	0.93	3.67	8,121	0.92	3.39
	World History	1,209	0.91	3.34	9,504	0.89	3.16
	11	1,183	0.91	3.31	9,112	0.89	3.17
Mathematics	2	726	0.92	2.83	6,140	0.91	2.58
	3	748	0.93	2.72	6,323	0.92	2.41
	4	808	0.92	2.65	6,833	0.91	2.33
	5	813	0.93	3.05	6,839	0.93	2.78
	6	782	0.92	3.22	7,304	0.93	2.99
	7	824	0.91	3.45	6,289	0.92	3.25
	General Mathematics	328	0.91	3.63	1,430	0.91	3.55
	Algebra I	1,630	0.92	3.55	11,158	0.93	3.42
	Geometry	1,169	0.92	3.55	9,493	0.93	3.39
	Algebra II	803	0.91	3.54	8,179	0.91	3.49
	Summ. H.S. Mathematics	436	0.92	3.29	5,533	0.90	3.20
	Integrated Mathematics 1	32	0.85	3.63	123	0.85	3.61
	Integrated Mathematics 2	15	0.66	3.78	113	0.83	3.66
	Integrated Mathematics 3	2	–	–	36	0.89	3.60
Science	5	813	0.90	3.09	6,816	0.89	2.90
	8	981	0.91	3.08	7,969	0.89	2.80
	10 Life Science	1,166	0.92	3.22	9,083	0.91	2.99
	Biology	1,459	0.92	3.31	11,786	0.90	3.13
	Chemistry	798	0.90	3.41	7,852	0.88	3.30
	Earth Science	420	0.90	3.47	2,302	0.89	3.33
	Physics	251	0.91	3.40	2,592	0.89	3.28
	Int/Coord Science 1	104	0.86	3.52	526	0.88	3.45
	Int/Coord Science 2	14	0.84	3.61	31	0.90	3.38
	Int/Coord Science 3	4	–	–	11	0.85	3.58
	Int/Coord Science 4	0	–	–	0	–	–
Grade-Specific	Algebra I – 8	662	0.92	3.48	5,653	0.92	3.35
	Geometry – 9	429	0.91	3.43	4,518	0.91	3.32
	Algebra II – 10	384	0.90	3.52	4,339	0.89	3.47
	Summ. H.S. Math – 11	366	0.91	3.35	4,591	0.90	3.26
	World History – 10	1,097	0.91	3.34	8,535	0.89	3.17

* CSTs named by number only are grade-level tests.

Table 8.B.16 Reliabilities and SEMs for the CSTs by Primary Ethnicity-for-Not Economically Disadvantaged

		Hispanic			African American			White		
Content Area	**CST ***	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**
English–Language Arts	2	41,293	0.94	3.19	6,429	0.94	3.21	79,329	0.93	2.96
	3	38,399	0.92	3.20	6,490	0.92	3.23	80,275	0.91	2.94
	4	37,769	0.94	3.46	6,494	0.94	3.51	80,425	0.93	3.18
	5	37,385	0.92	3.37	6,896	0.93	3.43	79,480	0.91	3.08
	6	38,258	0.92	3.49	7,486	0.92	3.55	80,611	0.90	3.23
	7	41,977	0.92	3.51	7,997	0.92	3.57	83,479	0.91	3.23
	8	43,362	0.92	3.60	8,494	0.92	3.64	85,574	0.91	3.33
	9	54,700	0.92	3.61	10,551	0.93	3.67	89,932	0.91	3.30
	10	53,530	0.93	3.60	10,252	0.93	3.66	91,743	0.92	3.31
	11	52,252	0.93	3.68	10,622	0.93	3.72	93,768	0.93	3.41
History–Social Science	8	45,452	0.93	3.67	8,979	0.93	3.72	87,809	0.93	3.40
	World History	55,221	0.92	3.35	10,747	0.92	3.40	94,081	0.92	3.09
	11	53,263	0.92	3.32	10,905	0.92	3.36	94,578	0.91	3.11
Mathematics	2	41,383	0.92	2.89	6,446	0.93	3.01	79,499	0.91	2.61
	3	38,608	0.93	2.76	6,484	0.94	2.88	80,764	0.92	2.48
	4	38,131	0.93	2.72	6,526	0.94	2.82	81,052	0.92	2.44
	5	37,620	0.93	3.08	6,916	0.94	3.20	79,797	0.93	2.83
	6	38,450	0.93	3.28	7,496	0.93	3.38	80,705	0.93	3.01
	7	38,499	0.92	3.47	7,376	0.92	3.53	72,613	0.92	3.26
	General Mathematics	19,012	0.91	3.64	3,740	0.91	3.64	29,095	0.92	3.56
	Algebra I	79,454	0.91	3.59	15,457	0.91	3.61	121,957	0.93	3.47
	Geometry	49,385	0.91	3.56	9,556	0.91	3.59	87,203	0.93	3.38
	Algebra II	34,136	0.90	3.56	6,747	0.89	3.59	71,749	0.91	3.50
	Summ. H.S. Math	14,898	0.92	3.34	2,809	0.92	3.43	47,078	0.92	3.09
	Integrated Math 1	1,601	0.83	3.63	316	0.84	3.62	2,144	0.88	3.61
	Integrated Math 2	586	0.84	3.68	152	0.84	3.68	873	0.88	3.64
	Integrated Math 3	89	0.92	3.55	26	0.89	3.64	119	0.92	3.58
Science	5	37,493	0.90	3.11	6,911	0.91	3.21	79,695	0.89	2.79
	8	43,396	0.91	3.10	8,533	0.91	3.18	85,558	0.90	2.79
	10 Life Science	53,155	0.92	3.23	10,125	0.92	3.29	91,171	0.92	2.91
	Biology	67,276	0.92	3.34	13,637	0.92	3.39	113,451	0.92	3.07
	Chemistry	33,306	0.89	3.44	6,785	0.89	3.51	66,360	0.89	3.21
	Earth Science	24,224	0.90	3.46	4,278	0.91	3.50	35,830	0.91	3.28
	Physics	9,275	0.91	3.41	1,844	0.91	3.48	21,590	0.90	3.16
	Int/Coord Science 1	5,037	0.88	3.53	1,005	0.87	3.56	5,527	0.88	3.36
	Int/Coord Science 2	351	0.82	3.61	56	0.84	3.57	497	0.88	3.48
	Int/Coord Science 3	128	0.82	3.57	12	0.72	3.54	171	0.91	3.42
	Int/Coord Science 4	7	–	–	0	–	–	9	–	–
Grade-Specific	Algebra I – 8	27,778	0.92	3.53	5,468	0.92	3.56	55,072	0.92	3.39
	Geometry – 9	16,615	0.91	3.46	2,979	0.91	3.51	36,906	0.90	3.24
	Algebra II – 10	15,080	0.90	3.53	2,837	0.89	3.56	35,835	0.89	3.48
	Summ. H.S. Math – 11	12,846	0.91	3.39	2,433	0.92	3.48	39,038	0.92	3.15
	World History – 10	49,885	0.91	3.35	9,593	0.92	3.40	86,263	0.91	3.10

* CSTs named by number only are grade-level tests.

Table 8.B.17 Reliabilities and SEMs for the CSTs by Primary Ethnicity-for-Economically Disadvantaged

		American Indian			Asian		
Content Area	**CST ***	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**
English–Language Arts	2	2,179	0.93	3.50	14,182	0.94	3.12
	3	2,175	0.92	3.51	14,381	0.93	3.18
	4	1,844	0.94	3.77	14,461	0.94	3.45
	5	1,886	0.93	3.71	14,259	0.93	3.37
	6	1,764	0.92	3.77	14,769	0.93	3.45
	7	1,672	0.92	3.75	15,663	0.93	3.40
	8	1,640	0.92	3.80	15,057	0.93	3.51
	9	1,716	0.92	3.81	15,120	0.93	3.53
	10	1,548	0.93	3.77	16,595	0.94	3.48
	11	1,468	0.92	3.83	17,496	0.93	3.58
History–Social Science	8	1,788	0.93	3.89	15,481	0.94	3.54
	World History	1,608	0.92	3.47	17,063	0.92	3.20
	11	1,517	0.91	3.44	17,541	0.92	3.23
Mathematics	2	2,188	0.93	3.23	14,218	0.93	2.77
	3	2,197	0.93	3.15	14,432	0.94	2.58
	4	1,877	0.94	3.15	14,570	0.94	2.48
	5	1,894	0.93	3.38	14,359	0.94	2.87
	6	1,770	0.92	3.53	14,883	0.94	3.06
	7	1,618	0.91	3.61	13,073	0.93	3.24
	General Math	1,220	0.90	3.67	3,292	0.92	3.57
	Algebra I	2,712	0.88	3.65	20,368	0.94	3.36
	Geometry	1,224	0.88	3.64	16,114	0.94	3.37
	Algebra II	595	0.90	3.58	14,647	0.93	3.40
	Summ. H.S. Mathematics	226	0.92	3.51	11,502	0.92	3.04
	Integrated Mathematics 1	51	0.90	3.55	188	0.87	3.62
	Integrated Mathematics 2	13	0.84	3.70	173	0.89	3.63
	Integrated Mathematics 3	2	–	–	28	0.91	3.62
Science	5	1,895	0.91	3.40	14,284	0.92	3.08
	8	1,638	0.91	3.34	15,094	0.92	2.93
	10 Life Science	1,529	0.92	3.35	16,508	0.93	3.09
	Biology	1,797	0.91	3.45	20,524	0.92	3.18
	Chemistry	543	0.89	3.50	14,196	0.91	3.27
	Earth Science	1,051	0.90	3.51	4,736	0.91	3.44
	Physics	151	0.91	3.46	4,542	0.91	3.26
	Int/Coord Science 1	226	0.86	3.58	1,019	0.90	3.47
	Int/Coord Science 2	19	0.83	3.61	37	0.89	3.51
	Int/Coord Science 3	9	–	–	10	–	–
	Int/Coord Science 4	1	–	–	0	–	–
Grade-Specific	Algebra I – 8	864	0.90	3.62	10,325	0.93	3.29
	Geometry – 9	362	0.90	3.60	7,200	0.92	3.31
	Algebra II – 10	252	0.91	3.56	7,448	0.92	3.39
	Summ. H.S. Math – 11	203	0.91	3.55	9,240	0.92	3.12
	World History – 10	1,426	0.91	3.46	15,350	0.91	3.22

* CSTs named by number only are grade-level tests.

Table 8.B.18 Reliabilities and SEMs for the CSTs by Primary Ethnicity-for-Economically Disadvantaged

		Pacific Islander			Filipino		
Content Area	**CST ***	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**
English–Language Arts	2	1,571	0.93	3.36	3,564	0.93	3.13
	3	1,616	0.91	3.39	3,836	0.91	3.17
	4	1,422	0.93	3.69	4,134	0.93	3.49
	5	1,508	0.92	3.60	4,180	0.92	3.39
	6	1,536	0.91	3.71	4,472	0.91	3.50
	7	1,558	0.91	3.71	4,510	0.92	3.48
	8	1,470	0.91	3.77	4,610	0.91	3.59
	9	1,424	0.92	3.78	4,575	0.91	3.57
	10	1,413	0.92	3.78	4,463	0.92	3.54
	11	1,332	0.91	3.85	4,429	0.91	3.64
History–Social Science	8	1,539	0.92	3.85	4,718	0.92	3.64
	World History	1,469	0.90	3.48	4,654	0.90	3.31
	11	1,339	0.90	3.44	4,432	0.90	3.29
Mathematics	2	1,574	0.93	3.12	3,569	0.92	2.86
	3	1,615	0.93	2.97	3,838	0.92	2.67
	4	1,428	0.94	2.91	4,161	0.93	2.64
	5	1,511	0.93	3.26	4,191	0.93	3.01
	6	1,547	0.92	3.47	4,482	0.93	3.25
	7	1,477	0.91	3.59	3,932	0.92	3.43
	General Mathematics	647	0.91	3.62	1,159	0.91	3.61
	Algebra I	2,324	0.91	3.60	6,640	0.92	3.52
	Geometry	1,372	0.89	3.64	4,599	0.92	3.51
	Algebra II	798	0.89	3.59	3,668	0.91	3.52
	Summ. H. S. Mathematics	296	0.91	3.45	2,066	0.92	3.32
	Integrated Mathematics 1	55	0.78	3.68	106	0.77	3.68
	Integrated Mathematics 2	17	0.72	3.72	48	0.88	3.60
	Integrated Mathematics 3	0	–	–	23	0.92	3.57
Science	5	1,514	0.90	3.37	4,183	0.89	3.15
	8	1,471	0.90	3.31	4,608	0.90	3.05
	10 Life Science	1,391	0.91	3.40	4,439	0.91	3.18
	Biology	1,782	0.90	3.46	5,837	0.91	3.28
	Chemistry	771	0.88	3.54	3,546	0.89	3.41
	Earth Science	720	0.90	3.53	1,460	0.89	3.46
	Physics	201	0.89	3.53	1,046	0.89	3.39
	Int/Coord Science 1	117	0.88	3.55	376	0.87	3.50
	Int/Coord Science 2	7	–	–	9	–	–
	Int/Coord Science 3	2	–	–	7	–	–
	Int/Coord Science 4	0	–	–	0	–	–
Grade-Specific	Algebra I – 8	944	0.91	3.56	3,257	0.92	3.46
	Geometry – 9	441	0.90	3.59	1,933	0.91	3.46
	Algebra II – 10	328	0.89	3.57	1,818	0.90	3.51
	Summ. H.S. Math – 11	249	0.91	3.50	1,795	0.91	3.37
	World History – 10	1,339	0.90	3.49	4,197	0.90	3.32

* CSTs named by number only are grade-level tests.

Table 8.B.19 Reliabilities and SEMs for the CSTs by Primary Ethnicity-for-Economically Disadvantaged

		Hispanic			African American			White		
Content Area	**CST ***	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**	**N**	**Rel**	**SEM**
English–Language Arts	2	208,637	0.93	3.44	19,724	0.94	3.44	32,398	0.94	3.32
	3	191,912	0.92	3.45	18,131	0.92	3.45	30,579	0.92	3.31
	4	185,340	0.93	3.74	17,855	0.94	3.75	29,892	0.94	3.59
	5	182,286	0.92	3.66	18,129	0.93	3.69	29,577	0.93	3.50
	6	182,797	0.92	3.74	18,443	0.92	3.77	29,766	0.92	3.59
	7	180,947	0.91	3.73	18,418	0.92	3.77	29,600	0.92	3.59
	8	175,969	0.91	3.79	18,654	0.92	3.82	29,746	0.92	3.65
	9	181,231	0.91	3.80	18,127	0.92	3.83	29,116	0.93	3.64
	10	172,209	0.93	3.76	17,229	0.93	3.82	27,717	0.93	3.64
	11	161,697	0.92	3.83	15,879	0.92	3.86	27,027	0.93	3.70
History–Social Science	8	190,043	0.92	3.87	20,935	0.92	3.91	31,935	0.93	3.75
	World History	181,105	0.91	3.47	18,225	0.91	3.51	28,856	0.92	3.36
	11	167,292	0.91	3.43	16,699	0.91	3.47	27,937	0.92	3.35
Mathematics	2	209,268	0.93	3.16	19,795	0.93	3.27	32,532	0.93	3.02
	3	193,452	0.93	3.02	18,187	0.94	3.14	30,959	0.93	2.91
	4	187,671	0.94	3.00	17,983	0.94	3.15	30,362	0.94	2.90
	5	184,329	0.93	3.28	18,177	0.93	3.40	29,844	0.93	3.21
	6	184,540	0.92	3.48	18,473	0.92	3.55	29,875	0.93	3.38
	7	172,757	0.91	3.59	17,680	0.91	3.64	27,856	0.92	3.52
	General Mathematics	90,296	0.89	3.66	11,178	0.89	3.66	18,733	0.91	3.64
	Algebra I	295,818	0.90	3.63	30,057	0.89	3.64	45,435	0.91	3.61
	Geometry	151,108	0.90	3.63	14,591	0.88	3.64	23,625	0.91	3.56
	Algebra II	97,946	0.89	3.58	8,701	0.88	3.59	13,956	0.90	3.57
	Summ. H. S. Math	35,985	0.91	3.47	2,547	0.92	3.56	6,165	0.92	3.30
	Integrated Math 1	6,362	0.81	3.64	666	0.80	3.62	1,233	0.86	3.64
	Integrated Math 2	2,027	0.83	3.67	209	0.82	3.67	379	0.87	3.64
	Integrated Math 3	265	0.89	3.57	21	0.90	3.66	20	0.94	3.54
Science	5	183,474	0.90	3.39	18,233	0.90	3.43	29,674	0.91	3.20
	8	176,881	0.91	3.30	18,732	0.91	3.38	29,811	0.92	3.15
	10 Life Science	171,227	0.91	3.38	16,992	0.91	3.43	27,445	0.93	3.22
	Biology	212,993	0.91	3.45	21,452	0.91	3.49	32,640	0.92	3.34
	Chemistry	96,865	0.88	3.53	9,018	0.88	3.57	12,836	0.89	3.40
	Earth Science	88,231	0.89	3.54	8,452	0.89	3.57	17,242	0.92	3.43
	Physics	26,448	0.90	3.51	2,518	0.90	3.55	3,829	0.90	3.40
	Int/Coord Science 1	19,223	0.87	3.57	1,933	0.86	3.59	2,403	0.89	3.50
	Int/Coord Science 2	1,736	0.85	3.58	96	0.76	3.58	171	0.86	3.56
	Int/Coord Science 3	312	0.82	3.55	40	0.25	3.55	110	0.86	3.52
	Int/Coord Science 4	20	0.81	3.38	3	–	–	14	0.91	3.46
Grade-Specific	Algebra I – 8	108,922	0.91	3.59	10,966	0.90	3.62	16,365	0.92	3.55
	Geometry – 9	45,761	0.90	3.58	3,827	0.89	3.62	7,485	0.91	3.46
	Algebra II – 10	42,228	0.90	3.56	3,514	0.88	3.59	6,186	0.89	3.54
	Summ. H.S. Math – 11	31,780	0.91	3.50	2,269	0.91	3.59	5,322	0.92	3.35
	World History – 10	163,226	0.91	3.47	16,313	0.91	3.51	26,167	0.92	3.36

* CSTs named by number only are grade-level tests.

Table 8.B.20 Subscore Reliabilities and SEM for ELA by Gender/Economic Status

Subscore Reliabilities and SEM for ELA by Gender/Economic Status									
Subscore Area	N of Items	Male		Female		Not Econ. Dis.		Econ. Dis.	
		Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Grade 2									
1. Word Analysis and Vocabulary Development	22	0.86	1.86	0.84	1.82	0.82	1.67	0.85	1.93
2. Reading Comprehension	15	0.79	1.64	0.78	1.61	0.77	1.49	0.75	1.70
3. Literary Response and Analysis	6	0.69	0.90	0.66	0.86	0.62	0.75	0.66	0.95
4. Written and Oral Language Conventions	14	0.82	1.51	0.81	1.45	0.80	1.35	0.80	1.55
5. Writing Strategies	8	0.67	1.24	0.66	1.22	0.65	1.16	0.62	1.27
Grade 3									
1. Word Analysis and Vocabulary Development	20	0.81	1.76	0.80	1.73	0.77	1.58	0.79	1.84
2. Reading Comprehension	15	0.75	1.59	0.74	1.55	0.69	1.44	0.73	1.65
3. Literary Response and Analysis	8	0.69	1.06	0.67	1.01	0.63	0.90	0.66	1.11
4. Written and Oral Language Conventions	13	0.73	1.54	0.72	1.51	0.70	1.45	0.69	1.57
5. Writing Strategies	9	0.70	1.28	0.69	1.25	0.67	1.16	0.66	1.32
Grade 4									
1. Word Analysis and Vocabulary Development	18	0.86	1.56	0.84	1.52	0.82	1.32	0.84	1.66
2. Reading Comprehension	15	0.80	1.63	0.79	1.59	0.76	1.50	0.77	1.68
3. Literary Response and Analysis	9	0.69	1.25	0.67	1.25	0.65	1.13	0.64	1.32
4. Written and Oral Language Conventions	18	0.80	1.74	0.78	1.67	0.77	1.56	0.78	1.79
5. Writing Strategies	15	0.77	1.69	0.75	1.67	0.76	1.59	0.72	1.74
Grade 5									
1. Word Analysis and Vocabulary Development	14	0.77	1.43	0.76	1.41	0.72	1.27	0.74	1.50
2. Reading Comprehension	16	0.76	1.68	0.74	1.67	0.72	1.55	0.72	1.75
3. Literary Response and Analysis	12	0.75	1.37	0.75	1.32	0.71	1.19	0.73	1.43
4. Written and Oral Language Conventions	17	0.76	1.61	0.72	1.50	0.71	1.43	0.74	1.63
5. Writing Strategies	16	0.75	1.67	0.73	1.61	0.71	1.50	0.72	1.72
Grade 6									
1. Word Analysis and Vocabulary Development	13	0.77	1.35	0.75	1.32	0.72	1.18	0.74	1.43
2. Reading Comprehension	17	0.75	1.77	0.73	1.76	0.70	1.65	0.71	1.84
3. Literary Response and Analysis	12	0.71	1.40	0.70	1.35	0.65	1.26	0.68	1.45
4. Written and Oral Language Conventions	16	0.74	1.59	0.69	1.52	0.69	1.42	0.71	1.63
5. Writing Strategies	17	0.76	1.81	0.75	1.79	0.72	1.71	0.73	1.85
Grade 7									
1. Word Analysis and Vocabulary Development	11	0.72	1.32	0.67	1.28	0.66	1.19	0.68	1.37
2. Reading Comprehension	18	0.82	1.65	0.78	1.61	0.77	1.49	0.79	1.72
3. Literary Response and Analysis	13	0.70	1.48	0.67	1.42	0.63	1.34	0.68	1.52
4. Written and Oral Language Conventions	16	0.72	1.70	0.68	1.64	0.70	1.57	0.66	1.74
5. Writing Strategies	17	0.78	1.77	0.78	1.74	0.77	1.66	0.73	1.82
Grade 8									
1. Word Analysis and Vocabulary Development	9	0.60	1.26	0.56	1.25	0.55	1.18	0.54	1.30
2. Reading Comprehension	18	0.76	1.78	0.74	1.75	0.73	1.68	0.73	1.82
3. Literary Response and Analysis	15	0.74	1.67	0.73	1.63	0.73	1.56	0.70	1.71
4. Written and Oral Language Conventions	16	0.77	1.62	0.72	1.52	0.73	1.44	0.73	1.65
5. Writing Strategies	17	0.79	1.76	0.77	1.72	0.78	1.62	0.75	1.82

Subscore Reliabilities and SEM for ELA by Gender/Economic Status									
Subscore Area	N of Items	Male		Female		Not Econ. Dis.		Econ. Dis.	
		Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Grade 9									
1. Word Analysis and Vocabulary Development	8	0.62	1.10	0.50	1.08	0.52	1.02	0.55	1.14
2. Reading Comprehension	18	0.82	1.72	0.79	1.71	0.79	1.58	0.78	1.81
3. Literary Response and Analysis	16	0.77	1.71	0.74	1.68	0.74	1.62	0.73	1.76
4. Written and Oral Language Conventions	13	0.72	1.56	0.68	1.49	0.70	1.42	0.66	1.61
5. Writing Strategies	20	0.77	1.90	0.74	1.86	0.74	1.79	0.75	1.94
Grade 10									
1. Word Analysis and Vocabulary Development	8	0.63	1.17	0.59	1.17	0.59	1.10	0.57	1.22
2. Reading Comprehension	18	0.84	1.70	0.81	1.68	0.81	1.57	0.81	1.78
3. Literary Response and Analysis	16	0.73	1.75	0.70	1.72	0.71	1.66	0.68	1.80
4. Written and Oral Language Conventions	13	0.74	1.47	0.70	1.41	0.71	1.37	0.71	1.50
5. Writing Strategies	20	0.82	1.85	0.80	1.81	0.79	1.74	0.79	1.91
Grade 11									
1. Word Analysis and Vocabulary Development	8	0.64	1.18	0.55	1.19	0.62	1.12	0.55	1.24
2. Reading Comprehension	19	0.80	1.84	0.78	1.81	0.79	1.74	0.76	1.90
3. Literary Response and Analysis	17	0.74	1.75	0.71	1.73	0.70	1.67	0.70	1.80
4. Written and Oral Language Conventions	9	0.71	1.22	0.68	1.17	0.70	1.12	0.66	1.26
5. Writing Strategies	22	0.83	2.03	0.81	1.99	0.82	1.92	0.80	2.08

Table 8.B.21 Subscore Reliabilities and SEM for History–Social Science by Gender/Economic Status

Subscore Reliabilities and SEM for ELA by Gender/Economic Status									
Subscore Area	N of Items	Male		Female		Not Econ. Dis.		Econ. Dis.	
		Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Grade 8									
1. World History and Geography: Ancient Civilizations	16	0.74	1.72	0.68	1.75	0.70	1.64	0.67	1.79
2. Late Antiquity and the Middle Ages	14	0.77	1.57	0.71	1.62	0.72	1.51	0.72	1.66
3. Renaissance/Reformation	10	0.72	1.30	0.64	1.34	0.67	1.23	0.66	1.38
4. U.S. Constitution and the Early Republic	22	0.85	1.97	0.81	2.01	0.83	1.86	0.81	2.07
5. Civil War and Its Aftermath	13	0.82	1.46	0.77	1.50	0.79	1.36	0.77	1.56
World History									
1. Development of Modern Political Thought	13	0.71	1.56	0.64	1.58	0.68	1.51	0.64	1.61
2. Industrial Expansion and Imperialism	10	0.72	1.29	0.65	1.35	0.67	1.25	0.67	1.38
3. Causes and Effects of World War I	14	0.80	1.54	0.74	1.63	0.77	1.50	0.75	1.65
4. Causes and Effects of World War II	13	0.78	1.50	0.70	1.58	0.75	1.46	0.71	1.60
5. International Developments in the Post-World War II Era	10	0.75	1.31	0.67	1.37	0.71	1.28	0.69	1.39
Grade 11 (U.S. History)									
1. Foundations of American Political and Social Thought	10	0.69	1.33	0.63	1.36	0.66	1.28	0.62	1.39
2. Industrialization and the U.S. Role as a World Power	13	0.77	1.49	0.71	1.52	0.73	1.44	0.72	1.56
3. United States between the World Wars	12	0.73	1.47	0.66	1.50	0.68	1.44	0.68	1.53
4. World War II and Foreign Affairs	12	0.76	1.42	0.67	1.50	0.72	1.41	0.71	1.50
5. Post-World War II Domestic Affairs	13	0.76	1.53	0.68	1.57	0.72	1.49	0.70	1.60

Table 8.B.22 Subscore Reliabilities and SEM for Mathematics by Gender/Economic Status

Subscore Reliabilities and SEM for Mathematics by Gender/Economic Status									
Subscore Area	N of Items	Male		Female		Not Econ. Dis.		Econ. Dis.	
		Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Grade 2									
1. Number Sense: Place Value, Addition, and Subtraction	15	0.81	1.35	0.80	1.37	0.76	1.20	0.80	1.44
2. Number Sense: Multiplication, Division, and Fractions	23	0.86	1.76	0.84	1.76	0.83	1.56	0.85	1.86
3. Algebra and Functions	6	0.65	0.89	0.61	0.90	0.62	0.79	0.61	0.95
4. Measurement and Geometry	14	0.71	1.46	0.66	1.47	0.65	1.34	0.67	1.53
5. Statistics, Data Analysis, and Probability	7	0.62	0.92	0.58	0.90	0.57	0.81	0.59	0.96
Grade 3									
1. Number Sense: Place Value, Fractions, and Decimals	16	0.80	1.35	0.79	1.37	0.76	1.22	0.78	1.43
2. Number Sense: Addition, Subtraction, Multiplication, and Division	16	0.84	1.41	0.83	1.39	0.82	1.27	0.83	1.47
3. Algebra and Functions	12	0.79	1.27	0.77	1.30	0.76	1.12	0.75	1.37
4. Measurement and Geometry	16	0.78	1.35	0.76	1.36	0.74	1.19	0.76	1.45
5. Statistics, Data Analysis, and Probability	5	0.48	0.74	0.43	0.72	0.42	0.63	0.45	0.78
Grade 4									
1. Number Sense: Decimals, Fractions, and Negative Numbers	17	0.81	1.36	0.79	1.41	0.76	1.20	0.79	1.49
2. Number Sense: Operations and Factoring	14	0.84	1.25	0.83	1.22	0.81	1.08	0.83	1.32
3. Algebra and Functions	18	0.87	1.37	0.86	1.34	0.83	1.17	0.86	1.46
4. Measurement and Geometry	12	0.74	1.32	0.71	1.33	0.71	1.22	0.71	1.39
5. Statistics, Data Analysis, and Probability	4	0.47	0.72	0.38	0.70	0.41	0.63	0.40	0.75
Grade 5									
1. Number Sense: Estimation, Percents, and Factoring	12	0.79	1.33	0.77	1.34	0.78	1.23	0.75	1.40
2. Number Sense: Operations with Fractions and Decimals	17	0.83	1.62	0.83	1.60	0.82	1.47	0.81	1.69
3. Algebra and Functions	17	0.82	1.54	0.80	1.54	0.80	1.39	0.79	1.63
4. Measurement and Geometry	15	0.80	1.51	0.78	1.52	0.79	1.42	0.76	1.57
5. Statistics, Data Analysis, and Probability	4	0.57	0.65	0.49	0.64	0.51	0.54	0.52	0.70
Grade 6									
1. Number Sense: Ratios, Proportions, Percentages and Negative Fractions	15	0.78	1.59	0.77	1.59	0.77	1.49	0.75	1.65
2. Number Sense: Operations and Problem Solving with Fractions	10	0.72	1.26	0.69	1.27	0.69	1.15	0.67	1.33
3. Algebra and Functions	19	0.85	1.68	0.84	1.73	0.84	1.53	0.82	1.81
4. Measurement and Geometry	10	0.73	1.31	0.73	1.32	0.73	1.23	0.69	1.37
5. Statistics, Data Analysis, and Probability	11	0.74	1.37	0.71	1.36	0.72	1.27	0.69	1.43
Grade 7									
1. Number Sense: Rational Numbers	14	0.76	1.58	0.75	1.58	0.75	1.50	0.73	1.63
2. Number Sense: Exponent, Powers and Roots	8	0.68	1.24	0.68	1.24	0.68	1.21	0.66	1.26
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	10	0.65	1.38	0.63	1.38	0.63	1.31	0.62	1.42
4. Algebra and Functions: Multistep Problems, Graphing and Functions	15	0.77	1.63	0.73	1.67	0.75	1.55	0.72	1.70
5. Measurement and Geometry	13	0.73	1.54	0.70	1.53	0.72	1.45	0.68	1.58
6. Statistics, Data Analysis, and Probability	5	0.60	0.90	0.55	0.88	0.57	0.83	0.56	0.92

Subscore Reliabilities and SEM for Mathematics by Gender/Economic Status									
Subscore Area	N of Items	Male		Female		Not Econ. Dis.		Econ. Dis.	
		Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
General Mathematics									
1. Number Sense: Rational Numbers	14	0.74	1.66	0.73	1.64	0.75	1.63	0.72	1.66
2. Number Sense: Exponent, Powers and Roots	10	0.68	1.41	0.69	1.41	0.71	1.40	0.66	1.42
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	11	0.62	1.51	0.59	1.51	0.63	1.49	0.59	1.52
4. Algebra and Functions: Multistep Problems, Graphing, and Functions	10	0.65	1.40	0.60	1.41	0.65	1.37	0.61	1.42
5. Measurement and Geometry	11	0.66	1.50	0.62	1.50	0.69	1.49	0.60	1.51
6. Statistics, Data Analysis, and Probability	9	0.62	1.32	0.57	1.30	0.63	1.28	0.57	1.33
Algebra I									
1. Number Properties, Operations, and Linear Equations	17	0.79	1.77	0.78	1.76	0.80	1.69	0.76	1.82
2. Graphing and Systems of Linear Equations	14	0.78	1.65	0.77	1.65	0.80	1.61	0.73	1.68
3. Quadratics and Polynomials	21	0.81	2.01	0.81	2.00	0.83	1.96	0.77	2.04
4. Functions and Rational Expressions	13	0.68	1.61	0.68	1.60	0.73	1.59	0.60	1.61
Geometry									
1. Logic and Geometric Proofs	23	0.83	2.04	0.82	2.07	0.84	1.97	0.78	2.13
2. Volume and Area Formulas	11	0.75	1.43	0.75	1.43	0.77	1.39	0.69	1.46
3. Angle Relationships, Constructions, and Lines	16	0.76	1.75	0.73	1.76	0.77	1.71	0.68	1.80
4. Trigonometry	15	0.78	1.67	0.76	1.69	0.78	1.63	0.72	1.72
Algebra II									
1. Polynomials and Rational Expressions	19	0.80	1.80	0.79	1.81	0.79	1.77	0.78	1.85
2. Quadratics, Conics, and Complex Numbers	16	0.76	1.76	0.75	1.76	0.76	1.75	0.71	1.77
3. Exponents and Logarithms	16	0.77	1.76	0.75	1.77	0.77	1.74	0.73	1.79
4. Series, Combinatorics, and Probability and Statistics	14	0.71	1.64	0.67	1.64	0.70	1.63	0.65	1.65
Summative High School Mathematics									
1. Algebra I	18	0.78	1.57	0.77	1.65	0.77	1.55	0.77	1.72
2. Geometry	19	0.79	1.66	0.78	1.76	0.77	1.63	0.79	1.84
3. Algebra II	23	0.85	1.82	0.84	1.92	0.84	1.80	0.83	1.99
4. Probability and Statistics	5	0.54	0.88	0.50	0.95	0.50	0.88	0.49	0.97
Integrated Mathematics 1									
1. Algebra I: Number Properties, Operations, and Linear Equations	15	0.73	1.72	0.71	1.72	0.73	1.69	0.71	1.74
2. Algebra I: Graphing	9	0.54	1.38	0.51	1.38	0.57	1.37	0.50	1.38
3. Algebra I: Quadratics and Polynomials	14	0.60	1.66	0.60	1.66	0.64	1.65	0.57	1.67
4. Algebra I: Functions and Relations Expressions	7	0.50	1.15	0.54	1.16	0.59	1.14	0.47	1.16
5. Geometry	20	0.53	1.99	0.48	1.96	0.59	1.99	0.44	1.97
Integrated Mathematics 2									
1. Algebra I	20	0.70	2.03	0.64	2.04	0.66	2.04	0.68	2.03
2. Geometry: Logic and Geometric Proofs	22	0.73	2.11	0.70	2.12	0.74	2.10	0.69	2.13
3. Geometry: Angle Relationships, Construction and Lines	8	0.51	1.28	0.49	1.27	0.53	1.27	0.47	1.28
4. Trigonometry	10	0.56	1.43	0.57	1.43	0.59	1.42	0.54	1.43
5. Algebra II: Probability and Statistics	5	0.27	0.98	0.26	0.95	0.29	0.98	0.24	0.96
Integrated Mathematics 3									
1. Geometry	5	0.48	0.96	0.31	0.98	0.41	0.96	0.35	0.98
2. Algebra II: Polynomials and Relations Expressions	19	0.83	1.85	0.80	1.89	0.83	1.86	0.80	1.89
3. Algebra II: Quadratics, Conics and Complex Numbers	16	0.75	1.77	0.73	1.78	0.76	1.77	0.69	1.77
4. Algebra II: Exponents and Logarithms	16	0.80	1.75	0.77	1.77	0.81	1.73	0.75	1.79
5. Algebra II: Series, Combinatorics, Probability and Statistics	9	0.53	1.32	0.35	1.33	0.50	1.32	0.36	1.33

Table 8.B.23 Subscore Reliabilities and SEM for Science by Gender/Economic Status

Subscore Reliabilities and SEM for Science by Gender/Economic Status									
Subscore Area	N of Items	Male		Female		Not Econ. Dis.		Econ. Dis.	
		Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Grade 5 Science									
1. Physical Science (Grade 5)	11	0.68	1.30	0.66	1.31	0.61	1.15	0.64	1.40
2. Physical Science (Grade 4)	8	0.63	1.07	0.61	1.11	0.57	0.97	0.60	1.16
3. Life Science (Grade 5)	13	0.75	1.47	0.71	1.50	0.70	1.34	0.70	1.57
4. Life Science (Grade 4)	9	0.70	1.21	0.68	1.23	0.66	1.09	0.65	1.29
5. Earth Science (Grade 5)	11	0.65	1.36	0.60	1.38	0.59	1.26	0.59	1.43
6. Earth Science (Grade 4)	8	0.67	1.20	0.61	1.22	0.62	1.10	0.58	1.27
Grade 8 Science									
1. Motion	8	0.64	1.16	0.58	1.20	0.62	1.10	0.55	1.23
2. Forces, Density, and Buoyancy	13	0.74	1.39	0.68	1.47	0.69	1.31	0.69	1.51
3. Structure of Matter and Periodic Table	16	0.79	1.58	0.75	1.61	0.76	1.47	0.75	1.68
4. Earth in the Solar System	7	0.62	1.00	0.53	1.07	0.55	0.96	0.56	1.08
5. Reactions and the Chemistry of Living Systems	10	0.71	1.29	0.67	1.31	0.67	1.19	0.66	1.37
6. Investigation and Experimentation	6	0.64	0.88	0.55	0.89	0.56	0.79	0.59	0.95
Grade 10 Life Science									
1. Cell Biology	10	0.72	1.32	0.67	1.37	0.71	1.27	0.66	1.40
2. Genetics	12	0.73	1.49	0.69	1.50	0.72	1.45	0.67	1.53
3. Physiology	10	0.75	1.21	0.68	1.25	0.71	1.13	0.69	1.31
4. Ecology	11	0.78	1.29	0.73	1.35	0.74	1.23	0.73	1.39
5. Evolution	11	0.79	1.34	0.75	1.37	0.76	1.26	0.73	1.43
6. Investigation and Experimentation	6	0.61	0.93	0.52	0.95	0.56	0.86	0.54	1.00
Biology									
1. Cell Biology	9	0.68	1.30	0.64	1.32	0.67	1.25	0.60	1.35
2. Genetics	18	0.81	1.78	0.77	1.77	0.79	1.70	0.76	1.84
3. Ecology and Evolution	16	0.81	1.70	0.76	1.73	0.79	1.62	0.74	1.79
4. Physiology	11	0.78	1.35	0.73	1.38	0.74	1.29	0.73	1.42
5. Investigation and Experimentation	6	0.57	1.04	0.51	1.04	0.52	0.99	0.50	1.07
Chemistry									
1. Atomic and Molecular Structure	8	0.48	1.21	0.43	1.23	0.44	1.19	0.43	1.25
2. Chemical Bonds, Biochemistry	9	0.62	1.26	0.54	1.31	0.56	1.22	0.55	1.34
3. Kinetics, Thermodynamics	14	0.74	1.62	0.65	1.71	0.69	1.60	0.66	1.73
4. Chemical Reactions	13	0.75	1.57	0.69	1.62	0.73	1.56	0.67	1.64
5. Conservation of Matter and Stoichiometry	10	0.74	1.34	0.69	1.38	0.73	1.31	0.68	1.41
6. Investigation and Experimentation	6	0.67	0.89	0.61	0.93	0.61	0.82	0.61	0.99
Earth Science									
1. Astronomy and Cosmology	12	0.68	1.54	0.59	1.59	0.66	1.53	0.62	1.58
2. Solid Earth	14	0.69	1.67	0.63	1.70	0.65	1.64	0.65	1.71
3. The Earth's Energy	28	0.86	2.33	0.81	2.41	0.85	2.29	0.82	2.41
4. Investigation and Experimentation	6	0.64	1.00	0.58	1.03	0.62	0.95	0.59	1.05
Physics									
1. Motion and Forces	12	0.72	1.43	0.69	1.52	0.70	1.40	0.67	1.54
2. Conservation of Energy and Momentum	12	0.77	1.42	0.74	1.48	0.74	1.39	0.73	1.51
3. Heat and Thermodynamics	9	0.71	1.23	0.65	1.30	0.67	1.20	0.65	1.33
4. Waves	10	0.67	1.32	0.60	1.38	0.62	1.30	0.63	1.40
5. Electric and Magnetic Phenomena	11	0.67	1.46	0.61	1.49	0.64	1.45	0.62	1.51
6. Investigation and Experimentation	6	0.56	1.02	0.52	1.06	0.51	0.98	0.50	1.10

Subscore Reliabilities and SEM for Science by Gender/Economic Status									
Subscore Area	N of Items	Male		Female		Not Econ. Dis.		Econ. Dis.	
		Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Integrated/Coordinated Science 1									
1. Biology/Life Sciences	10	0.66	1.40	0.62	1.42	0.65	1.36	0.61	1.44
2. Chemistry	15	0.61	1.78	0.54	1.80	0.60	1.77	0.54	1.80
3. Earth Sciences	17	0.79	1.80	0.73	1.85	0.77	1.77	0.74	1.85
4. Physics	12	0.52	1.61	0.47	1.62	0.51	1.61	0.47	1.61
5. Investigation and Experimentation	6	0.63	1.04	0.57	1.06	0.63	1.00	0.58	1.08
Integrated/Coordinated Science 2									
1. Biology/Life Sciences	15	0.70	1.73	0.66	1.72	0.71	1.68	0.64	1.76
2. Chemistry	6	0.50	1.12	0.51	1.12	0.58	1.09	0.38	1.14
3. Earth Sciences	15	0.76	1.71	0.69	1.77	0.75	1.68	0.69	1.77
4. Physics	18	0.66	1.95	0.65	1.94	0.71	1.95	0.58	1.94
5. Investigation and Experimentation	6	0.46	1.13	0.37	1.14	0.47	1.10	0.33	1.16
Integrated/Coordinated Science 3									
1. Biology/Life Sciences	16	0.74	1.79	0.71	1.80	0.76	1.75	0.65	1.82
2. Chemistry	23	0.74	2.16	0.68	2.18	0.78	2.17	0.60	2.16
3. Earth Sciences	7	0.64	1.17	0.54	1.21	0.61	1.16	0.55	1.21
4. Physics	8	0.49	1.29	0.39	1.29	0.52	1.30	0.33	1.28
5. Investigation and Experimentation	6	0.49	1.11	0.49	1.11	0.51	1.09	0.41	1.13
Integrated/Coordinated Science 4									
1. Biology/Life Sciences	13	0.67	1.63	0.74	1.54	–	–	0.69	1.58
2. Chemistry	10	0.18	1.51	0.33	1.42	–	–	0.33	1.46
3. Earth Sciences	15	0.79	1.69	0.56	1.80	–	–	0.72	1.74
4. Physics	16	0.35	1.78	0.03	1.75	–	–	0.32	1.75
5. Investigation and Experimentation	6	0.68	0.99	0.32	1.11	–	–	0.56	1.02

Table 8.B.24 Subscore Reliabilities and SEM for Grade-specific CSTs by Gender/Economic Status

Subscore Reliabilities and SEM for Grade-specific CSTs by Gender/Economic Status									
Subscore Area	N of Items	Male		Female		Not Econ. Dis.		Econ. Dis.	
		Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Algebra I – 8									
1. Number Properties, Operations, and Linear Equations	17	0.79	1.71	0.78	1.69	0.77	1.61	0.77	1.77
2. Graphing and Systems of Linear Equations	14	0.78	1.63	0.77	1.62	0.78	1.57	0.76	1.66
3. Quadratics and Polynomials	21	0.82	1.98	0.80	1.97	0.81	1.92	0.79	2.01
4. Functions and Rational Expressions	13	0.70	1.61	0.70	1.60	0.73	1.59	0.65	1.62
Geometry – 9									
1. Logic and Geometric Proofs	23	0.82	1.95	0.80	1.98	0.79	1.88	0.78	2.07
2. Volume and Area Formulas	11	0.75	1.39	0.74	1.39	0.73	1.34	0.72	1.44
3. Angle Relationships, Constructions, and Lines	16	0.75	1.70	0.72	1.73	0.73	1.66	0.70	1.77
4. Trigonometry	15	0.76	1.62	0.74	1.64	0.73	1.57	0.72	1.70
Algebra II – 10									
1. Polynomials and Rational Expressions	19	0.78	1.78	0.77	1.78	0.76	1.75	0.78	1.82
2. Quadratics, Conics, and Complex Numbers	16	0.74	1.76	0.74	1.76	0.74	1.75	0.72	1.77
3. Exponents and Logarithms	16	0.76	1.75	0.73	1.75	0.74	1.73	0.73	1.78
4. Series, Combinatorics, and Probability and Statistics	14	0.69	1.64	0.65	1.64	0.66	1.63	0.65	1.65
Summative High School Mathematics – 11									
1. Algebra I	18	0.78	1.62	0.77	1.68	0.77	1.60	0.76	1.74
2. Geometry	19	0.79	1.70	0.78	1.79	0.77	1.68	0.78	1.86
3. Algebra II	23	0.85	1.87	0.83	1.96	0.84	1.86	0.83	2.02
4. Probability and Statistics	5	0.54	0.90	0.50	0.96	0.51	0.90	0.48	0.98

Subscore Reliabilities and SEM for Grade-specific CSTs by Gender/Economic Status									
Subscore Area	N of	Male		Female		Not Econ. Dis.		Econ. Dis.	
	Items	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
World History – 10									
1. Development of Modern Political Thought	13	0.70	1.56	0.62	1.58	0.66	1.51	0.63	1.61
2. Industrial Expansion and Imperialism	10	0.71	1.29	0.64	1.36	0.65	1.26	0.66	1.38
3. Causes and Effects of World War I	14	0.79	1.54	0.73	1.63	0.76	1.50	0.74	1.65
4. Causes and Effects of World War II	13	0.77	1.50	0.69	1.59	0.74	1.47	0.70	1.61
5. International Developments in the Post-World War II Era	10	0.74	1.31	0.65	1.37	0.70	1.28	0.68	1.39

Table 8.B.25 Subscore Reliabilities and SEM for ELA by Special Services/English Fluency

Subscore Reliabilities and SEM for ELA by Special Services/English Fluency													
Subscore Area	N of	No Spec. Serv.		Spec. Serv.		Eng. Only		Ini. Fluent		Learner		Red. Fluent	
	Items	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Grade 2													
1. Word Analysis and Vocabulary Development	22	0.84	1.82	0.86	2.03	0.85	1.79	0.80	1.54	0.84	1.94	0.71	1.56
2. Reading Comprehension	15	0.78	1.62	0.78	1.71	0.79	1.58	0.75	1.42	0.75	1.71	0.65	1.46
3. Literary Response and Analysis	6	0.66	0.86	0.67	1.04	0.67	0.83	0.58	0.68	0.64	0.98	0.40	0.68
4. Written and Oral Language Conventions	14	0.81	1.47	0.81	1.62	0.82	1.45	0.78	1.24	0.80	1.55	0.70	1.23
5. Writing Strategies	8	0.66	1.23	0.62	1.27	0.67	1.21	0.64	1.10	0.61	1.27	0.53	1.13
Grade 3													
1. Word Analysis and Vocabulary Development	20	0.80	1.74	0.82	1.89	0.80	1.69	0.76	1.51	0.76	1.91	0.61	1.55
2. Reading Comprehension	15	0.74	1.57	0.78	1.67	0.73	1.53	0.66	1.40	0.72	1.70	0.50	1.44
3. Literary Response and Analysis	8	0.67	1.03	0.70	1.15	0.67	0.98	0.59	0.84	0.63	1.17	0.41	0.88
4. Written and Oral Language Conventions	13	0.72	1.53	0.72	1.59	0.72	1.51	0.71	1.40	0.67	1.60	0.60	1.42
5. Writing Strategies	9	0.69	1.26	0.70	1.33	0.69	1.23	0.65	1.11	0.63	1.36	0.52	1.15
Grade 4													
1. Word Analysis and Vocabulary Development	18	0.85	1.53	0.86	1.69	0.84	1.46	0.80	1.28	0.80	1.82	0.67	1.36
2. Reading Comprehension	15	0.79	1.61	0.79	1.67	0.79	1.58	0.76	1.47	0.70	1.73	0.67	1.55
3. Literary Response and Analysis	9	0.68	1.25	0.69	1.31	0.68	1.21	0.65	1.09	0.56	1.39	0.54	1.18
4. Written and Oral Language Conventions	18	0.79	1.70	0.80	1.82	0.79	1.67	0.76	1.52	0.74	1.88	0.64	1.57
5. Writing Strategies	15	0.76	1.68	0.76	1.72	0.77	1.66	0.76	1.55	0.63	1.78	0.65	1.64
Grade 5													
1. Word Analysis and Vocabulary Development	14	0.76	1.41	0.78	1.53	0.75	1.36	0.70	1.25	0.67	1.63	0.61	1.36
2. Reading Comprehension	16	0.75	1.67	0.76	1.75	0.75	1.63	0.71	1.54	0.63	1.83	0.62	1.65
3. Literary Response and Analysis	12	0.75	1.34	0.76	1.45	0.74	1.29	0.70	1.17	0.65	1.55	0.60	1.29
4. Written and Oral Language Conventions	17	0.74	1.55	0.77	1.70	0.74	1.52	0.69	1.37	0.71	1.75	0.58	1.43
5. Writing Strategies	16	0.74	1.63	0.75	1.75	0.74	1.60	0.69	1.47	0.66	1.82	0.58	1.58

Subscore Reliabilities and SEM for ELA by Special Services/English Fluency

Subscore Area	N of Items	No Spec. Serv.		Spec. Serv.		Eng. Only		Ini. Fluent		Learner		Red. Fluent	
		Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Grade 6													
1. Word Analysis and Vocabulary Development	13	0.76	1.33	0.76	1.50	0.75	1.28	0.72	1.17	0.66	1.60	0.62	1.29
2. Reading Comprehension	17	0.74	1.76	0.73	1.85	0.73	1.73	0.71	1.63	0.60	1.91	0.64	1.76
3. Literary Response and Analysis	12	0.70	1.37	0.72	1.48	0.69	1.33	0.64	1.26	0.62	1.57	0.56	1.36
4. Written and Oral Language Conventions	16	0.72	1.55	0.75	1.71	0.72	1.51	0.69	1.40	0.67	1.78	0.58	1.49
5. Writing Strategies	17	0.75	1.80	0.75	1.86	0.75	1.77	0.73	1.70	0.62	1.90	0.67	1.80
Grade 7													
1. Word Analysis and Vocabulary Development	11	0.69	1.30	0.71	1.44	0.69	1.27	0.65	1.17	0.58	1.50	0.55	1.27
2. Reading Comprehension	18	0.80	1.62	0.80	1.81	0.80	1.58	0.77	1.49	0.71	1.89	0.70	1.60
3. Literary Response and Analysis	13	0.69	1.44	0.69	1.59	0.66	1.41	0.63	1.34	0.59	1.65	0.56	1.44
4. Written and Oral Language Conventions	16	0.70	1.67	0.68	1.79	0.71	1.64	0.71	1.56	0.56	1.83	0.60	1.66
5. Writing Strategies	17	0.78	1.75	0.74	1.84	0.78	1.73	0.78	1.66	0.55	1.87	0.70	1.77
Grade 8													
1. Word Analysis and Vocabulary Development	9	0.58	1.25	0.58	1.34	0.56	1.23	0.55	1.19	0.40	1.37	0.46	1.26
2. Reading Comprehension	18	0.75	1.76	0.75	1.88	0.75	1.74	0.73	1.68	0.64	1.92	0.67	1.76
3. Literary Response and Analysis	15	0.74	1.65	0.69	1.76	0.74	1.62	0.74	1.56	0.52	1.79	0.67	1.67
4. Written and Oral Language Conventions	16	0.75	1.56	0.75	1.75	0.75	1.53	0.72	1.45	0.64	1.82	0.63	1.57
5. Writing Strategies	17	0.78	1.74	0.76	1.84	0.79	1.70	0.78	1.65	0.59	1.89	0.71	1.78
Grade 9													
1. Word Analysis and Vocabulary Development	8	0.55	1.08	0.62	1.22	0.56	1.06	0.48	1.03	0.50	1.27	0.39	1.07
2. Reading Comprehension	18	0.80	1.71	0.77	1.91	0.80	1.66	0.78	1.59	0.65	1.97	0.73	1.73
3. Literary Response and Analysis	16	0.75	1.69	0.73	1.79	0.75	1.66	0.73	1.64	0.57	1.82	0.66	1.73
4. Written and Oral Language Conventions	13	0.70	1.52	0.67	1.66	0.71	1.48	0.67	1.44	0.54	1.70	0.57	1.56
5. Writing Strategies	20	0.75	1.87	0.73	2.02	0.75	1.85	0.73	1.79	0.62	2.06	0.67	1.88
Grade 10													
1. Word Analysis and Vocabulary Development	8	0.60	1.17	0.56	1.27	0.61	1.14	0.59	1.10	0.37	1.30	0.49	1.18
2. Reading Comprehension	18	0.82	1.68	0.81	1.89	0.82	1.65	0.80	1.55	0.72	1.94	0.75	1.69
3. Literary Response and Analysis	16	0.71	1.73	0.68	1.85	0.72	1.70	0.70	1.66	0.53	1.89	0.61	1.76
4. Written and Oral Language Conventions	13	0.72	1.44	0.70	1.60	0.73	1.42	0.69	1.35	0.60	1.62	0.61	1.43
5. Writing Strategies	20	0.80	1.83	0.78	1.99	0.81	1.80	0.78	1.73	0.66	2.05	0.72	1.84

Subscore Reliabilities and SEM for ELA by Special Services/English Fluency													
Subscore Area	N of	No Spec. Serv.		Spec. Serv.		Eng. Only		Ini. Fluent		Learner		Red. Fluent	
	Items	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Grade 11													
1. Word Analysis and Vocabulary Development	8	0.59	1.18	0.56	1.29	0.62	1.16	0.60	1.10	0.40	1.33	0.48	1.18
2. Reading Comprehension	19	0.79	1.82	0.75	1.97	0.79	1.79	0.77	1.73	0.62	2.02	0.71	1.83
3. Literary Response and Analysis	17	0.72	1.74	0.71	1.86	0.72	1.71	0.68	1.67	0.57	1.90	0.62	1.75
4. Written and Oral Language Conventions	9	0.69	1.19	0.62	1.34	0.71	1.17	0.69	1.10	0.47	1.37	0.60	1.20
5. Writing Strategies	22	0.82	2.01	0.78	2.14	0.83	1.97	0.81	1.91	0.65	2.19	0.75	2.04

Table 8.B.26 Subscore Reliabilities and SEM for History–Social Science by Special Services/English Fluency

Subscore Reliabilities and SEM for History–Social Science by Special Services/English Fluency													
Subscore Area	N of	No Spec. Serv.		Spec. Serv.		Eng. Only		Ini. Fluent		Learner		Red. Fluent	
	Items	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Grade 8													
1. World History and Geography: Ancient Civilizations	16	0.69	1.72	0.66	1.84	0.71	1.70	0.69	1.64	0.55	1.86	0.62	1.74
2. Late Antiquity and the Middle Ages	14	0.72	1.59	0.71	1.69	0.74	1.58	0.72	1.50	0.61	1.72	0.66	1.60
3. Renaissance/Reformation	10	0.66	1.31	0.64	1.44	0.69	1.29	0.65	1.23	0.53	1.47	0.57	1.31
4. U.S. Constitution and the Early Republic	22	0.82	1.97	0.77	2.13	0.84	1.95	0.82	1.88	0.70	2.16	0.77	2.00
5. Civil War and Its Aftermath	13	0.78	1.47	0.73	1.61	0.80	1.44	0.78	1.38	0.64	1.65	0.73	1.49
World History													
1. Development of Modern Political Thought	13	0.66	1.56	0.63	1.65	0.68	1.55	0.66	1.50	0.52	1.67	0.58	1.57
2. Industrial Expansion and Imperialism	10	0.67	1.31	0.66	1.42	0.69	1.30	0.66	1.26	0.59	1.45	0.61	1.33
3. Causes and Effects of World War I	14	0.77	1.57	0.73	1.69	0.78	1.55	0.76	1.50	0.65	1.73	0.73	1.59
4. Causes and Effects of World War II	13	0.74	1.53	0.71	1.63	0.76	1.51	0.74	1.47	0.61	1.67	0.68	1.56
5. International Developments in the Post-World War II Era	10	0.70	1.33	0.66	1.41	0.72	1.32	0.70	1.28	0.57	1.44	0.64	1.35
Grade 11 (U.S. History)													
1. Foundations of American Political and Social Thought	10	0.65	1.33	0.57	1.44	0.67	1.32	0.64	1.28	0.45	1.45	0.57	1.35
2. Industrialization and the U.S. Role as a World Power	13	0.73	1.50	0.68	1.63	0.74	1.48	0.71	1.43	0.60	1.65	0.66	1.51
3. United States between the World Wars	12	0.68	1.48	0.67	1.56	0.70	1.47	0.67	1.43	0.56	1.59	0.60	1.49
4. World War II and Foreign Affairs	12	0.72	1.45	0.70	1.55	0.73	1.44	0.70	1.40	0.62	1.58	0.68	1.45
5. Post-World War II Domestic Affairs	13	0.71	1.54	0.67	1.64	0.73	1.52	0.70	1.49	0.53	1.67	0.63	1.56

Table 8.B.27 Subscore Reliabilities and SEM for Mathematics by Special Services/English Fluency

Subscore Reliabilities and SEM for Mathematics by Special Services/English Fluency													
Subscore Area	N of	No Spec. Serv.		Spec. Serv.		Eng. Only		Ini. Fluent		Learner		Red. Fluent	
	Items	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Grade 2													
1. Number Sense: Place Value, Addition, and Subtraction	15	0.79	1.34	0.85	1.56	0.80	1.32	0.72	1.12	0.80	1.44	0.65	1.09
2. Number Sense: Multiplication, Division, and Fractions	23	0.84	1.74	0.88	2.00	0.85	1.71	0.80	1.44	0.85	1.86	0.74	1.42
3. Algebra and Functions	6	0.62	0.89	0.64	1.03	0.64	0.88	0.59	0.71	0.61	0.95	0.51	0.71
4. Measurement and Geometry	14	0.66	1.45	0.74	1.62	0.68	1.43	0.60	1.28	0.67	1.53	0.53	1.28
5. Statistics, Data Analysis and Probability	7	0.57	0.90	0.67	1.06	0.61	0.89	0.49	0.74	0.59	0.96	0.43	0.73
Grade 3													
1. Number Sense: Place Value, Fractions, and Decimals	16	0.79	1.35	0.82	1.49	0.79	1.33	0.75	1.16	0.78	1.47	0.65	1.15
2. Number Sense: Addition, Subtraction, Multiplication, and Division	16	0.83	1.39	0.84	1.57	0.83	1.39	0.81	1.15	0.82	1.50	0.75	1.13
3. Algebra and Functions	12	0.78	1.27	0.77	1.42	0.78	1.24	0.76	1.05	0.74	1.41	0.68	1.07
4. Measurement and Geometry	16	0.76	1.34	0.80	1.54	0.77	1.31	0.72	1.10	0.75	1.50	0.64	1.09
5. Statistics, Data Analysis, and Probability	5	0.45	0.72	0.54	0.82	0.46	0.70	0.34	0.59	0.43	0.81	0.22	0.60
Grade 4													
1. Number Sense: Decimals, Fractions, and Negative Numbers	17	0.79	1.38	0.83	1.55	0.79	1.34	0.75	1.17	0.78	1.60	0.67	1.19
2. Number Sense: Operations and Factoring	14	0.83	1.22	0.83	1.42	0.83	1.22	0.81	1.00	0.82	1.41	0.77	0.99
3. Algebra and Functions	18	0.86	1.34	0.87	1.56	0.86	1.32	0.83	1.10	0.86	1.57	0.76	1.10
4. Measurement and Geometry	12	0.72	1.32	0.73	1.42	0.73	1.31	0.70	1.17	0.68	1.45	0.63	1.20
5. Statistics, Data Analysis, and Probability	4	0.42	0.70	0.46	0.78	0.44	0.69	0.36	0.61	0.37	0.79	0.26	0.64
Grade 5													
1. Number Sense: Estimation, Percents, and Factoring	12	0.78	1.33	0.76	1.43	0.78	1.32	0.79	1.18	0.70	1.46	0.75	1.26
2. Number Sense: Operations with Fractions and Decimals	17	0.83	1.60	0.81	1.74	0.83	1.59	0.83	1.42	0.78	1.78	0.80	1.49
3. Algebra and Functions	17	0.80	1.53	0.81	1.70	0.81	1.51	0.79	1.33	0.76	1.75	0.73	1.42
4. Measurement and Geometry	15	0.79	1.51	0.78	1.60	0.79	1.50	0.79	1.37	0.72	1.63	0.74	1.44
5. Statistics, Data Analysis, and Probability	4	0.53	0.64	0.55	0.75	0.54	0.62	0.49	0.51	0.47	0.79	0.38	0.55
Grade 6													
1. Number Sense: Ratios, Proportions, Percentages, and Negative Fractions	15	0.77	1.58	0.75	1.68	0.77	1.57	0.79	1.44	0.68	1.72	0.73	1.55
2. Number Sense: Operations and Problem Solving with Fractions	10	0.70	1.26	0.69	1.37	0.70	1.24	0.71	1.13	0.62	1.40	0.65	1.23
3. Algebra and Functions	19	0.84	1.70	0.83	1.87	0.84	1.67	0.85	1.50	0.77	1.94	0.80	1.65
4. Measurement and Geometry	10	0.73	1.31	0.68	1.39	0.73	1.30	0.75	1.20	0.62	1.42	0.70	1.30
5. Statistics, Data Analysis, and Probability	11	0.73	1.36	0.70	1.46	0.73	1.34	0.74	1.25	0.59	1.50	0.67	1.34

Subscore Reliabilities and SEM for Mathematics by Special Services/English Fluency													
Subscore Area	N of	No Spec. Serv.		Spec. Serv.		Eng. Only		Ini. Fluent		Learner		Red. Fluent	
	Items	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Grade 7													
1. Number Sense: Rational Numbers	14	0.76	1.58	0.72	1.66	0.76	1.57	0.76	1.50	0.66	1.68	0.72	1.56
2. Number Sense: Exponent, Powers and Roots	8	0.68	1.24	0.63	1.26	0.68	1.24	0.70	1.19	0.59	1.27	0.66	1.24
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	10	0.64	1.38	0.61	1.44	0.64	1.37	0.65	1.31	0.54	1.46	0.58	1.37
4. Algebra and Functions: Multistep Problems, Graphing and Functions	15	0.75	1.64	0.72	1.74	0.75	1.63	0.75	1.56	0.64	1.78	0.69	1.63
5. Measurement and Geometry	13	0.72	1.53	0.68	1.62	0.72	1.51	0.72	1.46	0.60	1.65	0.66	1.51
6. Statistics, Data Analysis, and Probability	5	0.58	0.88	0.56	0.97	0.58	0.88	0.56	0.83	0.52	0.98	0.52	0.85
General Mathematics													
1. Number Sense: Rational Numbers	14	0.72	1.64	0.65	1.67	0.74	1.65	0.74	1.63	0.69	1.67	0.71	1.63
2. Number Sense: Exponent, Powers and Roots	10	0.68	1.42	0.54	1.40	0.69	1.41	0.70	1.40	0.58	1.41	0.67	1.42
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	11	0.59	1.51	0.51	1.52	0.62	1.51	0.60	1.50	0.53	1.52	0.55	1.50
4. Algebra and Functions: Multistep Problems, Graphing and Functions	10	0.61	1.39	0.53	1.45	0.64	1.40	0.62	1.38	0.54	1.45	0.57	1.38
5. Measurement and Geometry	11	0.65	1.51	0.48	1.47	0.67	1.50	0.66	1.51	0.46	1.49	0.61	1.52
6. Statistics, Data Analysis, and Probability	9	0.59	1.30	0.49	1.36	0.62	1.31	0.60	1.29	0.46	1.35	0.53	1.28
Algebra I													
1. Number Properties, Operations, and Linear Equations	17	0.79	1.76	0.72	1.87	0.79	1.75	0.81	1.68	0.69	1.88	0.77	1.75
2. Graphing and Systems of Linear Equations	14	0.77	1.65	0.66	1.68	0.78	1.65	0.81	1.60	0.63	1.69	0.77	1.65
3. Quadratics and Polynomials	21	0.81	2.01	0.72	2.05	0.81	2.01	0.85	1.94	0.70	2.05	0.80	2.00
4. Functions and Rational Expressions	13	0.68	1.61	0.50	1.59	0.68	1.61	0.75	1.58	0.49	1.59	0.67	1.61
Geometry													
1. Logic and Geometric Proofs	23	0.82	2.05	0.77	2.15	0.82	2.03	0.85	1.96	0.72	2.17	0.80	2.09
2. Volume and Area Formulas	11	0.75	1.43	0.64	1.46	0.75	1.43	0.79	1.36	0.59	1.45	0.73	1.44
3. Angle Relationships, Constructions, and Lines	16	0.75	1.76	0.67	1.81	0.75	1.75	0.79	1.70	0.60	1.81	0.72	1.77
4. Trigonometry	15	0.77	1.68	0.69	1.73	0.77	1.67	0.79	1.62	0.65	1.74	0.74	1.70
Algebra II													
1. Polynomials and Rational Expressions	19	0.79	1.81	0.79	1.90	0.78	1.81	0.82	1.73	0.80	1.89	0.79	1.81
2. Quadratics, Conics, and Complex Numbers	16	0.75	1.76	0.69	1.76	0.74	1.77	0.80	1.72	0.70	1.76	0.74	1.76
3. Exponents and Logarithms	16	0.76	1.76	0.73	1.79	0.75	1.76	0.79	1.71	0.73	1.78	0.74	1.77
4. Series, Combinatorics, and Probability and Statistics	14	0.69	1.64	0.63	1.63	0.68	1.64	0.73	1.61	0.62	1.63	0.67	1.64

Subscore Reliabilities and SEM for Mathematics by Special Services/English Fluency													
Subscore Area	N of	No Spec. Serv.		Spec. Serv.		Eng. Only		Ini. Fluent		Learner		Red. Fluent	
	Items	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Summative High School Mathematics													
1. Algebra I	18	0.78	1.61	0.84	1.73	0.77	1.62	0.78	1.48	0.83	1.74	0.78	1.65
2. Geometry	19	0.79	1.71	0.85	1.81	0.78	1.70	0.79	1.60	0.85	1.85	0.79	1.78
3. Algebra II	23	0.85	1.87	0.88	1.97	0.84	1.87	0.85	1.73	0.87	2.02	0.84	1.92
4. Probability and Statistics	5	0.53	0.92	0.63	0.93	0.51	0.90	0.53	0.88	0.52	0.98	0.51	0.95
Integrated Mathematics 1													
1. Algebra I: Number Properties, Operations, and Linear Equations	15	0.72	1.71	0.63	1.78	0.74	1.70	0.73	1.70	0.62	1.78	0.68	1.72
2. Algebra I: Graphing	9	0.54	1.38	0.41	1.37	0.56	1.37	0.53	1.38	0.42	1.38	0.50	1.39
3. Algebra I: Quadratics and Polynomials	14	0.61	1.66	0.47	1.65	0.63	1.66	0.58	1.67	0.49	1.65	0.57	1.67
4. Algebra I: Functions and Relations Expressions	7	0.53	1.15	0.30	1.15	0.55	1.15	0.54	1.15	0.41	1.16	0.49	1.17
5. Geometry	20	0.52	1.98	0.33	1.94	0.57	1.99	0.50	2.01	0.18	1.94	0.41	1.97
Integrated Mathematics 2													
1. Algebra I	20	0.67	2.04	0.61	2.01	0.68	2.03	0.64	2.05	0.60	2.02	0.64	2.04
2. Geometry: Logic and Geometric Proofs	22	0.71	2.12	0.59	2.10	0.73	2.11	0.74	2.10	0.52	2.12	0.68	2.13
3. Geometry: Angle Relationships, Construction and Lines	8	0.50	1.27	0.37	1.29	0.52	1.27	0.54	1.27	0.40	1.29	0.44	1.28
4. Trigonometry	10	0.57	1.43	0.38	1.42	0.58	1.42	0.54	1.42	0.37	1.44	0.56	1.43
5. Algebra II: Probability and Statistics	5	0.26	0.97	0.29	0.95	0.30	0.98	0.13	0.96	0.04	0.96	0.22	0.94
Integrated Mathematics 3													
1. Geometry	5	0.40	0.97	0.38	1.02	0.39	0.98	0.42	0.97	–	–	0.36	0.97
2. Algebra II: Polynomials and Relations Expressions	19	0.81	1.87	0.84	1.87	0.81	1.88	0.84	1.84	–	–	0.80	1.86
3. Algebra II: Quadratics, Conics, and Complex Numbers	16	0.74	1.78	0.82	1.70	0.76	1.77	0.79	1.72	–	–	0.71	1.77
4. Algebra II: Exponents and Logarithms	16	0.78	1.76	0.81	1.72	0.79	1.75	0.83	1.73	–	–	0.76	1.77
5. Algebra II: Series, Combinatorics, Probability and Statistics	9	0.44	1.33	0.48	1.31	0.43	1.34	0.60	1.29	–	–	0.43	1.31

Table 8.B.28 Subscore Reliabilities and SEM for Science by Special Services/English Fluency

Subscore Reliabilities and SEM for Science by Special Services/English Fluency													
Subscore Area	N of	No Spec. Serv.		Spec. Serv.		Eng. Only		Ini. Fluent		Learner		Red. Fluent	
	Items	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Grade 5 Science													
1. Physical Science (Grade 5)	11	0.66	1.30	0.71	1.40	0.65	1.25	0.60	1.14	0.59	1.50	0.50	1.27
2. Physical Science (Grade 4)	8	0.61	1.09	0.65	1.17	0.61	1.06	0.56	0.95	0.55	1.24	0.52	1.04
3. Life Science (Grade 5)	13	0.73	1.48	0.74	1.56	0.73	1.44	0.68	1.32	0.63	1.65	0.62	1.44
4. Life Science (Grade 4)	9	0.69	1.22	0.70	1.28	0.69	1.18	0.66	1.08	0.55	1.36	0.60	1.20
5. Earth Science (Grade 5)	11	0.62	1.36	0.66	1.44	0.63	1.33	0.55	1.26	0.52	1.50	0.46	1.34
6. Earth Science (Grade 4)	8	0.64	1.20	0.64	1.25	0.65	1.18	0.63	1.09	0.49	1.31	0.52	1.19

Subscore Reliabilities and SEM for Science by Special Services/English Fluency													
Subscore Area	N of Items	No Spec. Serv.		Spec. Serv.		Eng. Only		Ini. Fluent		Learner		Red. Fluent	
		Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Grade 8 Science													
1. Motion	8	0.61	1.18	0.57	1.26	0.61	1.16	0.62	1.11	0.42	1.29	0.54	1.19
2. Forces, Density, and Buoyancy	13	0.71	1.42	0.72	1.57	0.71	1.39	0.69	1.33	0.62	1.64	0.62	1.43
3. Structure of Matter and Periodic Table	16	0.77	1.59	0.76	1.75	0.77	1.56	0.76	1.48	0.66	1.82	0.71	1.60
4. Earth in the Solar System	7	0.57	1.03	0.61	1.12	0.57	1.01	0.54	0.95	0.51	1.17	0.49	1.03
5. Reactions and the Chemistry of Living Systems	10	0.69	1.30	0.68	1.41	0.69	1.27	0.67	1.21	0.57	1.46	0.60	1.32
6. Investigation and Experimentation	6	0.59	0.88	0.61	1.04	0.60	0.87	0.57	0.79	0.51	1.08	0.49	0.86
Grade 10 Life Science													
1. Cell Biology	10	0.70	1.34	0.65	1.42	0.70	1.32	0.71	1.27	0.50	1.46	0.66	1.36
2. Genetics	12	0.71	1.49	0.64	1.55	0.72	1.48	0.72	1.43	0.52	1.59	0.66	1.50
3. Physiology	10	0.71	1.23	0.72	1.38	0.72	1.19	0.69	1.14	0.58	1.45	0.62	1.24
4. Ecology	11	0.75	1.31	0.74	1.44	0.76	1.28	0.73	1.24	0.61	1.49	0.68	1.34
5. Evolution	11	0.76	1.35	0.71	1.48	0.77	1.31	0.76	1.27	0.54	1.52	0.70	1.39
6. Investigation and Experimentation	6	0.56	0.93	0.58	1.05	0.59	0.90	0.53	0.87	0.45	1.10	0.45	0.95
Biology													
1. Cell Biology	9	0.65	1.30	0.55	1.35	0.66	1.29	0.68	1.25	0.46	1.36	0.60	1.33
2. Genetics	18	0.78	1.77	0.72	1.92	0.80	1.76	0.79	1.69	0.65	1.92	0.74	1.78
3. Ecology and Evolution	16	0.78	1.71	0.69	1.82	0.79	1.68	0.79	1.63	0.58	1.85	0.73	1.75
4. Physiology	11	0.74	1.36	0.69	1.48	0.75	1.34	0.74	1.29	0.59	1.50	0.69	1.38
5. Investigation and Experimentation	6	0.52	1.03	0.47	1.09	0.54	1.02	0.50	1.00	0.33	1.11	0.42	1.05
Chemistry													
1. Atomic and Molecular Structure	8	0.44	1.22	0.46	1.29	0.43	1.21	0.47	1.18	0.38	1.31	0.42	1.23
2. Chemical Bonds, Biochemistry	9	0.57	1.28	0.61	1.37	0.57	1.26	0.58	1.22	0.49	1.40	0.53	1.31
3. Kinetics, Thermodynamics	14	0.70	1.67	0.70	1.72	0.69	1.64	0.71	1.61	0.58	1.75	0.66	1.72
4. Chemical Reactions	13	0.72	1.60	0.66	1.63	0.72	1.58	0.75	1.55	0.53	1.64	0.68	1.63
5. Conservation of Matter and Stoichiometry	10	0.72	1.36	0.64	1.43	0.72	1.35	0.75	1.29	0.61	1.44	0.70	1.39
6. Investigation and Experimentation	6	0.63	0.90	0.65	1.06	0.63	0.87	0.62	0.83	0.51	1.12	0.57	0.95
Earth Science													
1. Astronomy and Cosmology	12	0.64	1.56	0.61	1.59	0.66	1.54	0.62	1.54	0.50	1.61	0.60	1.56
2. Solid Earth	14	0.64	1.68	0.64	1.73	0.67	1.67	0.62	1.65	0.56	1.74	0.56	1.68
3. The Earth's Energy	28	0.84	2.36	0.81	2.42	0.85	2.33	0.83	2.33	0.73	2.46	0.80	2.39
4. Investigation and Experimentation	6	0.60	1.00	0.56	1.09	0.63	0.99	0.57	0.98	0.47	1.12	0.50	1.00
Physics													
1. Motion and Forces	12	0.71	1.47	0.73	1.53	0.71	1.44	0.71	1.42	0.61	1.58	0.67	1.52
2. Conservation of Energy and Momentum	12	0.75	1.44	0.73	1.53	0.75	1.42	0.76	1.39	0.68	1.54	0.73	1.48
3. Heat and Thermodynamics	9	0.68	1.26	0.70	1.32	0.69	1.23	0.68	1.22	0.52	1.36	0.63	1.31
4. Waves	10	0.64	1.35	0.66	1.43	0.64	1.33	0.64	1.31	0.58	1.45	0.60	1.38
5. Electric and Magnetic Phenomena	11	0.64	1.47	0.61	1.52	0.64	1.47	0.66	1.44	0.55	1.53	0.62	1.49
6. Investigation and Experimentation	6	0.53	1.04	0.58	1.10	0.54	1.01	0.52	1.00	0.36	1.14	0.47	1.08

Subscore Reliabilities and SEM for Science by Special Services/English Fluency													
Subscore Area	N of	No Spec. Serv.		Spec. Serv.		Eng. Only		Ini. Fluent		Learner		Red. Fluent	
	Items	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Integrated/Coordinated Science 1													
1. Biology/Life Sciences	8	0.63	1.40	0.55	1.47	0.65	1.39	0.62	1.37	0.49	1.48	0.56	1.42
2. Chemistry	13	0.57	1.79	0.47	1.78	0.59	1.78	0.61	1.77	0.44	1.79	0.50	1.80
3. Earth Sciences	9	0.75	1.82	0.72	1.88	0.77	1.80	0.74	1.77	0.66	1.90	0.69	1.83
4. Physics	11	0.49	1.61	0.37	1.59	0.50	1.61	0.52	1.60	0.36	1.60	0.47	1.62
5. Investigation and Experimentation	8	0.60	1.04	0.47	1.12	0.62	1.03	0.60	1.00	0.41	1.13	0.54	1.05
Integrated/Coordinated Science 2													
1. Biology/Life Sciences	15	0.66	1.72	0.59	1.79	0.68	1.72	0.69	1.62	0.49	1.82	0.63	1.70
2. Chemistry	6	0.51	1.12	0.30	1.12	0.51	1.12	0.53	1.10	0.35	1.10	0.45	1.14
3. Earth Sciences	15	0.72	1.73	0.64	1.79	0.74	1.72	0.73	1.64	0.51	1.82	0.69	1.74
4. Physics	18	0.66	1.95	0.35	1.90	0.65	1.95	0.78	1.91	0.38	1.92	0.63	1.97
5. Investigation and Experimentation	6	0.41	1.14	0.23	1.14	0.42	1.13	0.53	1.07	0.18	1.15	0.32	1.16
Integrated/Coordinated Science 3													
1. Biology/Life Sciences	16	0.73	1.78	0.62	1.82	0.76	1.77	0.66	1.82	0.48	1.83	0.61	1.81
2. Chemistry	23	0.74	2.18	0.41	2.13	0.75	2.16	0.69	2.18	0.55	2.16	0.66	2.18
3. Earth Sciences	7	0.61	1.18	0.44	1.21	0.64	1.16	0.60	1.19	0.46	1.20	0.42	1.24
4. Physics	8	0.45	1.30	0.31	1.24	0.52	1.29	0.35	1.29	0.16	1.27	0.34	1.31
5. Investigation and Experimentation	6	0.48	1.11	0.39	1.11	0.54	1.09	0.04	1.17	0.30	1.12	0.34	1.14
Integrated/Coordinated Science 4													
1. Biology/Life Sciences	13	0.67	1.59	–	–	0.70	1.60	–	–	–	–	–	–
2. Chemistry	10	0.22	1.48	–	–	0.23	1.49	–	–	–	–	–	–
3. Earth Sciences	15	0.72	1.74	–	–	0.77	1.69	–	–	–	–	–	–
4. Physics	16	0.33	1.79	–	–	0.39	1.75	–	–	–	–	–	–
5. Investigation and Experimentation	6	0.62	1.04	–	–	0.58	1.07	–	–	–	–	–	–

Table 8.B.29 Subscore Reliabilities and SEM for Grade-specific CSTs by Special Services/English Fluency

Subscore Reliabilities and SEM for Grade-specific CSTs by Special Services/English Fluency													
Subscore Area	N of	No Spec. Serv.		Spec. Serv.		Eng. Only		Ini. Fluent		Learner		Red. Fluent	
	Items	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Algebra I – 8													
1. Number Properties, Operations, and Linear Equations	17	0.78	1.70	0.76	1.83	0.78	1.69	0.79	1.63	0.73	1.85	0.76	1.71
2. Graphing and Systems of Linear Equations	14	0.78	1.62	0.75	1.67	0.78	1.62	0.80	1.57	0.71	1.68	0.77	1.63
3. Quadratics and Polynomials	21	0.81	1.97	0.79	2.03	0.81	1.97	0.83	1.92	0.77	2.04	0.80	1.97
4. Functions and Rational Expressions	13	0.70	1.61	0.64	1.61	0.70	1.61	0.75	1.58	0.61	1.60	0.69	1.61
Geometry – 9													
1. Logic and Geometric Proofs	23	0.81	1.97	0.84	2.07	0.80	1.93	0.82	1.92	0.81	2.13	0.79	2.04
2. Volume and Area Formulas	11	0.75	1.39	0.76	1.43	0.73	1.38	0.77	1.34	0.74	1.43	0.73	1.42
3. Angle Relationships, Constructions, and Lines	16	0.74	1.71	0.76	1.76	0.73	1.70	0.76	1.68	0.73	1.79	0.72	1.75
4. Trigonometry	15	0.75	1.63	0.78	1.68	0.74	1.61	0.76	1.59	0.75	1.71	0.73	1.67

Subscore Reliabilities and SEM for Grade-specific CSTs by Special Services/English Fluency													
Subscore Area	N of	No Spec. Serv.		Spec. Serv.		Eng. Only		Ini. Fluent		Learner		Red. Fluent	
	Items	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM	Reliab.	SEM
Algebra II – 10													
1. Polynomials and Rational Expressions	19	0.77	1.78	0.82	1.86	0.76	1.78	0.79	1.73	0.82	1.86	0.78	1.78
2. Quadratics, Conics, and Complex Numbers	16	0.74	1.76	0.76	1.75	0.73	1.77	0.76	1.74	0.75	1.75	0.74	1.76
3. Exponents and Logarithms	16	0.74	1.75	0.78	1.77	0.73	1.75	0.76	1.72	0.77	1.77	0.74	1.76
4. Series, Combinatorics, and Probability and Statistics	14	0.67	1.64	0.69	1.64	0.65	1.64	0.69	1.63	0.67	1.63	0.66	1.64
Summative High School Mathematics – 11													
1. Algebra I	18	0.77	1.66	0.82	1.77	0.77	1.66	0.78	1.54	0.82	1.76	0.77	1.69
2. Geometry	19	0.79	1.75	0.84	1.84	0.77	1.73	0.79	1.66	0.84	1.87	0.78	1.81
3. Algebra II	23	0.84	1.92	0.88	2.01	0.84	1.92	0.85	1.80	0.86	2.05	0.84	1.96
4. Probability and Statistics	5	0.53	0.93	0.61	0.95	0.51	0.92	0.53	0.90	0.51	0.99	0.50	0.97
World History – 10													
1. Development of Modern Political Thought	13	0.64	1.56	0.62	1.65	0.67	1.55	0.64	1.51	0.51	1.67	0.56	1.57
2. Industrial Expansion and Imperialism	10	0.66	1.31	0.66	1.42	0.67	1.30	0.64	1.26	0.58	1.45	0.59	1.34
3. Causes and Effects of World War I	14	0.76	1.58	0.73	1.70	0.77	1.56	0.75	1.51	0.64	1.73	0.71	1.59
4. Causes and Effects of World War II	13	0.73	1.54	0.70	1.64	0.75	1.51	0.73	1.48	0.60	1.68	0.67	1.56
5. International Developments in the Post-World War II Era	10	0.69	1.33	0.65	1.41	0.71	1.32	0.68	1.28	0.56	1.44	0.63	1.35

Table 8.B.30 Subscore Reliabilities and SEM for ELA by Primary Ethnicity

Subscore Reliabilities and SEM for ELA by Primary Ethnicity															
Subscore Area	N of	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
	Items	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 2															
1. Word Analysis and Vocabulary Development	22	0.85	1.94	0.83	1.56	0.83	1.84	0.80	1.64	0.84	1.93	0.86	1.91	0.84	1.73
2. Reading Comprehension	15	0.77	1.68	0.78	1.44	0.75	1.66	0.73	1.53	0.75	1.69	0.77	1.69	0.78	1.52
3. Literary Response and Analysis	6	0.67	0.93	0.62	0.74	0.64	0.88	0.56	0.77	0.66	0.94	0.67	0.93	0.65	0.77
4. Written and Oral Language Conventions	14	0.80	1.57	0.80	1.24	0.79	1.49	0.78	1.31	0.80	1.54	0.81	1.54	0.81	1.41
5. Writing Strategies	8	0.63	1.27	0.67	1.12	0.62	1.25	0.63	1.18	0.62	1.27	0.63	1.27	0.66	1.18
Grade 3															
1. Word Analysis and Vocabulary Development	20	0.80	1.86	0.79	1.50	0.77	1.77	0.75	1.58	0.79	1.84	0.80	1.82	0.79	1.62
2. Reading Comprehension	15	0.74	1.64	0.71	1.43	0.71	1.61	0.67	1.48	0.73	1.64	0.74	1.64	0.71	1.46
3. Literary Response and Analysis	8	0.67	1.11	0.67	0.89	0.63	1.06	0.60	0.95	0.66	1.11	0.68	1.10	0.64	0.92
4. Written and Oral Language Conventions	13	0.69	1.60	0.74	1.37	0.71	1.55	0.68	1.45	0.69	1.57	0.71	1.57	0.70	1.48
5. Writing Strategies	9	0.65	1.34	0.70	1.11	0.66	1.30	0.64	1.19	0.66	1.32	0.67	1.32	0.67	1.18

Subscore Reliabilities and SEM for ELA by Primary Ethnicity

Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 4															
1. Word Analysis and Vocabulary Development	18	0.86	1.64	0.84	1.28	0.82	1.57	0.79	1.37	0.84	1.66	0.85	1.63	0.83	1.36
2. Reading Comprehension	15	0.79	1.66	0.78	1.47	0.76	1.66	0.74	1.56	0.77	1.67	0.77	1.68	0.77	1.52
3. Literary Response and Analysis	9	0.66	1.30	0.68	1.09	0.63	1.28	0.65	1.18	0.64	1.31	0.65	1.32	0.66	1.16
4. Written and Oral Language Conventions	18	0.80	1.79	0.78	1.49	0.78	1.73	0.74	1.59	0.78	1.79	0.79	1.79	0.78	1.61
5. Writing Strategies	15	0.75	1.72	0.78	1.52	0.73	1.71	0.74	1.62	0.72	1.74	0.73	1.73	0.76	1.62
Grade 5															
1. Word Analysis and Vocabulary Development	14	0.75	1.49	0.78	1.28	0.73	1.44	0.71	1.34	0.74	1.50	0.74	1.49	0.72	1.29
2. Reading Comprehension	16	0.76	1.73	0.75	1.53	0.73	1.73	0.70	1.63	0.72	1.75	0.73	1.76	0.73	1.56
3. Literary Response and Analysis	12	0.75	1.41	0.75	1.16	0.72	1.38	0.70	1.25	0.73	1.43	0.74	1.43	0.72	1.21
4. Written and Oral Language Conventions	17	0.77	1.66	0.73	1.31	0.74	1.55	0.68	1.41	0.73	1.63	0.76	1.62	0.73	1.48
5. Writing Strategies	16	0.74	1.72	0.74	1.45	0.71	1.67	0.69	1.54	0.72	1.71	0.73	1.71	0.72	1.54
Grade 6															
1. Word Analysis and Vocabulary Development	13	0.75	1.41	0.77	1.14	0.74	1.37	0.69	1.23	0.74	1.42	0.75	1.43	0.73	1.21
2. Reading Comprehension	17	0.71	1.83	0.75	1.58	0.71	1.80	0.69	1.67	0.71	1.84	0.71	1.84	0.71	1.68
3. Literary Response and Analysis	12	0.70	1.42	0.69	1.24	0.67	1.41	0.61	1.30	0.68	1.44	0.70	1.43	0.66	1.27
4. Written and Oral Language Conventions	16	0.72	1.63	0.71	1.33	0.69	1.59	0.65	1.44	0.70	1.63	0.73	1.64	0.70	1.46
5. Writing Strategies	17	0.74	1.85	0.76	1.66	0.73	1.84	0.70	1.76	0.73	1.85	0.74	1.85	0.73	1.73
Grade 7															
1. Word Analysis and Vocabulary Development	11	0.71	1.36	0.70	1.13	0.65	1.37	0.62	1.22	0.67	1.36	0.69	1.39	0.67	1.21
2. Reading Comprehension	18	0.80	1.70	0.78	1.42	0.78	1.68	0.74	1.51	0.78	1.72	0.80	1.74	0.78	1.51
3. Literary Response and Analysis	13	0.68	1.50	0.68	1.29	0.66	1.48	0.63	1.37	0.67	1.52	0.69	1.52	0.63	1.36
4. Written and Oral Language Conventions	16	0.68	1.74	0.72	1.45	0.67	1.69	0.67	1.54	0.65	1.74	0.68	1.74	0.69	1.60
5. Writing Strategies	17	0.75	1.80	0.80	1.57	0.75	1.80	0.75	1.70	0.73	1.82	0.74	1.82	0.77	1.68
Grade 8															
1. Word Analysis and Vocabulary Development	9	0.54	1.28	0.64	1.13	0.54	1.28	0.51	1.22	0.53	1.30	0.53	1.31	0.54	1.19
2. Reading Comprehension	18	0.75	1.81	0.74	1.60	0.72	1.81	0.70	1.69	0.73	1.82	0.74	1.84	0.73	1.70
3. Literary Response and Analysis	15	0.72	1.71	0.75	1.49	0.70	1.69	0.71	1.58	0.70	1.71	0.70	1.72	0.73	1.57
4. Written and Oral Language Conventions	16	0.76	1.63	0.73	1.38	0.73	1.61	0.67	1.46	0.73	1.65	0.76	1.65	0.74	1.47
5. Writing Strategies	17	0.78	1.78	0.80	1.56	0.76	1.79	0.75	1.67	0.75	1.82	0.76	1.81	0.78	1.63
Grade 9															
1. Word Analysis and Vocabulary Development	8	0.59	1.12	0.56	1.00	0.53	1.12	0.41	1.03	0.54	1.13	0.59	1.14	0.53	1.02
2. Reading Comprehension	18	0.80	1.76	0.81	1.49	0.79	1.77	0.77	1.60	0.78	1.80	0.79	1.82	0.79	1.58
3. Literary Response and Analysis	16	0.75	1.72	0.74	1.56	0.73	1.72	0.70	1.63	0.72	1.76	0.74	1.75	0.73	1.62
4. Written and Oral Language Conventions	13	0.70	1.57	0.72	1.36	0.69	1.57	0.64	1.46	0.66	1.60	0.69	1.61	0.70	1.41
5. Writing Strategies	20	0.75	1.92	0.74	1.72	0.75	1.90	0.69	1.78	0.74	1.94	0.76	1.95	0.74	1.80

Subscore Reliabilities and SEM for ELA by Primary Ethnicity															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 10															
1. Word Analysis and Vocabulary Development	8	0.61	1.19	0.62	1.05	0.59	1.20	0.55	1.11	0.56	1.22	0.60	1.22	0.58	1.10
2. Reading Comprehension	18	0.82	1.75	0.81	1.47	0.81	1.75	0.77	1.58	0.81	1.78	0.82	1.80	0.81	1.58
3. Literary Response and Analysis	16	0.72	1.76	0.72	1.60	0.67	1.79	0.65	1.69	0.68	1.80	0.70	1.80	0.71	1.66
4. Written and Oral Language Conventions	13	0.73	1.49	0.70	1.29	0.70	1.48	0.63	1.35	0.71	1.50	0.74	1.52	0.71	1.38
5. Writing Strategies	20	0.81	1.88	0.81	1.66	0.80	1.89	0.76	1.76	0.79	1.90	0.80	1.93	0.79	1.74
Grade 11															
1. Word Analysis and Vocabulary Development	8	0.60	1.21	0.64	1.07	0.56	1.23	0.53	1.13	0.54	1.24	0.57	1.24	0.62	1.12
2. Reading Comprehension	19	0.78	1.86	0.79	1.67	0.76	1.87	0.72	1.77	0.76	1.90	0.78	1.90	0.79	1.74
3. Literary Response and Analysis	17	0.72	1.76	0.72	1.63	0.70	1.78	0.64	1.69	0.70	1.80	0.72	1.80	0.70	1.66
4. Written and Oral Language Conventions	9	0.68	1.24	0.71	1.04	0.66	1.24	0.62	1.12	0.65	1.26	0.68	1.27	0.71	1.12
5. Writing Strategies	22	0.82	2.05	0.82	1.84	0.81	2.05	0.77	1.96	0.80	2.09	0.82	2.08	0.83	1.92

Table 8.B.31 Subscore Reliabilities and SEM for History–Social Science by Primary Ethnicity

Subscore Reliabilities and SEM for History–Social Science by Primary Ethnicity															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 8															
1. World History and Geography: Ancient Civilizations	16	0.68	1.78	0.73	1.56	0.66	1.76	0.66	1.64	0.67	1.79	0.68	1.80	0.71	1.66
2. Late Antiquity and the Middle Ages	14	0.73	1.65	0.74	1.40	0.71	1.64	0.68	1.51	0.71	1.66	0.72	1.66	0.73	1.53
3. Renaissance/Reformation	10	0.69	1.36	0.67	1.17	0.66	1.35	0.61	1.24	0.65	1.37	0.68	1.39	0.68	1.25
4. U.S. Constitution and the Early Republic	22	0.82	2.05	0.83	1.77	0.81	2.04	0.79	1.90	0.80	2.07	0.82	2.08	0.83	1.88
5. Civil War and Its Aftermath	13	0.78	1.54	0.79	1.26	0.77	1.52	0.76	1.38	0.76	1.55	0.77	1.56	0.79	1.38
World History															
1. Development of Modern Political Thought	13	0.68	1.59	0.68	1.45	0.62	1.61	0.61	1.53	0.64	1.61	0.66	1.62	0.68	1.51
2. Industrial Expansion and Imperialism	10	0.68	1.35	0.65	1.19	0.65	1.36	0.58	1.27	0.67	1.38	0.69	1.39	0.66	1.25
3. Causes and Effects of World War I	14	0.77	1.62	0.77	1.41	0.75	1.62	0.72	1.53	0.75	1.65	0.76	1.67	0.77	1.50
4. Causes and Effects of World War II	13	0.74	1.57	0.74	1.40	0.70	1.59	0.68	1.50	0.71	1.60	0.72	1.62	0.75	1.46
5. International Developments in the Post-World War II Era	10	0.70	1.37	0.70	1.21	0.67	1.39	0.65	1.30	0.68	1.39	0.69	1.40	0.71	1.28

Subscore Reliabilities and SEM for History–Social Science by Primary Ethnicity															
Subscore Area	N of	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
	Items	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 11 (U.S. History)															
1. Foundations of American Political and Social Thought	10	0.64	1.36	0.68	1.23	0.59	1.38	0.59	1.31	0.62	1.39	0.62	1.40	0.66	1.27
2. Industrialization and the U.S. Role as a World Power	13	0.72	1.55	0.73	1.38	0.71	1.55	0.66	1.47	0.72	1.56	0.72	1.58	0.73	1.43
3. United States between the World Wars	12	0.68	1.51	0.68	1.39	0.68	1.52	0.61	1.46	0.67	1.53	0.70	1.52	0.69	1.44
4. World War II and Foreign Affairs	12	0.71	1.49	0.71	1.35	0.68	1.50	0.67	1.40	0.71	1.50	0.71	1.53	0.72	1.41
5. Post-World War II Domestic Affairs	13	0.72	1.57	0.71	1.45	0.70	1.58	0.65	1.52	0.70	1.60	0.71	1.59	0.72	1.49

Table 8.B.32 Subscore Reliabilities and SEM for Mathematics by Primary Ethnicity

Subscore Reliabilities and SEM for Mathematics by Primary Ethnicity															
Subscore Area	N of	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
	Items	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 2															
1. Number Sense: Place Value, Addition, and Subtraction	15	0.80	1.45	0.76	1.09	0.80	1.37	0.76	1.20	0.80	1.43	0.82	1.46	0.77	1.24
2. Number Sense: Multiplication, Division, and Fractions	23	0.85	1.87	0.84	1.44	0.84	1.80	0.82	1.60	0.84	1.86	0.86	1.90	0.83	1.62
3. Algebra and Functions	6	0.63	0.96	0.62	0.69	0.62	0.91	0.60	0.78	0.61	0.95	0.62	0.98	0.62	0.83
4. Measurement and Geometry	14	0.69	1.52	0.66	1.28	0.67	1.49	0.65	1.36	0.67	1.53	0.68	1.57	0.65	1.37
5. Statistics, Data Analysis and Probability	7	0.60	0.97	0.58	0.76	0.56	0.94	0.57	0.82	0.58	0.96	0.62	0.99	0.58	0.84
Grade 3															
1. Number Sense: Place Value, Fractions, and Decimals	16	0.79	1.46	0.76	1.11	0.76	1.40	0.73	1.22	0.78	1.43	0.80	1.48	0.77	1.27
2. Number Sense: Addition, Subtraction, Multiplication, and Division	16	0.82	1.53	0.82	1.09	0.83	1.42	0.81	1.23	0.83	1.46	0.83	1.51	0.82	1.34
3. Algebra and Functions	12	0.76	1.38	0.77	1.01	0.76	1.32	0.74	1.15	0.75	1.37	0.77	1.40	0.77	1.16
4. Measurement and Geometry	16	0.76	1.49	0.76	1.08	0.77	1.39	0.73	1.20	0.76	1.44	0.77	1.48	0.75	1.23
5. Statistics, Data Analysis and Probability	5	0.48	0.79	0.41	0.60	0.46	0.77	0.38	0.66	0.44	0.77	0.50	0.81	0.44	0.65
Grade 4															
1. Number Sense: Decimals, Fractions, and Negative Numbers	17	0.81	1.51	0.76	1.07	0.76	1.42	0.74	1.22	0.79	1.48	0.80	1.54	0.77	1.26
2. Number Sense: Operations and Factoring	14	0.83	1.37	0.80	0.88	0.82	1.25	0.80	1.06	0.83	1.31	0.83	1.38	0.82	1.16
3. Algebra and Functions	18	0.87	1.52	0.82	0.99	0.84	1.36	0.82	1.16	0.86	1.45	0.88	1.51	0.85	1.24
4. Measurement and Geometry	12	0.73	1.40	0.72	1.12	0.70	1.35	0.70	1.23	0.70	1.38	0.71	1.43	0.71	1.26
5. Statistics, Data Analysis, and Probability	4	0.46	0.76	0.40	0.59	0.43	0.72	0.38	0.66	0.39	0.75	0.44	0.76	0.44	0.65

Subscore Reliabilities and SEM for Mathematics by Primary Ethnicity

Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 5															
1. Number Sense: Estimation, Percents, and Factoring	12	0.76	1.42	0.79	1.08	0.75	1.37	0.77	1.24	0.75	1.39	0.75	1.42	0.77	1.28
2. Number Sense: Operations with Fractions and Decimals	17	0.81	1.72	0.83	1.29	0.80	1.65	0.81	1.48	0.81	1.69	0.81	1.73	0.82	1.53
3. Algebra and Functions	17	0.81	1.66	0.79	1.24	0.78	1.59	0.77	1.41	0.79	1.62	0.80	1.68	0.80	1.44
4. Measurement and Geometry	15	0.78	1.59	0.79	1.30	0.77	1.54	0.77	1.42	0.76	1.56	0.76	1.59	0.79	1.46
5. Statistics, Data Analysis, and Probability	4	0.57	0.72	0.51	0.47	0.52	0.67	0.47	0.55	0.51	0.70	0.55	0.74	0.52	0.56
Grade 6															
1. Number Sense: Ratios, Proportions, Percentages, and Negative Fractions	15	0.75	1.66	0.78	1.34	0.74	1.63	0.75	1.50	0.74	1.65	0.74	1.68	0.76	1.53
2. Number Sense: Operations and Problem Solving with Fractions	10	0.68	1.34	0.70	1.02	0.66	1.30	0.67	1.18	0.67	1.33	0.67	1.34	0.69	1.19
3. Algebra and Functions	19	0.82	1.80	0.84	1.33	0.83	1.75	0.82	1.57	0.82	1.81	0.82	1.84	0.83	1.58
4. Measurement and Geometry	10	0.69	1.37	0.75	1.11	0.70	1.36	0.72	1.25	0.69	1.37	0.67	1.40	0.72	1.26
5. Statistics, Data Analysis, and Probability	11	0.71	1.42	0.74	1.18	0.70	1.41	0.70	1.32	0.69	1.43	0.68	1.45	0.72	1.29
Grade 7															
1. Number Sense: Rational Numbers	14	0.75	1.62	0.77	1.38	0.71	1.63	0.75	1.52	0.73	1.63	0.72	1.65	0.74	1.52
2. Number Sense: Exponent, Powers and Roots	8	0.66	1.26	0.70	1.10	0.66	1.26	0.68	1.21	0.65	1.26	0.66	1.26	0.67	1.23
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	10	0.63	1.41	0.65	1.21	0.60	1.40	0.62	1.31	0.61	1.42	0.62	1.43	0.62	1.34
4. Algebra and Functions: Multistep Problems, Graphing and Functions	15	0.75	1.69	0.76	1.44	0.72	1.68	0.72	1.58	0.72	1.70	0.71	1.74	0.74	1.56
5. Measurement and Geometry	13	0.70	1.57	0.73	1.34	0.68	1.57	0.70	1.46	0.68	1.58	0.68	1.60	0.71	1.47
6. Statistics, Data Analysis, and Probability	5	0.56	0.93	0.56	0.76	0.57	0.90	0.56	0.83	0.56	0.92	0.56	0.94	0.57	0.84
General Mathematics															
1. Number Sense: Rational Numbers	14	0.72	1.68	0.79	1.55	0.74	1.63	0.75	1.60	0.72	1.66	0.71	1.66	0.74	1.64
2. Number Sense: Exponent, Powers and Roots	10	0.67	1.41	0.76	1.36	0.67	1.42	0.71	1.40	0.65	1.42	0.65	1.41	0.71	1.40
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	11	0.59	1.52	0.66	1.46	0.64	1.50	0.62	1.49	0.58	1.52	0.60	1.52	0.62	1.50
4. Algebra and Functions: Multistep Problems, Graphing and Functions	10	0.61	1.42	0.67	1.34	0.63	1.40	0.60	1.37	0.60	1.42	0.59	1.43	0.65	1.37
5. Measurement and Geometry	11	0.64	1.51	0.70	1.48	0.64	1.49	0.66	1.50	0.59	1.51	0.56	1.49	0.69	1.49
6. Statistics, Data Analysis, and Probability	9	0.59	1.33	0.61	1.27	0.57	1.32	0.55	1.29	0.56	1.32	0.58	1.34	0.63	1.29

Subscore Reliabilities and SEM for Mathematics by Primary Ethnicity

Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Algebra I															
1. Number Properties, Operations, and Linear Equations	17	0.76	1.82	0.82	1.49	0.77	1.78	0.78	1.69	0.76	1.82	0.75	1.83	0.78	1.71
2. Graphing and Systems of Linear Equations	14	0.73	1.68	0.83	1.44	0.75	1.67	0.79	1.60	0.72	1.68	0.70	1.69	0.78	1.63
3. Quadratics and Polynomials	21	0.76	2.05	0.86	1.77	0.79	2.02	0.81	1.95	0.77	2.04	0.75	2.04	0.82	1.99
4. Functions and Rational Expressions	13	0.56	1.62	0.81	1.49	0.64	1.61	0.71	1.60	0.58	1.62	0.55	1.61	0.70	1.61
Geometry															
1. Logic and Geometric Proofs	23	0.78	2.11	0.86	1.81	0.78	2.12	0.82	2.00	0.77	2.13	0.76	2.15	0.82	1.98
2. Volume and Area Formulas	11	0.68	1.47	0.81	1.25	0.69	1.46	0.75	1.40	0.68	1.46	0.65	1.46	0.75	1.41
3. Angle Relationships, Constructions, and Lines	16	0.68	1.80	0.82	1.58	0.68	1.79	0.74	1.73	0.67	1.80	0.65	1.81	0.75	1.72
4. Trigonometry	15	0.72	1.72	0.81	1.51	0.72	1.72	0.76	1.64	0.71	1.73	0.70	1.74	0.77	1.64
Algebra II															
1. Polynomials and Rational Expressions	19	0.77	1.85	0.81	1.60	0.77	1.85	0.77	1.78	0.77	1.86	0.76	1.90	0.77	1.80
2. Quadratics, Conics, and Complex Numbers	16	0.69	1.79	0.81	1.65	0.71	1.78	0.74	1.76	0.69	1.78	0.66	1.78	0.73	1.77
3. Exponents and Logarithms	16	0.72	1.79	0.80	1.63	0.73	1.79	0.74	1.75	0.71	1.80	0.70	1.81	0.74	1.76
4. Series, Combinatorics, and Probability and Statistics	14	0.63	1.66	0.75	1.59	0.67	1.64	0.68	1.64	0.63	1.65	0.60	1.63	0.67	1.64
Summative High School Mathematics															
1. Algebra I	18	0.75	1.74	0.75	1.38	0.76	1.71	0.73	1.66	0.75	1.75	0.76	1.80	0.76	1.60
2. Geometry	19	0.78	1.80	0.76	1.51	0.77	1.82	0.75	1.75	0.77	1.87	0.78	1.90	0.75	1.67
3. Algebra II	23	0.83	1.99	0.83	1.62	0.82	1.99	0.82	1.91	0.82	2.03	0.83	2.06	0.83	1.86
4. Probability and Statistics	5	0.54	0.94	0.50	0.85	0.43	0.99	0.44	0.96	0.48	0.98	0.48	0.99	0.49	0.89
Integrated Mathematics 1															
1. Algebra I: Number Properties, Operations and Linear Equations	15	0.77	1.65	0.74	1.65	0.70	1.72	0.66	1.75	0.70	1.74	0.69	1.75	0.74	1.67
2. Algebra I: Graphing	9	0.63	1.35	0.59	1.37	0.55	1.38	0.54	1.38	0.49	1.38	0.46	1.39	0.60	1.37
3. Algebra I: Quadratics and Polynomials	14	0.61	1.65	0.72	1.63	0.43	1.70	0.59	1.64	0.56	1.67	0.54	1.67	0.66	1.66
4. Algebra I: Functions and Relations Expressions	7	0.59	1.14	0.62	1.16	0.39	1.19	0.49	1.14	0.48	1.16	0.48	1.14	0.60	1.14
5. Geometry	20	0.65	1.97	0.57	2.01	0.47	2.00	0.50	2.00	0.42	1.97	0.41	1.95	0.62	2.00
Integrated Mathematics 2															
1. Algebra I	20	0.37	2.07	0.72	2.01	0.55	2.06	0.64	2.01	0.65	2.04	0.64	2.03	0.69	2.03
2. Geometry: Logic and Geometric Proofs	22	0.59	2.14	0.75	2.11	0.49	2.17	0.73	2.11	0.67	2.13	0.66	2.15	0.76	2.08
3. Geometry: Angle Relationships, Construction, and Lines	8	0.39	1.33	0.59	1.24	0.46	1.27	0.51	1.26	0.44	1.28	0.46	1.29	0.56	1.25
4. Trigonometry	10	0.60	1.43	0.65	1.41	0.54	1.44	0.63	1.39	0.52	1.43	0.52	1.43	0.57	1.42
5. Algebra II: Probability and Statistics	5	0.13	0.98	0.27	0.95	0.37	0.99	0.31	0.95	0.20	0.96	0.28	0.94	0.31	0.99

Subscore Reliabilities and SEM for Mathematics by Primary Ethnicity															
Subscore Area	N of	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
	Items	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Integrated Mathematics 3															
1. Geometry	5	–	–	0.44	0.97	–	–	0.22	1.02	0.33	0.97	0.30	1.02	0.46	0.95
2. Algebra II: Polynomials and Relations Expressions	19	–	–	0.84	1.80	–	–	0.78	1.89	0.79	1.88	0.79	1.94	0.82	1.88
3. Algebra II: Quadratics, Conics, and Complex Numbers	16	–	–	0.80	1.73	–	–	0.69	1.84	0.68	1.76	0.60	1.85	0.75	1.79
4. Algebra II: Exponents and Logarithms	16	–	–	0.82	1.72	–	–	0.79	1.72	0.76	1.78	0.77	1.76	0.79	1.77
5. Algebra II: Series, Combinatorics, Probability and Statistics	9	–	–	0.46	1.34	–	–	0.59	1.30	0.39	1.31	0.27	1.37	0.48	1.35

Table 8.B.33 Subscore Reliabilities and SEM for Science by Primary Ethnicity

Subscore Reliabilities and SEM for Science by Primary Ethnicity															
Subscore Area	N of	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
	Items	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 5 Science															
1. Physical Science (Grade 5)	11	0.68	1.37	0.67	1.10	0.64	1.35	0.57	1.21	0.63	1.40	0.66	1.40	0.62	1.17
2. Physical Science (Grade 4)	8	0.61	1.16	0.62	0.92	0.58	1.15	0.58	1.02	0.59	1.15	0.61	1.18	0.57	1.00
3. Life Science (Grade 5)	13	0.73	1.55	0.73	1.28	0.71	1.53	0.70	1.40	0.69	1.56	0.70	1.58	0.70	1.36
4. Life Science (Grade 4)	9	0.66	1.27	0.71	1.04	0.63	1.28	0.64	1.17	0.64	1.29	0.65	1.30	0.66	1.11
5. Earth Science (Grade 5)	11	0.65	1.42	0.62	1.23	0.61	1.40	0.54	1.32	0.58	1.43	0.62	1.45	0.61	1.27
6. Earth Science (Grade 4)	8	0.63	1.26	0.66	1.05	0.60	1.25	0.59	1.15	0.58	1.26	0.60	1.27	0.63	1.13
Grade 8 Science															
1. Motion	8	0.59	1.22	0.66	1.02	0.55	1.22	0.59	1.13	0.54	1.23	0.53	1.25	0.60	1.11
2. Forces, Density, and Buoyancy	13	0.71	1.49	0.70	1.22	0.69	1.49	0.65	1.34	0.68	1.51	0.69	1.54	0.69	1.32
3. Structure of Matter and Periodic Table	16	0.76	1.67	0.77	1.36	0.76	1.64	0.72	1.49	0.74	1.68	0.75	1.70	0.76	1.48
4. Earth in the Solar System	7	0.58	1.08	0.57	0.90	0.55	1.08	0.51	0.97	0.55	1.08	0.58	1.10	0.55	0.97
5. Reactions and the Chemistry of Living Systems	10	0.67	1.36	0.68	1.09	0.66	1.35	0.61	1.21	0.65	1.37	0.67	1.38	0.66	1.21
6. Investigation and Experimentation	6	0.59	0.97	0.53	0.70	0.58	0.93	0.49	0.79	0.58	0.95	0.60	0.98	0.57	0.81
Grade 10 Life Science															
1. Cell Biology	10	0.68	1.37	0.73	1.18	0.67	1.39	0.68	1.29	0.65	1.40	0.65	1.41	0.69	1.28
2. Genetics	12	0.69	1.52	0.72	1.37	0.69	1.52	0.68	1.45	0.67	1.54	0.67	1.54	0.71	1.45
3. Physiology	10	0.72	1.25	0.71	1.09	0.67	1.31	0.63	1.15	0.68	1.31	0.69	1.32	0.71	1.12
4. Ecology	11	0.75	1.34	0.74	1.17	0.73	1.38	0.69	1.27	0.73	1.39	0.73	1.41	0.74	1.22
5. Evolution	11	0.76	1.38	0.77	1.19	0.74	1.42	0.71	1.30	0.73	1.43	0.74	1.44	0.77	1.24
6. Investigation and Experimentation	6	0.59	0.96	0.51	0.80	0.55	0.98	0.47	0.88	0.54	1.00	0.56	1.02	0.58	0.85
Biology															
1. Cell Biology	9	0.62	1.33	0.69	1.16	0.60	1.34	0.61	1.28	0.59	1.35	0.59	1.35	0.66	1.26
2. Genetics	18	0.79	1.82	0.79	1.56	0.77	1.82	0.74	1.71	0.76	1.84	0.77	1.87	0.79	1.70
3. Ecology and Evolution	16	0.78	1.74	0.80	1.53	0.75	1.78	0.74	1.67	0.74	1.79	0.74	1.80	0.79	1.61
4. Physiology	11	0.75	1.39	0.75	1.20	0.73	1.42	0.70	1.30	0.73	1.43	0.74	1.44	0.74	1.29
5. Investigation and Experimentation	6	0.53	1.04	0.52	0.96	0.50	1.06	0.44	1.00	0.49	1.07	0.51	1.08	0.52	0.98

Subscore Reliabilities and SEM for Science by Primary Ethnicity

Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Chemistry															
1. Atomic and Molecular Structure	8	0.31	1.26	0.47	1.14	0.45	1.24	0.39	1.21	0.42	1.25	0.42	1.27	0.41	1.20
2. Chemical Bonds, Biochemistry	9	0.56	1.30	0.58	1.15	0.56	1.32	0.50	1.26	0.54	1.35	0.55	1.37	0.54	1.22
3. Kinetics, Thermodynamics	14	0.66	1.69	0.71	1.52	0.65	1.73	0.63	1.67	0.64	1.74	0.64	1.75	0.67	1.60
4. Chemical Reactions	13	0.67	1.62	0.75	1.49	0.69	1.63	0.67	1.60	0.66	1.64	0.65	1.65	0.71	1.56
5. Conservation of Matter and Stoichiometry	10	0.68	1.40	0.74	1.18	0.68	1.40	0.69	1.34	0.66	1.43	0.64	1.44	0.71	1.32
6. Investigation and Experimentation	6	0.60	0.92	0.61	0.75	0.62	0.98	0.56	0.86	0.60	0.99	0.63	1.02	0.59	0.81
Earth Science															
1. Astronomy and Cosmology	12	0.65	1.56	0.65	1.55	0.59	1.59	0.62	1.54	0.62	1.58	0.62	1.59	0.67	1.52
2. Solid Earth	14	0.66	1.69	0.65	1.65	0.65	1.70	0.58	1.65	0.64	1.70	0.64	1.72	0.66	1.63
3. The Earth's Energy	28	0.84	2.37	0.85	2.29	0.83	2.39	0.82	2.31	0.82	2.41	0.82	2.42	0.85	2.27
4. Investigation and Experimentation	6	0.63	1.01	0.61	0.96	0.60	1.03	0.53	0.96	0.58	1.05	0.59	1.07	0.64	0.94
Physics															
1. Motion and Forces	12	0.70	1.48	0.70	1.34	0.65	1.54	0.65	1.48	0.66	1.55	0.67	1.56	0.67	1.40
2. Conservation of Energy and Momentum	12	0.75	1.47	0.73	1.30	0.73	1.51	0.70	1.43	0.72	1.52	0.73	1.54	0.73	1.39
3. Heat and Thermodynamics	9	0.69	1.27	0.66	1.17	0.66	1.32	0.64	1.26	0.64	1.33	0.66	1.34	0.66	1.20
4. Waves	10	0.66	1.36	0.61	1.26	0.63	1.40	0.57	1.32	0.62	1.40	0.62	1.43	0.60	1.30
5. Electric and Magnetic Phenomena	11	0.61	1.51	0.64	1.38	0.61	1.51	0.61	1.45	0.60	1.52	0.59	1.53	0.62	1.46
6. Investigation and Experimentation	6	0.50	1.05	0.49	0.95	0.45	1.09	0.43	1.04	0.50	1.10	0.53	1.11	0.49	0.97
Integrated/Coordinated Science 1															
1. Biology/Life Sciences	10	0.61	1.42	0.69	1.33	0.60	1.43	0.57	1.40	0.61	1.44	0.60	1.45	0.65	1.33
2. Chemistry	15	0.57	1.78	0.65	1.74	0.54	1.80	0.55	1.78	0.54	1.80	0.52	1.80	0.59	1.76
3. Earth Sciences	17	0.76	1.82	0.78	1.73	0.76	1.84	0.72	1.79	0.74	1.85	0.73	1.88	0.77	1.74
4. Physics	12	0.48	1.63	0.58	1.59	0.50	1.61	0.56	1.59	0.47	1.61	0.43	1.62	0.49	1.61
5. Investigation and Experimentation	6	0.59	1.05	0.66	0.95	0.61	1.04	0.59	1.01	0.57	1.08	0.57	1.09	0.63	0.98
Integrated/Coordinated Science 2															
1. Biology/Life Sciences	15	0.56	1.82	0.71	1.50	0.56	1.79	0.78	1.60	0.64	1.76	0.66	1.76	0.67	1.71
2. Chemistry	6	0.51	1.13	0.64	0.96	0.53	1.14	0.36	1.14	0.40	1.14	0.16	1.15	0.48	1.12
3. Earth Sciences	15	0.77	1.72	0.75	1.51	0.70	1.80	0.74	1.67	0.67	1.78	0.58	1.81	0.72	1.69
4. Physics	18	0.59	1.95	0.76	1.87	0.54	1.87	0.74	1.91	0.57	1.95	0.41	1.91	0.62	1.97
5. Investigation and Experimentation	6	0.08	1.19	0.51	1.01	0.32	1.17	0.33	1.13	0.32	1.16	0.20	1.17	0.45	1.10
Integrated/Coordinated Science 3															
1. Biology/Life Sciences	16	0.80	1.80	0.75	1.74	0.74	1.84	0.53	1.79	0.64	1.82	–	–	0.78	1.72
2. Chemistry	23	0.74	2.11	0.80	2.21	0.62	2.11	0.59	2.28	0.60	2.17	–	–	0.79	2.16
3. Earth Sciences	7	0.80	1.07	0.66	1.13	0.60	1.24	0.69	1.13	0.50	1.23	–	–	0.67	1.13
4. Physics	8	0.02	1.31	0.31	1.36	0.47	1.39	0.38	1.32	0.33	1.28	–	–	0.54	1.30
5. Investigation and Experimentation	6	0.57	1.13	0.47	1.09	0.52	0.98	0.30	1.17	0.35	1.14	–	–	0.60	1.06

Subscore Reliabilities and SEM for Science by Primary Ethnicity															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Integrated/Coordinated Science 4															
1. Biology/Life Sciences	13	–	–	–	–	–	–	–	–	0.67	1.56	–	–	0.68	1.62
2. Chemistry	10	–	–	–	–	–	–	–	–	0.24	1.46	–	–	0.36	1.45
3. Earth Sciences	15	–	–	–	–	–	–	–	–	0.67	1.75	–	–	0.80	1.69
4. Physics	16	–	–	–	–	–	–	–	–	0.07	1.71	–	–	0.28	1.82
5. Investigation and Experimentation	6	–	–	–	–	–	–	–	–	0.50	1.04	–	–	0.65	1.02

Table 8.B.34 Subscore Reliabilities and SEM for Grade-specific CSTs by Primary Ethnicity

Subscore Reliabilities and SEM for Grade-specific CSTs by Primary Ethnicity															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Algebra I – 8															
1. Number Properties, Operations, and Linear Equations	17	0.77	1.76	0.78	1.46	0.76	1.73	0.75	1.63	0.76	1.77	0.77	1.80	0.76	1.63
2. Graphing and Systems of Linear Equations	14	0.75	1.67	0.80	1.43	0.76	1.65	0.77	1.57	0.75	1.67	0.73	1.68	0.77	1.59
3. Quadratics and Polynomials	21	0.78	2.02	0.83	1.77	0.79	1.99	0.79	1.92	0.78	2.02	0.78	2.03	0.80	1.94
4. Functions and Rational Expressions	13	0.59	1.64	0.78	1.50	0.68	1.61	0.71	1.59	0.63	1.62	0.61	1.62	0.70	1.61
Geometry – 9															
1. Logic and Geometric Proofs	23	0.78	2.04	0.81	1.79	0.78	2.07	0.79	1.94	0.78	2.07	0.78	2.10	0.77	1.88
2. Volume and Area Formulas	11	0.73	1.42	0.76	1.24	0.73	1.43	0.72	1.37	0.71	1.45	0.69	1.46	0.71	1.36
3. Angle Relationships, Constructions, and Lines	16	0.71	1.75	0.76	1.58	0.72	1.75	0.70	1.71	0.69	1.78	0.69	1.78	0.71	1.67
4. Trigonometry	15	0.74	1.67	0.75	1.50	0.73	1.69	0.71	1.62	0.72	1.70	0.72	1.72	0.72	1.58
Algebra II – 10															
1. Polynomials and Rational Expressions	19	0.76	1.82	0.77	1.62	0.75	1.83	0.74	1.76	0.76	1.83	0.76	1.87	0.74	1.76
2. Quadratics, Conics, and Complex Numbers	16	0.69	1.79	0.77	1.69	0.72	1.77	0.72	1.76	0.70	1.78	0.68	1.78	0.72	1.76
3. Exponents and Logarithms	16	0.72	1.77	0.76	1.65	0.73	1.78	0.72	1.74	0.71	1.78	0.71	1.80	0.72	1.74
4. Series, Combinatorics, and Probability and Statistics	14	0.62	1.67	0.69	1.61	0.67	1.64	0.65	1.64	0.64	1.65	0.60	1.64	0.63	1.64
Summative High School Mathematics – 11															
1. Algebra I	18	0.74	1.78	0.76	1.44	0.75	1.74	0.73	1.69	0.75	1.77	0.76	1.82	0.76	1.63
2. Geometry	19	0.77	1.83	0.76	1.56	0.77	1.85	0.74	1.78	0.77	1.89	0.77	1.92	0.76	1.70
3. Algebra II	23	0.82	2.03	0.83	1.70	0.82	2.02	0.81	1.94	0.81	2.05	0.82	2.08	0.83	1.90
4. Probability and Statistics	5	0.55	0.94	0.51	0.87	0.41	1.00	0.43	0.97	0.47	0.99	0.47	1.00	0.50	0.90
World History – 10															
1. Development of Modern Political Thought	13	0.66	1.59	0.66	1.46	0.60	1.61	0.59	1.54	0.62	1.61	0.65	1.62	0.66	1.51
2. Industrial Expansion and Imperialism	10	0.67	1.35	0.64	1.20	0.63	1.36	0.57	1.27	0.65	1.38	0.68	1.39	0.65	1.25
3. Causes and Effects of World War I	14	0.76	1.61	0.76	1.42	0.74	1.63	0.71	1.53	0.74	1.65	0.75	1.67	0.76	1.50
4. Causes and Effects of World War II	13	0.74	1.57	0.73	1.41	0.69	1.60	0.66	1.51	0.70	1.61	0.71	1.62	0.74	1.46
5. International Developments in the Post-World War II Era	10	0.69	1.37	0.69	1.22	0.66	1.39	0.64	1.30	0.67	1.39	0.68	1.40	0.70	1.28

Table 8.B.35 Subscore Reliabilities and SEM for ELA by Primary Ethnicity-for-Not Economically Disadvantaged

Subscore Reliabilities and SEM for ELA by Primary Ethnicity-for-Not Economically Disadvantaged															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 2															
1. Word Analysis and Vocabulary Development	22	0.84	1.81	0.79	1.45	0.82	1.75	0.78	1.58	0.83	1.80	0.85	1.79	0.81	1.67
2. Reading Comprehension	15	0.79	1.57	0.74	1.35	0.75	1.59	0.71	1.49	0.77	1.59	0.78	1.61	0.76	1.47
3. Literary Response and Analysis	6	0.65	0.81	0.55	0.66	0.65	0.80	0.52	0.73	0.65	0.83	0.64	0.85	0.61	0.73
4. Written and Oral Language Conventions	14	0.80	1.48	0.76	1.15	0.78	1.42	0.75	1.27	0.80	1.45	0.81	1.45	0.79	1.36
5. Writing Strategies	8	0.66	1.22	0.63	1.06	0.63	1.22	0.62	1.16	0.65	1.22	0.65	1.23	0.64	1.15
Grade 3															
1. Word Analysis and Vocabulary Development	20	0.77	1.76	0.75	1.39	0.76	1.68	0.72	1.52	0.78	1.71	0.79	1.71	0.76	1.56
2. Reading Comprehension	15	0.70	1.55	0.65	1.35	0.69	1.52	0.65	1.44	0.71	1.54	0.72	1.57	0.67	1.41
3. Literary Response and Analysis	8	0.64	1.01	0.61	0.79	0.63	0.98	0.58	0.90	0.64	0.99	0.66	1.01	0.60	0.87
4. Written and Oral Language Conventions	13	0.69	1.55	0.69	1.30	0.72	1.50	0.66	1.43	0.69	1.52	0.71	1.53	0.68	1.45
5. Writing Strategies	9	0.65	1.29	0.65	1.02	0.65	1.24	0.62	1.15	0.66	1.25	0.66	1.27	0.64	1.14
Grade 4															
1. Word Analysis and Vocabulary Development	18	0.84	1.49	0.80	1.14	0.80	1.44	0.76	1.30	0.83	1.47	0.84	1.49	0.80	1.28
2. Reading Comprehension	15	0.79	1.58	0.73	1.38	0.77	1.61	0.72	1.52	0.77	1.59	0.77	1.62	0.74	1.47
3. Literary Response and Analysis	9	0.65	1.23	0.63	1.00	0.65	1.21	0.63	1.14	0.65	1.22	0.66	1.24	0.63	1.11
4. Written and Oral Language Conventions	18	0.78	1.70	0.73	1.38	0.79	1.64	0.72	1.53	0.77	1.68	0.79	1.70	0.75	1.55
5. Writing Strategies	15	0.76	1.67	0.75	1.44	0.75	1.66	0.73	1.58	0.74	1.67	0.75	1.68	0.75	1.58
Grade 5															
1. Word Analysis and Vocabulary Development	14	0.75	1.36	0.73	1.18	0.73	1.35	0.68	1.29	0.73	1.37	0.73	1.39	0.68	1.23
2. Reading Comprehension	16	0.75	1.63	0.71	1.44	0.73	1.65	0.68	1.59	0.72	1.65	0.73	1.70	0.70	1.51
3. Literary Response and Analysis	12	0.72	1.31	0.70	1.06	0.70	1.30	0.67	1.21	0.72	1.30	0.74	1.33	0.68	1.16
4. Written and Oral Language Conventions	17	0.75	1.57	0.69	1.22	0.73	1.49	0.65	1.36	0.71	1.53	0.74	1.54	0.69	1.42
5. Writing Strategies	16	0.75	1.63	0.70	1.36	0.72	1.58	0.67	1.50	0.71	1.61	0.73	1.63	0.68	1.48
Grade 6															
1. Word Analysis and Vocabulary Development	13	0.74	1.30	0.72	1.04	0.73	1.25	0.66	1.17	0.73	1.29	0.74	1.33	0.69	1.15
2. Reading Comprehension	17	0.70	1.76	0.70	1.49	0.67	1.72	0.67	1.63	0.70	1.75	0.71	1.78	0.67	1.64
3. Literary Response and Analysis	12	0.67	1.34	0.62	1.16	0.65	1.34	0.58	1.26	0.66	1.34	0.68	1.36	0.60	1.23
4. Written and Oral Language Conventions	16	0.69	1.55	0.67	1.23	0.67	1.50	0.64	1.39	0.69	1.53	0.73	1.56	0.67	1.40
5. Writing Strategies	17	0.74	1.80	0.71	1.58	0.71	1.79	0.68	1.73	0.72	1.79	0.74	1.81	0.70	1.69
Grade 7															
1. Word Analysis and Vocabulary Development	11	0.69	1.29	0.65	1.04	0.65	1.28	0.58	1.17	0.66	1.29	0.68	1.32	0.63	1.16
2. Reading Comprehension	18	0.79	1.61	0.73	1.32	0.76	1.58	0.71	1.46	0.78	1.60	0.79	1.65	0.75	1.45
3. Literary Response and Analysis	13	0.65	1.44	0.60	1.22	0.62	1.41	0.59	1.32	0.65	1.42	0.67	1.45	0.58	1.32
4. Written and Oral Language Conventions	16	0.69	1.68	0.68	1.35	0.68	1.63	0.66	1.50	0.67	1.67	0.70	1.67	0.67	1.56
5. Writing Strategies	17	0.76	1.75	0.77	1.48	0.76	1.73	0.73	1.66	0.75	1.76	0.76	1.78	0.75	1.64

Subscore Reliabilities and SEM for ELA by Primary Ethnicity-for-Not Economically Disadvantaged															
Subscore Area	N of	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
	Items	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 8															
1. Word Analysis and Vocabulary Development	9	0.53	1.25	0.58	1.06	0.53	1.24	0.48	1.19	0.53	1.25	0.53	1.27	0.51	1.16
2. Reading Comprehension	18	0.74	1.76	0.70	1.53	0.71	1.77	0.69	1.66	0.73	1.77	0.74	1.79	0.70	1.66
3. Literary Response and Analysis	15	0.73	1.65	0.72	1.40	0.71	1.64	0.70	1.54	0.72	1.65	0.71	1.67	0.71	1.54
4. Written and Oral Language Conventions	16	0.74	1.56	0.68	1.27	0.71	1.55	0.64	1.40	0.73	1.55	0.76	1.57	0.71	1.42
5. Writing Strategies	17	0.77	1.73	0.77	1.46	0.77	1.72	0.73	1.62	0.77	1.74	0.78	1.74	0.76	1.59
Grade 9															
1. Word Analysis and Vocabulary Development	8	0.55	1.07	0.50	0.95	0.47	1.08	0.38	1.01	0.53	1.08	0.57	1.10	0.47	0.99
2. Reading Comprehension	18	0.80	1.68	0.77	1.37	0.79	1.69	0.75	1.55	0.79	1.72	0.79	1.76	0.77	1.53
3. Literary Response and Analysis	16	0.74	1.67	0.70	1.48	0.73	1.68	0.67	1.60	0.74	1.70	0.75	1.72	0.70	1.58
4. Written and Oral Language Conventions	13	0.71	1.50	0.68	1.26	0.69	1.50	0.61	1.41	0.67	1.53	0.70	1.56	0.67	1.36
5. Writing Strategies	20	0.75	1.86	0.69	1.64	0.74	1.85	0.65	1.75	0.74	1.88	0.75	1.90	0.70	1.77
Grade 10															
1. Word Analysis and Vocabulary Development	8	0.60	1.15	0.57	0.98	0.60	1.16	0.52	1.09	0.58	1.18	0.60	1.19	0.55	1.08
2. Reading Comprehension	18	0.81	1.67	0.77	1.37	0.82	1.67	0.75	1.53	0.81	1.70	0.82	1.74	0.79	1.53
3. Literary Response and Analysis	16	0.70	1.72	0.68	1.52	0.68	1.75	0.63	1.66	0.69	1.75	0.71	1.76	0.69	1.63
4. Written and Oral Language Conventions	13	0.70	1.45	0.66	1.21	0.70	1.44	0.61	1.32	0.71	1.45	0.73	1.48	0.68	1.34
5. Writing Strategies	20	0.79	1.82	0.77	1.56	0.80	1.83	0.73	1.72	0.79	1.84	0.79	1.88	0.77	1.70
Grade 11															
1. Word Analysis and Vocabulary Development	8	0.60	1.18	0.62	0.98	0.59	1.19	0.53	1.11	0.57	1.20	0.60	1.21	0.60	1.10
2. Reading Comprehension	19	0.79	1.80	0.76	1.58	0.78	1.82	0.72	1.74	0.77	1.84	0.79	1.86	0.78	1.70
3. Literary Response and Analysis	17	0.72	1.71	0.67	1.56	0.71	1.73	0.62	1.67	0.70	1.75	0.72	1.76	0.68	1.64
4. Written and Oral Language Conventions	9	0.70	1.19	0.68	0.94	0.69	1.19	0.61	1.09	0.67	1.22	0.70	1.23	0.69	1.09
5. Writing Strategies	22	0.82	2.00	0.79	1.75	0.83	2.00	0.76	1.93	0.81	2.03	0.82	2.04	0.82	1.89

Table 8.B.36 Subscore Reliabilities and SEM for History–Social Science by Primary Ethnicity-for-Not Economically Disadvantaged

Subscore Reliabilities and SEM for History–Social Science by Primary Ethnicity-for-Not Economically Disadvantaged															
Subscore Area	N of	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
	Items	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 8															
1. World History and Geography: Ancient Civilizations	16	0.67	1.74	0.68	1.47	0.66	1.71	0.65	1.60	0.68	1.72	0.69	1.74	0.68	1.62
2. Late Antiquity and the Middle Ages	14	0.72	1.60	0.69	1.32	0.70	1.59	0.67	1.48	0.72	1.60	0.73	1.61	0.70	1.49
3. Renaissance/Reformation	10	0.66	1.32	0.63	1.10	0.65	1.31	0.59	1.21	0.66	1.31	0.68	1.33	0.65	1.21
4. U.S. Constitution and the Early Republic	22	0.81	1.99	0.80	1.66	0.81	1.97	0.78	1.84	0.82	1.98	0.82	2.01	0.81	1.83
5. Civil War and Its Aftermath	13	0.76	1.49	0.76	1.16	0.78	1.46	0.75	1.33	0.78	1.47	0.79	1.49	0.77	1.33

Subscore Reliabilities and SEM for History–Social Science by Primary Ethnicity-for-Not Economically Disadvantaged															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
World History															
1. Development of Modern Political Thought	13	0.67	1.56	0.65	1.39	0.62	1.58	0.60	1.51	0.65	1.58	0.67	1.59	0.66	1.49
2. Industrial Expansion and Imperialism	10	0.67	1.31	0.60	1.13	0.64	1.32	0.57	1.25	0.66	1.33	0.69	1.35	0.64	1.23
3. Causes and Effects of World War I	14	0.77	1.56	0.74	1.33	0.76	1.57	0.71	1.50	0.76	1.60	0.77	1.63	0.76	1.47
4. Causes and Effects of World War II	13	0.75	1.52	0.71	1.32	0.71	1.56	0.67	1.47	0.72	1.56	0.73	1.58	0.74	1.42
5. International Developments in the Post-World War II Era	10	0.70	1.34	0.67	1.16	0.67	1.36	0.65	1.27	0.69	1.35	0.70	1.38	0.70	1.25
Grade 11 (U.S. History)															
1. Foundations of American Political and Social Thought	10	0.64	1.32	0.66	1.16	0.61	1.34	0.59	1.29	0.64	1.35	0.64	1.37	0.64	1.25
2. Industrialization and the U.S. role as a World Power	13	0.72	1.50	0.69	1.31	0.73	1.51	0.65	1.45	0.72	1.52	0.73	1.55	0.71	1.40
3. United States between the World Wars	12	0.67	1.48	0.64	1.34	0.70	1.49	0.59	1.45	0.68	1.50	0.71	1.50	0.67	1.42
4. World War II and Foreign Affairs	12	0.70	1.45	0.68	1.30	0.69	1.48	0.66	1.39	0.72	1.47	0.72	1.50	0.71	1.38
5. Post-World War II Domestic Affairs	13	0.70	1.53	0.67	1.38	0.71	1.54	0.63	1.49	0.71	1.56	0.73	1.56	0.70	1.46

Table 8.B.37 Subscore Reliabilities and SEM for Mathematics by Primary Ethnicity-for-Not Economically Disadvantaged

Subscore Reliabilities and SEM for Mathematics by Primary Ethnicity-for-Not Economically Disadvantaged															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 2															
1. Number Sense: Place Value, Addition, and Subtraction	15	0.79	1.32	0.70	0.99	0.76	1.27	0.73	1.16	0.78	1.32	0.80	1.36	0.73	1.18
2. Number Sense: Multiplication, Division, and Fractions	23	0.84	1.73	0.80	1.30	0.82	1.70	0.81	1.53	0.83	1.72	0.85	1.78	0.81	1.54
3. Algebra and Functions	6	0.66	0.86	0.57	0.61	0.62	0.83	0.59	0.74	0.61	0.88	0.64	0.90	0.59	0.79
4. Measurement and Geometry	14	0.66	1.44	0.60	1.20	0.65	1.41	0.62	1.32	0.65	1.43	0.68	1.50	0.61	1.32
5. Statistics, Data Analysis, and Probability	7	0.62	0.88	0.54	0.68	0.53	0.88	0.56	0.79	0.58	0.88	0.61	0.93	0.55	0.79
Grade 3															
1. Number Sense: Place Value, Fractions, and Decimals	16	0.78	1.36	0.70	1.00	0.74	1.32	0.71	1.18	0.76	1.33	0.78	1.39	0.74	1.21
2. Number Sense: Addition, Subtraction, Multiplication, and Division	16	0.82	1.46	0.78	0.97	0.82	1.34	0.79	1.18	0.82	1.38	0.83	1.43	0.81	1.28
3. Algebra and Functions	12	0.75	1.28	0.73	0.89	0.76	1.23	0.74	1.10	0.76	1.25	0.77	1.31	0.74	1.10
4. Measurement and Geometry	16	0.74	1.38	0.71	0.96	0.74	1.31	0.71	1.15	0.75	1.32	0.77	1.38	0.72	1.16
5. Statistics, Data Analysis and Probability	5	0.45	0.74	0.36	0.54	0.47	0.71	0.36	0.63	0.42	0.71	0.48	0.75	0.41	0.61

Subscore Reliabilities and SEM for Mathematics by Primary Ethnicity-for-Not Economically Disadvantaged

Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 4															
1. Number Sense: Decimals, Fractions, and Negative Numbers	17	0.80	1.37	0.70	0.95	0.73	1.33	0.70	1.15	0.77	1.35	0.79	1.42	0.74	1.18
2. Number Sense: Operations and Factoring	14	0.83	1.26	0.75	0.77	0.81	1.17	0.78	0.99	0.81	1.21	0.83	1.26	0.80	1.09
3. Algebra and Functions	18	0.86	1.37	0.76	0.87	0.82	1.27	0.79	1.09	0.84	1.32	0.86	1.36	0.82	1.17
4. Measurement and Geometry	12	0.72	1.32	0.66	1.04	0.67	1.30	0.69	1.19	0.70	1.31	0.72	1.36	0.69	1.22
5. Statistics, Data Analysis, and Probability	4	0.42	0.69	0.37	0.53	0.37	0.70	0.38	0.63	0.40	0.69	0.43	0.72	0.41	0.62
Grade 5															
1. Number Sense: Estimation, Percents, and Factoring	12	0.77	1.35	0.77	0.97	0.76	1.32	0.77	1.20	0.76	1.33	0.77	1.37	0.76	1.23
2. Number Sense: Operations with Fractions and Decimals	17	0.82	1.63	0.79	1.16	0.80	1.59	0.80	1.43	0.81	1.60	0.81	1.66	0.80	1.47
3. Algebra and Functions	17	0.81	1.56	0.75	1.11	0.78	1.50	0.76	1.36	0.79	1.52	0.81	1.59	0.79	1.37
4. Measurement and Geometry	15	0.78	1.54	0.77	1.21	0.77	1.49	0.76	1.39	0.77	1.51	0.77	1.55	0.78	1.42
5. Statistics, Data Analysis, and Probability	4	0.58	0.64	0.47	0.39	0.49	0.61	0.43	0.52	0.50	0.62	0.55	0.67	0.49	0.52
Grade 6															
1. Number Sense: Ratios, Proportions, Percentages and Negative Fractions	15	0.76	1.59	0.76	1.23	0.74	1.56	0.74	1.46	0.75	1.59	0.75	1.63	0.74	1.49
2. Number Sense: Operations and Problem Solving with Fractions	10	0.69	1.27	0.67	0.92	0.65	1.23	0.65	1.13	0.68	1.26	0.68	1.28	0.67	1.15
3. Algebra and Functions	19	0.82	1.69	0.82	1.17	0.83	1.62	0.82	1.51	0.83	1.70	0.84	1.76	0.82	1.51
4. Measurement and Geometry	10	0.72	1.32	0.73	1.02	0.70	1.31	0.72	1.21	0.71	1.32	0.70	1.36	0.71	1.23
5. Statistics, Data Analysis, and Probability	11	0.72	1.35	0.71	1.10	0.69	1.35	0.69	1.28	0.70	1.36	0.70	1.40	0.70	1.25
Grade 7															
1. Number Sense: Rational Numbers	14	0.75	1.58	0.75	1.30	0.71	1.60	0.74	1.49	0.74	1.58	0.74	1.61	0.73	1.49
2. Number Sense: Exponent, Powers and Roots	8	0.68	1.24	0.68	1.05	0.65	1.25	0.67	1.19	0.66	1.25	0.67	1.25	0.66	1.21
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	10	0.65	1.37	0.61	1.14	0.60	1.36	0.60	1.29	0.61	1.38	0.63	1.40	0.60	1.31
4. Algebra and Functions: Multistep Problems, Graphing and Functions	15	0.76	1.64	0.73	1.35	0.72	1.62	0.71	1.55	0.73	1.65	0.72	1.69	0.73	1.52
5. Measurement and Geometry	13	0.72	1.52	0.71	1.26	0.68	1.52	0.69	1.43	0.69	1.53	0.70	1.56	0.70	1.43
6. Statistics, Data Analysis, and Probability	5	0.56	0.90	0.53	0.72	0.55	0.88	0.55	0.80	0.56	0.88	0.58	0.91	0.55	0.82

Subscore Reliabilities and SEM for Mathematics by Primary Ethnicity-for-Not Economically Disadvantaged

Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
General Mathematics															
1. Number Sense: Rational Numbers	14	0.71	1.67	0.79	1.49	0.72	1.65	0.75	1.59	0.73	1.65	0.73	1.65	0.74	1.62
2. Number Sense: Exponent, Powers and Roots	10	0.70	1.40	0.76	1.32	0.67	1.43	0.71	1.39	0.67	1.42	0.69	1.41	0.71	1.39
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	11	0.59	1.51	0.68	1.41	0.62	1.51	0.62	1.48	0.60	1.51	0.63	1.51	0.62	1.49
4. Algebra and Functions: Multistep Problems, Graphing, and Functions	10	0.63	1.40	0.69	1.28	0.64	1.38	0.61	1.35	0.62	1.40	0.63	1.41	0.65	1.35
5. Measurement and Geometry	11	0.67	1.50	0.72	1.45	0.66	1.50	0.68	1.49	0.64	1.51	0.61	1.50	0.70	1.49
6. Statistics, Data Analysis, and Probability	9	0.61	1.31	0.63	1.24	0.59	1.31	0.56	1.28	0.59	1.31	0.61	1.32	0.63	1.27
Algebra I															
1. Number Properties, Operations, and Linear Equations	17	0.78	1.77	0.80	1.37	0.77	1.75	0.77	1.65	0.77	1.79	0.77	1.81	0.78	1.67
2. Graphing and Systems of Linear Equations	14	0.76	1.66	0.82	1.34	0.77	1.65	0.79	1.58	0.74	1.67	0.73	1.68	0.79	1.61
3. Quadratics and Polynomials	21	0.79	2.03	0.86	1.67	0.80	2.00	0.81	1.93	0.78	2.03	0.78	2.03	0.82	1.97
4. Functions and Rational Expressions	13	0.60	1.63	0.81	1.44	0.67	1.62	0.72	1.59	0.62	1.62	0.60	1.61	0.71	1.61
Geometry															
1. Logic and Geometric Proofs	23	0.79	2.07	0.86	1.69	0.80	2.08	0.82	1.97	0.80	2.09	0.79	2.12	0.82	1.95
2. Volume and Area Formulas	11	0.70	1.46	0.80	1.17	0.73	1.44	0.75	1.38	0.71	1.45	0.69	1.46	0.75	1.40
3. Angle Relationships, Constructions, and Lines	16	0.72	1.77	0.81	1.50	0.71	1.78	0.75	1.72	0.70	1.78	0.69	1.79	0.75	1.70
4. Trigonometry	15	0.74	1.69	0.79	1.42	0.73	1.70	0.76	1.63	0.74	1.70	0.73	1.72	0.77	1.62
Algebra II															
1. Polynomials and Rational Expressions	19	0.75	1.84	0.80	1.54	0.78	1.83	0.76	1.77	0.76	1.84	0.76	1.88	0.77	1.79
2. Quadratics, Conics, and Complex Numbers	16	0.68	1.80	0.81	1.61	0.73	1.78	0.74	1.76	0.70	1.78	0.68	1.79	0.74	1.76
3. Exponents and Logarithms	16	0.72	1.79	0.80	1.58	0.74	1.78	0.74	1.74	0.72	1.79	0.70	1.81	0.75	1.75
4. Series, Combinatorics, and Probability and Statistics	14	0.61	1.66	0.74	1.56	0.69	1.63	0.67	1.64	0.64	1.65	0.61	1.64	0.67	1.64
Summative High School Mathematics															
1. Algebra I	18	0.74	1.70	0.73	1.30	0.77	1.67	0.72	1.64	0.75	1.71	0.76	1.76	0.75	1.58
2. Geometry	19	0.76	1.76	0.72	1.43	0.76	1.78	0.73	1.72	0.76	1.80	0.77	1.86	0.75	1.65
3. Algebra II	23	0.83	1.94	0.82	1.54	0.82	1.96	0.81	1.89	0.82	1.98	0.82	2.03	0.83	1.84
4. Probability and Statistics	5	0.48	0.92	0.47	0.82	0.43	0.97	0.43	0.95	0.49	0.95	0.48	0.98	0.48	0.88
Integrated Mathematics 1															
1. Algebra I: Number Properties, Operations, and Linear Equations	15	0.70	1.70	0.75	1.66	0.72	1.72	0.66	1.73	0.71	1.71	0.74	1.70	0.74	1.65
2. Algebra I: Graphing	9	0.46	1.41	0.53	1.39	0.48	1.36	0.58	1.37	0.52	1.38	0.43	1.40	0.61	1.36
3. Algebra I: Quadratics and Polynomials	14	0.52	1.68	0.72	1.62	0.63	1.66	0.64	1.63	0.58	1.66	0.60	1.65	0.67	1.65
4. Algebra I: Functions and Relations Expressions	7	0.65	1.13	0.65	1.14	0.37	1.19	0.53	1.14	0.54	1.15	0.55	1.13	0.62	1.13
5. Geometry	20	0.62	1.99	0.65	1.99	0.66	1.98	0.53	1.99	0.51	1.97	0.38	1.98	0.64	2.00

Subscore Reliabilities and SEM for Mathematics by Primary Ethnicity-for-Not Economically Disadvantaged															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Integrated Mathematics 2															
1. Algebra I	20	–	–	0.70	2.02	0.51	2.04	0.63	2.02	0.63	2.05	0.62	2.05	0.68	2.03
2. Geometry: Logic and Geometric Proofs	22	–	–	0.78	2.09	0.63	2.19	0.71	2.12	0.70	2.12	0.70	2.14	0.76	2.08
3. Geometry: Angle Relationships, Construction and Lines	8	–	–	0.63	1.21	0.27	1.32	0.43	1.29	0.52	1.26	0.42	1.30	0.55	1.26
4. Trigonometry	10	–	–	0.65	1.40	0.23	1.47	0.62	1.39	0.53	1.44	0.52	1.43	0.60	1.41
5. Algebra II: Probability and Statistics	5	–	–	0.42	0.93	0.44	0.98	0.22	0.95	0.25	0.98	0.35	0.92	0.28	0.99
Integrated Mathematics 3															
1. Geometry	5	–	–	0.42	0.97	–	–	0.26	1.00	0.34	0.96	0.25	1.01	0.46	0.93
2. Algebra II: Polynomials and Relations Expressions	19	–	–	0.78	1.79	–	–	0.75	1.93	0.84	1.86	0.78	1.93	0.82	1.88
3. Algebra II: Quadratics, Conics, and Complex Numbers	16	–	–	0.83	1.68	–	–	0.57	1.89	0.74	1.77	0.57	1.85	0.72	1.80
4. Algebra II: Exponents and Logarithms	16	–	–	0.82	1.69	–	–	0.78	1.70	0.81	1.74	0.76	1.78	0.80	1.77
5. Algebra II: Series, Combinatorics, Probability and Statistics	9	–	–	0.44	1.33	–	–	0.65	1.25	0.48	1.32	0.41	1.33	0.49	1.34

Table 8.B.38 Subscore Reliabilities and SEM for Science by Primary Ethnicity-for-Not Economically Disadvantaged

Subscore Reliabilities and SEM for Science by Primary Ethnicity-for-Not Economically Disadvantaged															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 5 Science															
1. Physical Science (Grade 5)	11	0.64	1.28	0.61	0.99	0.60	1.25	0.53	1.17	0.61	1.28	0.63	1.31	0.57	1.11
2. Physical Science (Grade 4)	8	0.57	1.07	0.56	0.83	0.55	1.06	0.55	0.98	0.58	1.06	0.61	1.11	0.53	0.96
3. Life Science (Grade 5)	13	0.73	1.46	0.68	1.18	0.71	1.44	0.68	1.36	0.70	1.46	0.70	1.51	0.67	1.31
4. Life Science (Grade 4)	9	0.68	1.17	0.67	0.94	0.61	1.22	0.62	1.13	0.65	1.20	0.66	1.24	0.63	1.06
5. Earth Science (Grade 5)	11	0.61	1.36	0.57	1.15	0.57	1.34	0.52	1.28	0.58	1.35	0.61	1.39	0.55	1.23
6. Earth Science (Grade 4)	8	0.65	1.20	0.62	0.96	0.59	1.19	0.57	1.12	0.60	1.20	0.61	1.22	0.59	1.09
Grade 8 Science															
1. Motion	8	0.61	1.18	0.63	0.94	0.56	1.18	0.58	1.10	0.57	1.18	0.56	1.21	0.58	1.08
2. Forces, Density, and Buoyancy	13	0.69	1.42	0.65	1.11	0.69	1.42	0.61	1.29	0.68	1.43	0.69	1.48	0.66	1.27
3. Structure of Matter and Periodic Table	16	0.75	1.59	0.73	1.25	0.76	1.57	0.70	1.44	0.75	1.59	0.76	1.63	0.73	1.43
4. Earth in the Solar System	7	0.57	1.03	0.52	0.83	0.54	1.04	0.50	0.94	0.54	1.03	0.58	1.05	0.51	0.94
5. Reactions and the Chemistry of Living Systems	10	0.66	1.29	0.63	1.00	0.65	1.29	0.59	1.17	0.66	1.30	0.67	1.32	0.63	1.17
6. Investigation and Experimentation	6	0.53	0.92	0.46	0.62	0.58	0.87	0.45	0.76	0.57	0.88	0.59	0.92	0.53	0.77

Subscore Reliabilities and SEM for Science by Primary Ethnicity-for-Not Economically Disadvantaged															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 10 Life Science															
1. Cell Biology	10	0.67	1.33	0.71	1.11	0.67	1.36	0.67	1.26	0.67	1.36	0.67	1.38	0.68	1.25
2. Genetics	12	0.70	1.49	0.70	1.32	0.71	1.49	0.67	1.44	0.69	1.51	0.68	1.52	0.70	1.43
3. Physiology	10	0.71	1.20	0.67	1.00	0.69	1.24	0.61	1.12	0.69	1.24	0.70	1.27	0.69	1.08
4. Ecology	11	0.74	1.28	0.70	1.09	0.73	1.34	0.67	1.24	0.73	1.33	0.74	1.37	0.72	1.18
5. Evolution	11	0.76	1.32	0.73	1.10	0.75	1.37	0.70	1.27	0.75	1.37	0.75	1.40	0.75	1.20
6. Investigation and Experimentation	6	0.58	0.90	0.46	0.73	0.55	0.94	0.46	0.84	0.55	0.95	0.57	0.99	0.55	0.81
Biology															
1. Cell Biology	9	0.63	1.31	0.67	1.09	0.63	1.31	0.61	1.26	0.62	1.32	0.62	1.33	0.64	1.24
2. Genetics	18	0.80	1.77	0.76	1.47	0.77	1.78	0.73	1.69	0.77	1.80	0.78	1.84	0.78	1.67
3. Ecology and Evolution	16	0.79	1.69	0.77	1.42	0.76	1.73	0.73	1.64	0.77	1.73	0.77	1.77	0.77	1.58
4. Physiology	11	0.76	1.34	0.71	1.12	0.72	1.39	0.68	1.27	0.73	1.38	0.75	1.41	0.72	1.26
5. Investigation and Experimentation	6	0.51	1.02	0.46	0.91	0.49	1.03	0.42	0.99	0.50	1.05	0.52	1.07	0.48	0.97
Chemistry															
1. Atomic and Molecular Structure	8	0.29	1.25	0.44	1.10	0.43	1.22	0.36	1.20	0.41	1.23	0.40	1.26	0.40	1.19
2. Chemical Bonds, Biochemistry	9	0.53	1.26	0.56	1.08	0.57	1.29	0.49	1.25	0.54	1.32	0.54	1.34	0.53	1.21
3. Kinetics, Thermodynamics	14	0.65	1.67	0.69	1.45	0.66	1.70	0.62	1.65	0.66	1.71	0.64	1.74	0.66	1.58
4. Chemical Reactions	13	0.67	1.61	0.74	1.44	0.71	1.62	0.67	1.59	0.68	1.62	0.66	1.64	0.71	1.55
5. Conservation of Matter and Stoichiometry	10	0.67	1.38	0.73	1.13	0.69	1.38	0.69	1.33	0.67	1.40	0.67	1.43	0.71	1.31
6. Investigation and Experimentation	6	0.55	0.89	0.56	0.68	0.60	0.93	0.54	0.83	0.61	0.93	0.63	0.98	0.57	0.79
Earth Science															
1. Astronomy and Cosmology	12	0.67	1.53	0.66	1.52	0.59	1.59	0.61	1.53	0.64	1.56	0.65	1.57	0.66	1.50
2. Solid Earth	14	0.68	1.67	0.64	1.62	0.65	1.68	0.55	1.63	0.64	1.68	0.66	1.70	0.64	1.61
3. The Earth's Energy	28	0.85	2.32	0.86	2.22	0.84	2.36	0.82	2.27	0.83	2.37	0.84	2.39	0.85	2.23
4. Investigation and Experimentation	6	0.62	0.98	0.62	0.90	0.61	0.99	0.50	0.93	0.60	1.00	0.61	1.04	0.62	0.91
Physics															
1. Motion and Forces	12	0.70	1.45	0.68	1.28	0.67	1.50	0.64	1.46	0.68	1.51	0.67	1.54	0.66	1.38
2. Conservation of Energy and Momentum	12	0.76	1.44	0.71	1.25	0.73	1.48	0.69	1.42	0.73	1.49	0.72	1.52	0.72	1.37
3. Heat and Thermodynamics	9	0.65	1.25	0.64	1.11	0.66	1.30	0.63	1.25	0.65	1.30	0.67	1.31	0.65	1.18
4. Waves	10	0.64	1.35	0.59	1.22	0.63	1.38	0.56	1.31	0.62	1.37	0.60	1.41	0.60	1.29
5. Electric and Magnetic Phenomena	11	0.61	1.50	0.63	1.35	0.59	1.50	0.61	1.45	0.61	1.50	0.59	1.53	0.61	1.45
6. Investigation and Experimentation	6	0.52	1.02	0.45	0.90	0.42	1.06	0.41	1.02	0.50	1.07	0.50	1.09	0.48	0.96
Integrated/Coordinated Science 1															
1. Biology/Life Sciences	10	0.65	1.36	0.69	1.28	0.51	1.43	0.59	1.38	0.61	1.42	0.62	1.42	0.63	1.31
2. Chemistry	15	0.57	1.76	0.67	1.71	0.50	1.81	0.57	1.77	0.57	1.79	0.53	1.80	0.58	1.75
3. Earth Sciences	17	0.75	1.76	0.78	1.66	0.73	1.81	0.72	1.78	0.75	1.83	0.74	1.86	0.76	1.71

Subscore Reliabilities and SEM for Science by Primary Ethnicity-for-Not Economically Disadvantaged															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
4. Physics	12	0.56	1.61	0.59	1.57	0.52	1.62	0.55	1.59	0.46	1.62	0.46	1.62	0.49	1.60
5. Investigation and Experimentation	6	0.60	1.01	0.68	0.90	0.61	0.99	0.61	1.00	0.59	1.06	0.59	1.07	0.62	0.95
Integrated/Coordinated Science 2															
1. Biology/Life Sciences	15	0.21	1.89	0.69	1.46	0.52	1.72	0.75	1.55	0.63	1.76	0.70	1.73	0.66	1.70
2. Chemistry	6	0.72	1.03	0.61	0.93	0.51	1.16	0.39	1.12	0.46	1.12	0.27	1.15	0.49	1.12
3. Earth Sciences	15	0.69	1.71	0.71	1.48	0.74	1.79	0.74	1.65	0.63	1.80	0.66	1.80	0.72	1.67
4. Physics	18	0.74	1.96	0.75	1.86	0.53	1.97	0.74	1.93	0.46	1.97	0.56	1.91	0.64	1.97
5. Investigation and Experimentation	6	0.46	1.15	0.38	0.99	0.47	1.13	0.36	1.12	0.34	1.16	0.23	1.17	0.45	1.09
Integrated/Coordinated Science 3															
1. Biology/Life Sciences	16	0.86	1.74	–	–	0.23	1.90	0.31	1.83	0.65	1.83	0.75	1.81	0.78	1.68
2. Chemistry	23	0.83	2.16	–	–	0.63	2.01	0.68	2.25	0.58	2.20	0.23	2.06	0.81	2.16
3. Earth Sciences	7	0.33	1.24	–	–	0.47	1.33	0.66	1.16	0.45	1.23	0.15	1.21	0.66	1.09
4. Physics	8	0.32	1.32	–	–	0.58	1.33	–0.05	1.38	0.37	1.26	0.54	1.27	0.55	1.31
5. Investigation and Experimentation	6	0.65	1.03	–	–	0.25	1.09	0.52	1.10	0.30	1.15	0.41	1.15	0.58	1.03
Integrated/Coordinated Science 4															
1. Biology/Life Sciences	13	–	–	–	–	–	–	–	–	0.49	1.70	–	–	0.65	1.47
2. Chemistry	10	–	–	–	–	–	–	–	–	0.15	1.35	–	–	0.17	1.48
3. Earth Sciences	15	–	–	–	–	–	–	–	–	0.79	1.72	–	–	0.73	1.80
4. Physics	16	–	–	–	–	–	–	–	–	0.29	1.74	–	–	0.08	1.80
5. Investigation and Experimentation	6	–	–	–	–	–	–	–	–	0.55	1.16	–	–	0.50	1.06

Table 8.B.39 Subscore Reliabilities and SEM for Grade-specific CSTs by Primary Ethnicity-for-Not Economically Disadvantaged

Subscore Reliabilities and SEM for Grade-specific CSTs by Primary Ethnicity-for-Not Economically Disadvantaged															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Algebra I – 8															
1. Number Properties, Operations, and Linear Equations	17	0.77	1.71	0.75	1.37	0.76	1.71	0.74	1.60	0.76	1.72	0.77	1.75	0.75	1.60
2. Graphing and Systems of Linear Equations	14	0.77	1.64	0.79	1.36	0.78	1.61	0.76	1.55	0.76	1.65	0.75	1.67	0.77	1.57
3. Quadratics and Polynomials	21	0.78	2.00	0.82	1.69	0.81	1.97	0.79	1.89	0.79	1.99	0.79	2.01	0.79	1.92
4. Functions and Rational Expressions	13	0.60	1.65	0.78	1.46	0.70	1.61	0.71	1.58	0.66	1.62	0.66	1.62	0.71	1.60
Geometry – 9															
1. Logic and Geometric Proofs	23	0.75	1.98	0.80	1.70	0.78	2.00	0.78	1.92	0.79	2.00	0.78	2.05	0.76	1.85
2. Volume and Area Formulas	11	0.72	1.39	0.74	1.18	0.74	1.39	0.72	1.35	0.72	1.42	0.71	1.44	0.70	1.34
3. Angle Relationships, Constructions, and Lines	16	0.72	1.70	0.75	1.53	0.72	1.73	0.70	1.69	0.70	1.74	0.70	1.76	0.70	1.65
4. Trigonometry	15	0.73	1.61	0.73	1.44	0.72	1.66	0.70	1.60	0.73	1.66	0.74	1.68	0.71	1.56
Algebra II – 10															
1. Polynomials and Rational Expressions	19	0.73	1.81	0.76	1.59	0.77	1.80	0.73	1.75	0.75	1.81	0.76	1.85	0.74	1.76
2. Quadratics, Conics, and Complex Numbers	16	0.67	1.80	0.76	1.67	0.72	1.78	0.72	1.76	0.71	1.78	0.69	1.78	0.71	1.76
3. Exponents and Logarithms	16	0.73	1.76	0.75	1.62	0.73	1.77	0.72	1.73	0.72	1.77	0.71	1.79	0.72	1.74
4. Series, Combinatorics, and Probability and Statistics	14	0.60	1.66	0.68	1.60	0.68	1.63	0.65	1.64	0.64	1.65	0.62	1.64	0.63	1.63

Subscore Reliabilities and SEM for Grade-specific CSTs by Primary Ethnicity-for-Not Economically Disadvantaged															
Subscore Area	N of	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
	Items	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Summative High School Mathematics – 11															
1. Algebra I	18	0.73	1.74	0.74	1.36	0.76	1.70	0.72	1.67	0.74	1.74	0.75	1.79	0.75	1.62
2. Geometry	19	0.75	1.80	0.73	1.49	0.76	1.81	0.72	1.76	0.76	1.83	0.77	1.89	0.75	1.68
3. Algebra II	23	0.82	1.98	0.82	1.61	0.81	1.99	0.81	1.93	0.82	2.01	0.82	2.05	0.83	1.88
4. Probability and Statistics	5	0.48	0.93	0.48	0.84	0.43	0.98	0.43	0.96	0.49	0.96	0.48	0.98	0.49	0.89
World History – 10															
1. Development of Modern Political Thought	13	0.65	1.56	0.64	1.40	0.60	1.58	0.58	1.52	0.63	1.58	0.65	1.59	0.65	1.49
2. Industrial Expansion and Imperialism	10	0.65	1.31	0.59	1.13	0.62	1.32	0.55	1.26	0.65	1.33	0.67	1.35	0.62	1.23
3. Causes and Effects of World War I	14	0.76	1.55	0.74	1.34	0.75	1.58	0.70	1.50	0.75	1.60	0.76	1.63	0.75	1.47
4. Causes and Effects of World War II	13	0.74	1.52	0.71	1.33	0.70	1.56	0.66	1.48	0.71	1.56	0.72	1.59	0.73	1.43
5. International Developments in the Post-World War II Era	10	0.68	1.34	0.66	1.16	0.66	1.36	0.64	1.28	0.68	1.35	0.69	1.38	0.69	1.25

Table 8.B.40 Subscore Reliabilities and SEM for ELA by Primary Ethnicity-for-Economically Disadvantaged

Subscore Reliabilities and SEM for ELA by Primary Ethnicity-for-Economically Disadvantaged															
Subscore Area	N of	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
	Items	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 2															
1. Word Analysis and Vocabulary Development	22	0.84	1.99	0.84	1.74	0.83	1.88	0.82	1.73	0.84	1.95	0.85	1.94	0.85	1.88
2. Reading Comprehension	15	0.74	1.73	0.76	1.59	0.73	1.69	0.73	1.60	0.74	1.71	0.75	1.71	0.78	1.64
3. Literary Response and Analysis	6	0.66	0.98	0.63	0.85	0.63	0.91	0.58	0.84	0.65	0.97	0.67	0.96	0.68	0.88
4. Written and Oral Language Conventions	14	0.79	1.61	0.81	1.38	0.79	1.52	0.79	1.37	0.80	1.56	0.80	1.57	0.81	1.53
5. Writing Strategies	8	0.59	1.28	0.66	1.20	0.60	1.27	0.63	1.22	0.60	1.27	0.61	1.28	0.65	1.25
Grade 3															
1. Word Analysis and Vocabulary Development	20	0.79	1.90	0.80	1.67	0.77	1.80	0.76	1.66	0.78	1.86	0.79	1.85	0.79	1.78
2. Reading Comprehension	15	0.73	1.68	0.73	1.55	0.70	1.64	0.67	1.55	0.73	1.66	0.73	1.67	0.73	1.58
3. Literary Response and Analysis	8	0.66	1.15	0.66	1.04	0.62	1.10	0.61	1.02	0.66	1.13	0.67	1.13	0.67	1.04
4. Written and Oral Language Conventions	13	0.66	1.62	0.73	1.48	0.69	1.57	0.68	1.49	0.68	1.58	0.69	1.59	0.69	1.56
5. Writing Strategies	9	0.63	1.36	0.68	1.24	0.65	1.32	0.64	1.25	0.65	1.34	0.66	1.34	0.67	1.29
Grade 4															
1. Word Analysis and Vocabulary Development	18	0.85	1.70	0.84	1.49	0.82	1.63	0.81	1.48	0.83	1.70	0.85	1.68	0.84	1.56
2. Reading Comprehension	15	0.77	1.69	0.78	1.60	0.75	1.69	0.75	1.62	0.76	1.69	0.75	1.70	0.77	1.63
3. Literary Response and Analysis	9	0.64	1.34	0.67	1.22	0.60	1.32	0.64	1.25	0.63	1.33	0.63	1.34	0.66	1.27
4. Written and Oral Language Conventions	18	0.79	1.83	0.78	1.65	0.77	1.77	0.74	1.67	0.77	1.81	0.78	1.82	0.79	1.74
5. Writing Strategies	15	0.72	1.75	0.76	1.66	0.70	1.73	0.72	1.68	0.70	1.75	0.70	1.74	0.74	1.71

Subscore Reliabilities and SEM for ELA by Primary Ethnicity-for-Economically Disadvantaged

Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 5															
1. Word Analysis and Vocabulary Development	14	0.73	1.54	0.77	1.42	0.72	1.49	0.72	1.41	0.73	1.52	0.73	1.52	0.74	1.41
2. Reading Comprehension	16	0.73	1.77	0.74	1.67	0.70	1.77	0.70	1.70	0.70	1.76	0.71	1.79	0.73	1.69
3. Literary Response and Analysis	12	0.74	1.45	0.74	1.32	0.71	1.42	0.72	1.32	0.72	1.45	0.72	1.46	0.73	1.36
4. Written and Oral Language Conventions	17	0.76	1.69	0.74	1.45	0.74	1.58	0.70	1.47	0.73	1.64	0.76	1.65	0.75	1.60
5. Writing Strategies	16	0.73	1.76	0.74	1.60	0.69	1.71	0.70	1.62	0.71	1.73	0.72	1.75	0.73	1.67
Grade 6															
1. Word Analysis and Vocabulary Development	13	0.73	1.47	0.76	1.29	0.72	1.43	0.70	1.31	0.73	1.45	0.74	1.47	0.75	1.35
2. Reading Comprehension	17	0.69	1.86	0.74	1.71	0.70	1.84	0.69	1.74	0.70	1.85	0.70	1.86	0.71	1.79
3. Literary Response and Analysis	12	0.69	1.46	0.69	1.36	0.66	1.45	0.63	1.36	0.67	1.46	0.69	1.46	0.69	1.38
4. Written and Oral Language Conventions	16	0.72	1.67	0.71	1.48	0.69	1.63	0.65	1.50	0.70	1.65	0.73	1.68	0.72	1.58
5. Writing Strategies	17	0.72	1.87	0.75	1.77	0.72	1.86	0.71	1.80	0.72	1.86	0.72	1.87	0.73	1.82
Grade 7															
1. Word Analysis and Vocabulary Development	11	0.70	1.40	0.70	1.27	0.63	1.41	0.63	1.29	0.67	1.38	0.68	1.42	0.69	1.33
2. Reading Comprehension	18	0.79	1.75	0.79	1.56	0.77	1.73	0.77	1.59	0.78	1.74	0.79	1.77	0.79	1.65
3. Literary Response and Analysis	13	0.68	1.54	0.70	1.40	0.66	1.52	0.65	1.44	0.67	1.54	0.68	1.55	0.66	1.47
4. Written and Oral Language Conventions	16	0.65	1.77	0.71	1.58	0.65	1.73	0.67	1.62	0.63	1.76	0.66	1.76	0.68	1.71
5. Writing Strategies	17	0.71	1.84	0.78	1.71	0.71	1.83	0.74	1.76	0.71	1.83	0.71	1.84	0.75	1.78
Grade 8															
1. Word Analysis and Vocabulary Development	9	0.53	1.31	0.64	1.23	0.52	1.31	0.52	1.27	0.52	1.31	0.52	1.32	0.55	1.26
2. Reading Comprehension	18	0.74	1.85	0.74	1.71	0.71	1.83	0.70	1.75	0.72	1.83	0.73	1.86	0.74	1.78
3. Literary Response and Analysis	15	0.68	1.74	0.74	1.60	0.68	1.72	0.70	1.64	0.69	1.73	0.68	1.74	0.72	1.67
4. Written and Oral Language Conventions	16	0.76	1.67	0.73	1.53	0.72	1.64	0.68	1.54	0.72	1.67	0.75	1.68	0.75	1.60
5. Writing Strategies	17	0.76	1.82	0.79	1.70	0.74	1.83	0.75	1.75	0.73	1.83	0.74	1.83	0.78	1.75
Grade 9															
1. Word Analysis and Vocabulary Development	8	0.59	1.16	0.56	1.08	0.54	1.14	0.44	1.07	0.53	1.15	0.59	1.16	0.59	1.09
2. Reading Comprehension	18	0.79	1.83	0.81	1.66	0.77	1.83	0.78	1.69	0.77	1.83	0.78	1.85	0.80	1.73
3. Literary Response and Analysis	16	0.74	1.76	0.74	1.68	0.72	1.76	0.71	1.68	0.71	1.77	0.73	1.77	0.74	1.72
4. Written and Oral Language Conventions	13	0.68	1.62	0.69	1.51	0.67	1.62	0.64	1.54	0.65	1.62	0.67	1.64	0.71	1.53
5. Writing Strategies	20	0.73	1.97	0.76	1.83	0.74	1.94	0.72	1.85	0.73	1.96	0.75	1.98	0.76	1.90
Grade 10															
1. Word Analysis and Vocabulary Development	8	0.58	1.23	0.61	1.15	0.56	1.24	0.56	1.16	0.55	1.23	0.58	1.24	0.59	1.19
2. Reading Comprehension	18	0.82	1.81	0.82	1.62	0.80	1.81	0.78	1.67	0.81	1.80	0.81	1.83	0.82	1.72
3. Literary Response and Analysis	16	0.71	1.80	0.71	1.70	0.64	1.82	0.67	1.74	0.67	1.81	0.69	1.82	0.71	1.75
4. Written and Oral Language Conventions	13	0.73	1.53	0.70	1.40	0.68	1.52	0.65	1.41	0.70	1.51	0.73	1.55	0.73	1.48
5. Writing Strategies	20	0.80	1.93	0.81	1.79	0.79	1.93	0.78	1.82	0.78	1.92	0.79	1.95	0.80	1.86

Subscore Reliabilities and SEM for ELA by Primary Ethnicity-for-Economically Disadvantaged															
Subscore Area	N of	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
	Items	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 11															
1. Word Analysis and Vocabulary Development	8	0.57	1.25	0.60	1.17	0.50	1.26	0.53	1.18	0.53	1.25	0.54	1.27	0.60	1.21
2. Reading Comprehension	19	0.76	1.91	0.78	1.79	0.73	1.92	0.71	1.83	0.75	1.91	0.77	1.93	0.79	1.85
3. Literary Response and Analysis	17	0.70	1.81	0.72	1.72	0.67	1.82	0.65	1.73	0.69	1.81	0.70	1.82	0.72	1.76
4. Written and Oral Language Conventions	9	0.64	1.29	0.70	1.15	0.62	1.29	0.63	1.17	0.64	1.27	0.66	1.29	0.70	1.22
5. Writing Strategies	22	0.80	2.10	0.81	1.97	0.79	2.10	0.78	2.03	0.79	2.10	0.80	2.11	0.83	2.03

Table 8.B.41 Subscore Reliabilities and SEM for History–Social Science by Primary Ethnicity-for-Economically Disadvantaged

Subscore Reliabilities and SEM for History–Social Science by Primary Ethnicity-for-Economically Disadvantaged															
Subscore Area	N of	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
	Items	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 8															
1. World History and Geography: Ancient Civilizations	16	0.66	1.81	0.72	1.68	0.64	1.79	0.66	1.71	0.66	1.80	0.66	1.82	0.69	1.76
2. Late Antiquity and the Middle Ages	14	0.72	1.68	0.74	1.51	0.70	1.66	0.69	1.56	0.70	1.67	0.71	1.68	0.73	1.62
3. Renaissance/Reformation	10	0.68	1.39	0.67	1.28	0.65	1.39	0.61	1.30	0.64	1.39	0.66	1.42	0.68	1.34
4. U.S. Constitution and the Early Republic	22	0.81	2.09	0.82	1.92	0.80	2.08	0.79	1.99	0.79	2.09	0.80	2.11	0.82	2.02
5. Civil War and Its Aftermath	13	0.77	1.58	0.79	1.40	0.76	1.56	0.76	1.46	0.75	1.57	0.75	1.58	0.78	1.51
World History															
1. Development of Modern Political Thought	13	0.66	1.62	0.66	1.53	0.61	1.63	0.61	1.57	0.63	1.62	0.64	1.63	0.67	1.58
2. Industrial Expansion and Imperialism	10	0.67	1.39	0.65	1.27	0.64	1.39	0.60	1.31	0.66	1.39	0.67	1.41	0.68	1.34
3. Causes and Effects of World War I	14	0.74	1.67	0.76	1.52	0.73	1.66	0.73	1.58	0.74	1.66	0.74	1.69	0.77	1.61
4. Causes and Effects of World War II	13	0.72	1.61	0.73	1.50	0.68	1.62	0.67	1.55	0.70	1.62	0.69	1.64	0.74	1.56
5. International Developments in the Post-World War II Era	10	0.68	1.40	0.70	1.29	0.66	1.40	0.65	1.34	0.67	1.40	0.67	1.41	0.71	1.36
Grade 11 (U.S. History)															
1. Foundations of American Political and Social Thought	10	0.60	1.40	0.66	1.31	0.56	1.40	0.58	1.35	0.60	1.40	0.59	1.42	0.65	1.36
2. Industrialization and the U.S. Role as a World Power	13	0.70	1.59	0.74	1.47	0.68	1.59	0.67	1.50	0.71	1.57	0.71	1.60	0.74	1.53
3. United States between the World Wars	12	0.67	1.54	0.67	1.46	0.66	1.54	0.62	1.49	0.66	1.54	0.69	1.54	0.70	1.51
4. World War II and Foreign Affairs	12	0.70	1.52	0.72	1.41	0.67	1.52	0.69	1.43	0.70	1.51	0.69	1.54	0.73	1.48
5. Post-World War II Domestic Affairs	13	0.71	1.61	0.70	1.53	0.67	1.61	0.65	1.56	0.69	1.61	0.69	1.62	0.73	1.57

Table 8.B.42 Subscore Reliabilities and SEM for Mathematics by Primary Ethnicity-for-Economically Disadvantaged

Subscore Reliabilities and SEM for Mathematics by Primary Ethnicity-for-Economically Disadvantaged															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 2															
1. Number Sense: Place Value, Addition, and Subtraction	15	0.80	1.49	0.79	1.24	0.80	1.42	0.78	1.28	0.80	1.46	0.81	1.50	0.79	1.38
2. Number Sense: Multiplication, Division, and Fractions	23	0.84	1.92	0.84	1.65	0.85	1.85	0.83	1.72	0.84	1.88	0.85	1.94	0.84	1.79
3. Algebra and Functions	6	0.60	0.99	0.62	0.81	0.60	0.94	0.59	0.84	0.60	0.96	0.61	1.00	0.62	0.93
4. Measurement and Geometry	14	0.69	1.55	0.68	1.40	0.67	1.53	0.67	1.43	0.66	1.54	0.67	1.59	0.66	1.48
5. Statistics, Data Analysis, and Probability	7	0.58	1.00	0.58	0.86	0.57	0.96	0.56	0.88	0.58	0.97	0.62	1.01	0.60	0.93
Grade 3															
1. Number Sense: Place Value, Fractions, and Decimals	16	0.78	1.50	0.78	1.26	0.76	1.43	0.74	1.29	0.78	1.44	0.79	1.51	0.78	1.39
2. Number Sense: Addition, Subtraction, Multiplication, and Division	16	0.82	1.56	0.83	1.25	0.83	1.45	0.81	1.31	0.83	1.48	0.83	1.54	0.82	1.48
3. Algebra and Functions	12	0.75	1.42	0.77	1.19	0.76	1.36	0.74	1.24	0.74	1.39	0.75	1.43	0.76	1.31
4. Measurement and Geometry	16	0.76	1.54	0.77	1.25	0.77	1.42	0.73	1.28	0.76	1.46	0.77	1.52	0.76	1.38
5. Statistics, Data Analysis and Probability	5	0.48	0.81	0.42	0.68	0.45	0.80	0.39	0.70	0.43	0.79	0.50	0.83	0.47	0.74
Grade 4															
1. Number Sense: Decimals, Fractions, and Negative Numbers	17	0.80	1.58	0.78	1.25	0.77	1.47	0.76	1.31	0.79	1.51	0.79	1.58	0.79	1.43
2. Number Sense: Operations and Factoring	14	0.82	1.43	0.82	1.05	0.83	1.29	0.81	1.16	0.83	1.33	0.83	1.42	0.82	1.32
3. Algebra and Functions	18	0.87	1.58	0.84	1.17	0.85	1.41	0.84	1.26	0.86	1.48	0.87	1.56	0.87	1.43
4. Measurement and Geometry	12	0.72	1.44	0.73	1.24	0.70	1.38	0.71	1.30	0.70	1.40	0.70	1.45	0.71	1.36
5. Statistics, Data Analysis, and Probability	4	0.44	0.78	0.40	0.67	0.45	0.73	0.37	0.70	0.38	0.76	0.43	0.78	0.46	0.72
Grade 5															
1. Number Sense: Estimation, Percents, and Factoring	12	0.74	1.44	0.78	1.24	0.73	1.39	0.76	1.30	0.74	1.41	0.74	1.44	0.76	1.39
2. Number Sense: Operations with Fractions and Decimals	17	0.79	1.76	0.83	1.46	0.80	1.69	0.81	1.55	0.81	1.70	0.79	1.76	0.81	1.67
3. Algebra and Functions	17	0.80	1.70	0.79	1.42	0.77	1.64	0.77	1.50	0.78	1.64	0.79	1.72	0.80	1.59
4. Measurement and Geometry	15	0.76	1.61	0.78	1.43	0.76	1.56	0.77	1.47	0.76	1.57	0.75	1.61	0.78	1.55
5.Statistics, Data Analysis, and Probability	4	0.55	0.75	0.51	0.57	0.51	0.70	0.51	0.60	0.51	0.71	0.54	0.77	0.54	0.66
Grade 6															
1. Number Sense: Ratios, Proportions, Percentages and Negative Fractions	15	0.72	1.69	0.77	1.48	0.72	1.66	0.74	1.56	0.74	1.66	0.72	1.69	0.75	1.63
2. Number Sense: Operations and Problem Solving with Fractions	10	0.65	1.38	0.68	1.17	0.65	1.33	0.67	1.24	0.66	1.34	0.66	1.36	0.68	1.31
3. Algebra and Functions	19	0.81	1.85	0.83	1.54	0.81	1.82	0.82	1.67	0.81	1.83	0.81	1.88	0.83	1.75
4. Measurement and Geometry	10	0.66	1.39	0.74	1.24	0.68	1.38	0.70	1.31	0.68	1.38	0.65	1.42	0.69	1.35
5. Statistics, Data Analysis, and Probability	11	0.69	1.45	0.73	1.31	0.69	1.44	0.69	1.37	0.68	1.44	0.66	1.47	0.71	1.39

Subscore Reliabilities and SEM for Mathematics by Primary Ethnicity-for-Economically Disadvantaged															
Subscore Area	N of	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
	Items	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 7															
1. Number Sense: Rational Numbers	14	0.73	1.64	0.76	1.48	0.69	1.65	0.74	1.57	0.72	1.64	0.70	1.66	0.73	1.61
2. Number Sense: Exponent, Powers and Roots	8	0.64	1.27	0.70	1.17	0.66	1.26	0.67	1.23	0.65	1.26	0.64	1.26	0.65	1.26
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	10	0.61	1.44	0.65	1.29	0.59	1.43	0.63	1.35	0.60	1.43	0.60	1.44	0.62	1.40
4. Algebra and Functions: Multistep Problems, Graphing, and Functions	15	0.73	1.72	0.75	1.54	0.70	1.71	0.71	1.64	0.71	1.72	0.68	1.76	0.73	1.66
5. Measurement and Geometry	13	0.68	1.60	0.72	1.43	0.66	1.59	0.69	1.51	0.67	1.60	0.66	1.62	0.69	1.55
6. Statistics, Data Analysis, and Probability	5	0.56	0.95	0.56	0.81	0.58	0.91	0.55	0.86	0.55	0.92	0.55	0.96	0.56	0.91
General Mathematics															
1. Number Sense: Rational Numbers	14	0.71	1.68	0.78	1.59	0.74	1.62	0.75	1.61	0.72	1.66	0.70	1.67	0.73	1.66
2. Number Sense: Exponent, Powers and Roots	10	0.65	1.42	0.73	1.39	0.67	1.42	0.70	1.41	0.65	1.42	0.64	1.41	0.68	1.41
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	11	0.58	1.52	0.63	1.50	0.64	1.50	0.61	1.51	0.58	1.52	0.58	1.52	0.61	1.51
4. Algebra and Functions: Multistep Problems, Graphing and Functions	10	0.59	1.43	0.64	1.38	0.62	1.41	0.59	1.40	0.60	1.43	0.56	1.44	0.64	1.40
5. Measurement and Geometry	11	0.62	1.51	0.65	1.50	0.63	1.49	0.63	1.51	0.57	1.51	0.52	1.49	0.67	1.51
6. Statistics, Data Analysis, and Probability	9	0.57	1.34	0.58	1.30	0.55	1.33	0.53	1.31	0.55	1.33	0.56	1.34	0.62	1.32
Algebra I															
1. Number Properties, Operations, and Linear Equations	17	0.74	1.85	0.81	1.63	0.76	1.80	0.77	1.74	0.75	1.83	0.74	1.85	0.77	1.79
2. Graphing and Systems of Linear Equations	14	0.69	1.69	0.81	1.55	0.73	1.68	0.78	1.63	0.72	1.69	0.68	1.69	0.75	1.67
3. Quadratics and Polynomials	21	0.73	2.06	0.84	1.90	0.77	2.03	0.80	1.99	0.76	2.04	0.73	2.05	0.78	2.04
4. Functions and Rational Expressions	13	0.50	1.61	0.76	1.56	0.61	1.61	0.69	1.60	0.56	1.62	0.50	1.60	0.61	1.62
Geometry															
1. Logic and Geometric Proofs	23	0.75	2.14	0.84	1.98	0.75	2.16	0.80	2.06	0.76	2.15	0.73	2.16	0.79	2.07
2. Volume and Area Formulas	11	0.63	1.48	0.79	1.36	0.63	1.48	0.74	1.42	0.66	1.47	0.61	1.46	0.70	1.47
3. Angle Relationships, Constructions, and Lines	16	0.61	1.82	0.78	1.69	0.64	1.81	0.72	1.76	0.65	1.81	0.60	1.81	0.70	1.78
4. Trigonometry	15	0.67	1.74	0.79	1.62	0.70	1.74	0.75	1.68	0.70	1.74	0.66	1.75	0.73	1.70
Algebra II															
1. Polynomials and Rational Expressions	19	0.78	1.87	0.81	1.69	0.74	1.88	0.78	1.80	0.77	1.87	0.76	1.91	0.76	1.85
2. Quadratics, Conics, and Complex Numbers	16	0.70	1.79	0.79	1.71	0.68	1.78	0.73	1.77	0.68	1.78	0.63	1.78	0.70	1.78
3. Exponents and Logarithms	16	0.72	1.79	0.78	1.70	0.70	1.80	0.74	1.76	0.70	1.80	0.68	1.81	0.72	1.79
4. Series, Combinatorics, and Probability and Statistics	14	0.65	1.66	0.73	1.63	0.62	1.64	0.68	1.64	0.62	1.65	0.57	1.63	0.63	1.66

Subscore Reliabilities and SEM for Mathematics by Primary Ethnicity-for-Economically Disadvantaged															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Summative High School Mathematics															
1. Algebra I	18	0.76	1.81	0.76	1.52	0.73	1.76	0.75	1.70	0.75	1.77	0.76	1.83	0.76	1.69
2. Geometry	19	0.78	1.88	0.78	1.65	0.77	1.88	0.77	1.80	0.77	1.89	0.78	1.94	0.77	1.78
3. Algebra II	23	0.82	2.09	0.83	1.79	0.81	2.03	0.83	1.95	0.82	2.05	0.82	2.10	0.83	1.96
4. Probability and Statistics	5	0.58	0.96	0.50	0.92	0.39	1.02	0.42	0.98	0.45	0.99	0.44	1.01	0.49	0.94
Integrated Mathematics 1															
1. Algebra I: Number Properties, Operations and Linear Equations	15	0.83	1.59	0.74	1.65	0.69	1.73	0.64	1.77	0.70	1.74	0.66	1.77	0.73	1.71
2. Algebra I: Graphing	9	0.75	1.29	0.63	1.35	0.60	1.37	0.49	1.39	0.48	1.38	0.46	1.38	0.57	1.37
3. Algebra I: Quadratics and Polynomials	14	0.69	1.62	0.71	1.64	0.21	1.73	0.53	1.66	0.56	1.67	0.50	1.67	0.62	1.66
4. Algebra I: Functions and Relations Expressions	7	0.49	1.16	0.60	1.17	0.40	1.20	0.45	1.14	0.46	1.16	0.44	1.14	0.53	1.15
5. Geometry	20	0.69	1.95	0.48	2.02	0.22	2.00	0.46	2.01	0.39	1.96	0.42	1.94	0.56	1.99
Integrated Mathematics 2															
1. Algebra I	20	0.42	2.10	0.73	2.00	0.59	2.08	0.69	2.00	0.66	2.03	0.62	2.02	0.70	2.02
2. Geometry: Logic and Geometric Proofs	22	0.65	2.12	0.73	2.12	0.25	2.15	0.78	2.07	0.66	2.13	0.60	2.15	0.75	2.08
3. Geometry: Angle Relationships, Construction and Lines	8	0.53	1.27	0.56	1.26	0.51	1.21	0.64	1.19	0.41	1.29	0.49	1.27	0.58	1.23
4. Trigonometry	10	0.78	1.37	0.66	1.41	0.58	1.41	0.65	1.40	0.52	1.43	0.52	1.43	0.51	1.45
5. Algebra II: Probability and Statistics	5	0.39	0.95	0.13	0.96	0.33	1.01	0.48	0.94	0.18	0.96	0.24	0.95	0.36	0.98
Integrated Mathematics 3															
1. Geometry	5	–	–	0.38	0.99	–	–	0.18	1.06	0.31	0.97	–	–	0.50	1.00
2. Algebra II: Polynomials and Relations Expressions	19	–	–	0.87	1.82	–	–	0.83	1.81	0.78	1.89	–	–	0.86	1.86
3. Algebra II: Quadratics, Conics, and Complex Numbers	16	–	–	0.61	1.87	–	–	0.79	1.76	0.65	1.76	–	–	0.86	1.68
4. Algebra II: Exponents and Logarithms	16	–	–	0.75	1.81	–	–	0.82	1.74	0.74	1.79	–	–	0.75	1.81
5. Algebra II: Series, Combinatorics, Probability and Statistics	9	–	–	0.49	1.32	–	–	0.51	1.35	0.35	1.31	–	–	0.44	1.38

Table 8.B.43 Subscore Reliabilities and SEM for Science by Primary Ethnicity-for-Economically Disadvantaged

Subscore Reliabilities and SEM for Science by Primary Ethnicity-for-Economically Disadvantaged															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 5 Science															
1. Physical Science (Grade 5)	11	0.67	1.42	0.66	1.26	0.62	1.40	0.58	1.28	0.62	1.42	0.65	1.43	0.64	1.31
2. Physical Science (Grade 4)	8	0.59	1.20	0.62	1.06	0.56	1.19	0.58	1.08	0.59	1.17	0.60	1.20	0.58	1.11
3. Life Science (Grade 5)	13	0.71	1.59	0.72	1.43	0.69	1.58	0.70	1.47	0.68	1.58	0.68	1.61	0.71	1.49
4. Life Science (Grade 4)	9	0.63	1.31	0.70	1.18	0.62	1.30	0.65	1.23	0.63	1.31	0.63	1.32	0.65	1.23
5. Earth Science (Grade 5)	11	0.63	1.45	0.61	1.34	0.60	1.44	0.53	1.37	0.56	1.44	0.60	1.48	0.63	1.37
6. Earth Science (Grade 4)	8	0.59	1.28	0.63	1.18	0.57	1.27	0.58	1.21	0.56	1.28	0.57	1.29	0.62	1.23

Subscore Reliabilities and SEM for Science by Primary Ethnicity-for-Economically Disadvantaged

Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Grade 8 Science															
1. Motion	8	0.55	1.25	0.63	1.14	0.52	1.25	0.57	1.18	0.52	1.24	0.50	1.26	0.57	1.19
2. Forces, Density, and Buoyancy	13	0.70	1.54	0.69	1.36	0.67	1.54	0.66	1.42	0.67	1.53	0.67	1.57	0.70	1.44
3. Structure of Matter and Periodic Table	16	0.74	1.72	0.76	1.51	0.74	1.69	0.73	1.56	0.74	1.70	0.74	1.73	0.76	1.61
4. Earth in the Solar System	7	0.57	1.11	0.57	0.98	0.55	1.10	0.52	1.02	0.55	1.09	0.56	1.13	0.56	1.05
5. Reactions and the Chemistry of Living Systems	10	0.65	1.40	0.68	1.22	0.64	1.39	0.62	1.27	0.64	1.39	0.66	1.40	0.67	1.32
6. Investigation and Experimentation	6	0.61	0.99	0.55	0.79	0.56	0.96	0.52	0.85	0.58	0.96	0.59	1.00	0.59	0.92
Grade 10 Life Science															
1. Cell Biology	10	0.67	1.40	0.73	1.28	0.65	1.41	0.68	1.34	0.64	1.41	0.63	1.42	0.68	1.36
2. Genetics	12	0.66	1.55	0.71	1.45	0.66	1.54	0.68	1.48	0.66	1.54	0.65	1.55	0.70	1.51
3. Physiology	10	0.70	1.30	0.70	1.21	0.63	1.36	0.65	1.22	0.67	1.33	0.68	1.35	0.72	1.24
4. Ecology	11	0.74	1.39	0.74	1.28	0.72	1.41	0.70	1.32	0.72	1.41	0.71	1.44	0.75	1.33
5. Evolution	11	0.74	1.43	0.76	1.32	0.72	1.46	0.72	1.36	0.72	1.45	0.72	1.47	0.76	1.36
6. Investigation and Experimentation	6	0.58	1.01	0.51	0.89	0.53	1.01	0.45	0.94	0.53	1.02	0.55	1.04	0.59	0.94
Biology															
1. Cell Biology	9	0.58	1.36	0.66	1.27	0.55	1.36	0.60	1.31	0.57	1.36	0.55	1.36	0.63	1.33
2. Genetics	18	0.76	1.87	0.78	1.69	0.75	1.85	0.74	1.75	0.75	1.85	0.75	1.88	0.78	1.81
3. Ecology and Evolution	16	0.75	1.79	0.78	1.67	0.71	1.82	0.73	1.73	0.73	1.80	0.72	1.82	0.77	1.73
4. Physiology	11	0.72	1.44	0.76	1.31	0.71	1.45	0.72	1.35	0.72	1.44	0.72	1.46	0.75	1.38
5. Investigation and Experimentation	6	0.52	1.07	0.51	1.02	0.47	1.08	0.45	1.03	0.47	1.08	0.49	1.09	0.53	1.04
Chemistry															
1. Atomic and Molecular Structure	8	0.31	1.27	0.45	1.20	0.44	1.25	0.43	1.22	0.42	1.26	0.42	1.28	0.40	1.23
2. Chemical Bonds, Biochemistry	9	0.56	1.34	0.56	1.25	0.53	1.36	0.51	1.30	0.53	1.36	0.53	1.38	0.54	1.30
3. Kinetics, Thermodynamics	14	0.65	1.73	0.68	1.64	0.61	1.76	0.63	1.70	0.63	1.75	0.62	1.76	0.66	1.68
4. Chemical Reactions	13	0.65	1.64	0.72	1.58	0.65	1.65	0.67	1.62	0.64	1.65	0.62	1.65	0.69	1.61
5. Conservation of Matter and Stoichiometry	10	0.68	1.42	0.74	1.27	0.66	1.43	0.70	1.37	0.65	1.44	0.61	1.45	0.69	1.38
6. Investigation and Experimentation	6	0.62	0.97	0.61	0.86	0.61	1.02	0.56	0.93	0.59	1.01	0.61	1.04	0.60	0.91
Earth Science															
1. Astronomy and Cosmology	12	0.63	1.58	0.64	1.57	0.58	1.60	0.61	1.57	0.61	1.59	0.60	1.59	0.66	1.55
2. Solid Earth	14	0.65	1.71	0.64	1.67	0.65	1.71	0.59	1.68	0.64	1.71	0.62	1.73	0.67	1.67
3. The Earth's Energy	28	0.83	2.40	0.84	2.34	0.82	2.41	0.82	2.37	0.81	2.42	0.79	2.44	0.85	2.34
4. Investigation and Experimentation	6	0.63	1.03	0.59	1.00	0.59	1.04	0.54	1.00	0.57	1.06	0.56	1.09	0.64	0.99
Physics															
1. Motion and Forces	12	0.68	1.51	0.69	1.44	0.59	1.58	0.65	1.51	0.64	1.56	0.66	1.57	0.67	1.49
2. Conservation of Energy and Momentum	12	0.70	1.54	0.73	1.40	0.70	1.54	0.70	1.47	0.71	1.53	0.71	1.55	0.73	1.48
3. Heat and Thermodynamics	9	0.71	1.30	0.65	1.26	0.63	1.35	0.63	1.31	0.63	1.34	0.62	1.36	0.66	1.28
4. Waves	10	0.68	1.39	0.60	1.33	0.63	1.42	0.58	1.36	0.61	1.42	0.61	1.44	0.60	1.38
5. Electric and Magnetic Phenomena	11	0.60	1.52	0.63	1.43	0.61	1.51	0.59	1.47	0.60	1.52	0.57	1.54	0.61	1.50
6. Investigation and Experimentation	6	0.43	1.10	0.48	1.03	0.42	1.13	0.45	1.07	0.48	1.11	0.51	1.12	0.50	1.05

Subscore Reliabilities and SEM for Science by Primary Ethnicity-for-Economically Disadvantaged															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Integrated/Coordinated Science 1															
1. Biology/Life Sciences	10	0.55	1.46	0.67	1.38	0.62	1.43	0.55	1.41	0.60	1.44	0.57	1.46	0.65	1.39
2. Chemistry	15	0.55	1.79	0.61	1.78	0.54	1.78	0.53	1.79	0.52	1.80	0.51	1.80	0.58	1.79
3. Earth Sciences	17	0.74	1.86	0.76	1.80	0.76	1.86	0.70	1.82	0.74	1.86	0.72	1.89	0.77	1.81
4. Physics	12	0.39	1.64	0.54	1.61	0.47	1.61	0.58	1.59	0.47	1.61	0.41	1.62	0.46	1.62
5. Investigation and Experimentation	6	0.56	1.08	0.62	1.00	0.56	1.09	0.56	1.04	0.56	1.09	0.55	1.10	0.62	1.04
Integrated/Coordinated Science 2															
1. Biology/Life Sciences	15	–	–	0.64	1.73	0.53	1.76	0.78	1.71	0.64	1.76	0.62	1.79	0.66	1.73
2. Chemistry	6	–	–	0.52	1.11	0.36	1.10	0.10	1.26	0.39	1.14	0.06	1.15	0.40	1.15
3. Earth Sciences	15	–	–	0.77	1.72	0.62	1.77	0.77	1.69	0.68	1.77	0.49	1.81	0.69	1.76
4. Physics	18	–	–	0.70	1.93	0.11	1.73	0.73	1.85	0.58	1.94	0.26	1.90	0.56	1.97
5. Investigation and Experimentation	6	–	–	0.50	1.11	0.08	1.17	0.24	1.16	0.32	1.16	0.18	1.17	0.44	1.13
Integrated/Coordinated Science 3															
1. Biology/Life Sciences	16	–	–	0.63	1.89	0.94	1.75	–	–	0.63	1.82	–	–	0.72	1.79
2. Chemistry	23	–	–	0.76	2.26	0.00	2.12	–	–	0.60	2.16	–	–	0.65	2.16
3. Earth Sciences	7	–	–	0.65	1.14	0.88	1.00	–	–	0.51	1.22	–	–	0.61	1.19
4. Physics	8	–	–	0.56	1.22	0.51	1.49	–	–	0.33	1.28	–	–	0.37	1.28
5. Investigation and Experimentation	6	–	–	0.61	1.11	0.80	0.95	–	–	0.35	1.14	–	–	0.54	1.09
Integrated/Coordinated Science 4															
1. Biology/Life Sciences	13	–	–	–	–	–	–	–	–	–	–	–	–	0.64	1.68
2. Chemistry	10	–	–	–	–	–	–	–	–	–	–	–	–	0.47	1.45
3. Earth Sciences	15	–	–	–	–	–	–	–	–	–	–	–	–	0.84	1.63
4. Physics	16	–	–	–	–	–	–	–	–	–	–	–	–	0.40	1.84
5. Investigation and Experimentation	6	–	–	–	–	–	–	–	–	–	–	–	–	0.74	0.98

Table 8.B.44 Subscore Reliabilities and SEM for Grade-specific CSTs by Primary Ethnicity-for-Economically Disadvantaged

Subscore Reliabilities and SEM for Grade-specific CSTs by Primary Ethnicity-for-Economically Disadvantaged															
Subscore Area	N of Items	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
		Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Algebra I – 8															
1. Number Properties, Operations, and Linear Equations	17	0.76	1.80	0.78	1.57	0.76	1.75	0.76	1.68	0.75	1.79	0.76	1.82	0.76	1.73
2. Graphing and Systems of Linear Equations	14	0.72	1.69	0.79	1.52	0.74	1.67	0.77	1.61	0.74	1.67	0.72	1.69	0.76	1.65
3. Quadratics and Polynomials	21	0.77	2.04	0.82	1.86	0.77	2.01	0.79	1.96	0.78	2.02	0.77	2.04	0.79	2.01
4. Functions and Rational Expressions	13	0.56	1.63	0.74	1.56	0.64	1.61	0.70	1.60	0.62	1.62	0.58	1.61	0.66	1.62
Geometry – 9															
1. Logic and Geometric Proofs	23	0.77	2.10	0.81	1.93	0.74	2.13	0.79	2.01	0.77	2.10	0.76	2.13	0.77	2.00
2. Volume and Area Formulas	11	0.71	1.45	0.76	1.33	0.69	1.46	0.72	1.41	0.69	1.46	0.66	1.47	0.71	1.43
3. Angle Relationships, Constructions, and Lines	16	0.64	1.81	0.74	1.67	0.71	1.77	0.69	1.74	0.68	1.79	0.65	1.80	0.70	1.74
4. Trigonometry	15	0.69	1.73	0.74	1.59	0.72	1.71	0.71	1.66	0.71	1.71	0.69	1.74	0.73	1.66

Subscore Reliabilities and SEM for Grade-specific CSTs by Primary Ethnicity-for-Economically Disadvantaged															
Subscore Area	N of	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
	Items	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM	Rel.	SEM
Algebra II – 10															
1. Polynomials and Rational Expressions	19	0.80	1.83	0.78	1.67	0.72	1.87	0.76	1.78	0.77	1.84	0.76	1.89	0.76	1.81
2. Quadratics, Conics, and Complex Numbers	16	0.72	1.79	0.77	1.72	0.70	1.76	0.72	1.77	0.70	1.78	0.65	1.78	0.71	1.77
3. Exponents and Logarithms	16	0.70	1.79	0.76	1.69	0.71	1.79	0.72	1.76	0.71	1.79	0.70	1.80	0.72	1.78
4. Series, Combinatorics, and Probability and Statistics	14	0.65	1.67	0.69	1.63	0.62	1.65	0.65	1.64	0.64	1.65	0.58	1.63	0.63	1.66
Summative High School Mathematics – 11															
1. Algebra I	18	0.74	1.84	0.76	1.57	0.72	1.79	0.74	1.72	0.75	1.78	0.75	1.85	0.76	1.72
2. Geometry	19	0.78	1.89	0.78	1.69	0.77	1.90	0.76	1.83	0.76	1.91	0.77	1.96	0.77	1.80
3. Algebra II	23	0.80	2.12	0.83	1.84	0.81	2.05	0.82	1.98	0.81	2.07	0.82	2.11	0.83	1.99
4. Probability and Statistics	5	0.58	0.96	0.49	0.93	0.36	1.03	0.42	0.99	0.45	1.00	0.43	1.01	0.49	0.95
World History – 10															
1. Development of Modern Political Thought	13	0.65	1.62	0.64	1.54	0.59	1.63	0.60	1.57	0.61	1.62	0.63	1.63	0.66	1.58
2. Industrial Expansion and Imperialism	10	0.66	1.39	0.64	1.28	0.62	1.39	0.59	1.31	0.65	1.39	0.67	1.41	0.67	1.34
3. Causes and Effects of World War I	14	0.74	1.66	0.75	1.53	0.72	1.67	0.72	1.59	0.73	1.66	0.73	1.69	0.76	1.61
4. Causes and Effects of World War II	13	0.71	1.61	0.72	1.50	0.67	1.63	0.66	1.56	0.69	1.62	0.68	1.64	0.73	1.56
5 International Developments in the Post-World War II Era	10	0.68	1.40	0.69	1.30	0.64	1.41	0.64	1.34	0.66	1.40	0.67	1.42	0.70	1.36

Table 8.B.45 Reliability of Classification for ELA, Grade Two

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–20	0.05	0.02	0.00	0.01	0.00	0.08
	21–30	0.01	0.08	0.03	0.00	0.00	0.12
	31–44	0.00	0.01	0.21	0.02	0.00	0.24
	45–55	0.00	0.01	0.04	0.24	0.03	0.32
	56–65	0.00	0.00	0.00	0.04	0.20	0.24
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–20	0.05	0.02	0.00	0.01	0.00	0.08
	21–30	0.02	0.07	0.03	0.00	0.00	0.12
	31–44	0.00	0.02	0.18	0.04	0.00	0.24
	45–55	0.00	0.01	0.06	0.21	0.05	0.32
	56–65	0.00	0.00	0.00	0.05	0.19	0.24
	Estimated Proportion Consistently Classified: Total = 0.70, Proficient & Above = 0.89						

Table 8.B.46 Reliability of Classification for ELA, Grade Three

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–24	0.06	0.02	0.00	0.00	0.00	0.08
	25–35	0.01	0.11	0.03	0.00	0.00	0.15
	36–48	0.00	0.03	0.24	0.04	0.00	0.31
	49–56	0.00	0.00	0.04	0.19	0.04	0.27
	57–65	0.00	0.00	0.00	0.04	0.16	0.19
	Estimated Proportion Correctly Classified: Total = 0.76, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–24	0.06	0.02	0.00	0.00	0.00	0.08
	25–35	0.02	0.09	0.04	0.00	0.00	0.15
	36–48	0.00	0.04	0.21	0.05	0.00	0.31
	49–56	0.00	0.00	0.06	0.15	0.05	0.27
	57–65	0.00	0.00	0.00	0.05	0.15	0.19
	Estimated Proportion Consistently Classified: Total = 0.67, Proficient & Above = 0.89						

Table 8.B.47 Reliability of Classification for ELA, Grade Four

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–20	0.03	0.01	0.00	0.00	0.00	0.03
	21–29	0.01	0.05	0.02	0.01	0.00	0.09
	30–46	0.00	0.01	0.20	0.02	0.00	0.23
	47–58	0.00	0.00	0.03	0.21	0.02	0.27
	59–75	0.00	0.00	0.00	0.04	0.33	0.38
	Estimated Proportion Correctly Classified: Total = 0.82, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–20	0.03	0.01	0.00	0.00	0.00	0.03
	21–29	0.01	0.04	0.03	0.01	0.00	0.09
	30–46	0.00	0.01	0.18	0.03	0.00	0.23
	47–58	0.00	0.00	0.04	0.18	0.04	0.27
	59–75	0.00	0.00	0.01	0.05	0.32	0.38
	Estimated Proportion Consistently Classified: Total = 0.75, Proficient & Above = 0.91						

Table 8.B.48 Reliability of Classification for ELA, Grade Five

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–26	0.03	0.01	0.00	0.00	0.00	0.05
	27–35	0.01	0.05	0.02	0.00	0.00	0.08
	36–51	0.00	0.01	0.22	0.04	0.00	0.27
	52–62	0.00	0.00	0.04	0.24	0.04	0.32
	63–75	0.00	0.00	0.00	0.04	0.25	0.29
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–26	0.03	0.01	0.00	0.00	0.00	0.05
	27–35	0.01	0.04	0.03	0.00	0.00	0.08
	36–51	0.00	0.02	0.20	0.05	0.00	0.27
	52–62	0.00	0.00	0.05	0.20	0.06	0.32
	63–75	0.00	0.00	0.00	0.05	0.23	0.29
	Estimated Proportion Consistently Classified: Total = 0.70, Proficient & Above = 0.89						

Table 8.B.49 Reliability of Classification for ELA, Grade Six

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–23	0.02	0.01	0.00	0.00	0.00	0.04
	24–33	0.01	0.06	0.02	0.00	0.00	0.09
	34–49	0.00	0.01	0.23	0.03	0.00	0.27
	50–60	0.00	0.00	0.04	0.24	0.04	0.32
	61–75	0.00	0.00	0.00	0.04	0.24	0.28
	Estimated Proportion Correctly Classified: Total = 0.79, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–23	0.02	0.01	0.00	0.00	0.00	0.04
	24–33	0.01	0.05	0.03	0.00	0.00	0.09
	34–49	0.00	0.02	0.20	0.05	0.00	0.27
	50–60	0.00	0.00	0.05	0.20	0.06	0.32
	61–75	0.00	0.00	0.00	0.05	0.23	0.28
	Estimated Proportion Consistently Classified: Total = 0.71, Proficient & Above = 0.89						

Table 8.B.50 Reliability of Classification for ELA, Grade Seven

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–25	0.03	0.01	0.00	0.00	0.00	0.05
	26–35	0.01	0.07	0.02	0.00	0.00	0.10
	36–49	0.00	0.02	0.21	0.04	0.00	0.26
	50–61	0.00	0.00	0.04	0.26	0.03	0.34
	62–75	0.00	0.00	0.00	0.04	0.22	0.26
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–25	0.03	0.01	0.00	0.00	0.00	0.05
	26–35	0.01	0.06	0.03	0.00	0.00	0.10
	36–49	0.00	0.03	0.18	0.05	0.00	0.26
	50–61	0.00	0.00	0.05	0.23	0.05	0.34
	62–75	0.00	0.00	0.00	0.05	0.21	0.26
	Estimated Proportion Consistently Classified: Total = 0.70, Proficient & Above = 0.89						

Table 8.B.51 Reliability of Classification for ELA, Grade Eight

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–24	0.03	0.02	0.00	0.00	0.00	0.05
	25–33	0.01	0.06	0.03	0.00	0.00	0.10
	34–48	0.00	0.02	0.23	0.04	0.00	0.29
	49–59	0.00	0.00	0.04	0.22	0.03	0.29
	60–75	0.00	0.00	0.00	0.04	0.24	0.28
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–24	0.03	0.02	0.00	0.00	0.00	0.05
	25–33	0.02	0.05	0.03	0.00	0.00	0.10
	34–48	0.00	0.03	0.20	0.05	0.00	0.29
	49–59	0.00	0.00	0.05	0.18	0.05	0.29
	60–75	0.00	0.00	0.00	0.05	0.23	0.28
	Estimated Proportion Consistently Classified: Total = 0.70, Proficient & Above = 0.89						

Table 8.B.52 Reliability of Classification for ELA, Grade Nine

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–23	0.03	0.01	0.00	0.00	0.00	0.05
	24–33	0.01	0.07	0.02	0.00	0.00	0.10
	34–47	0.00	0.02	0.19	0.03	0.00	0.24
	48–59	0.00	0.00	0.04	0.25	0.04	0.33
	60–75	0.00	0.00	0.00	0.04	0.25	0.29
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–23	0.03	0.01	0.00	0.00	0.00	0.05
	24–33	0.01	0.06	0.03	0.00	0.00	0.10
	34–47	0.00	0.03	0.16	0.05	0.00	0.24
	48–59	0.00	0.00	0.05	0.21	0.06	0.33
	60–75	0.00	0.00	0.00	0.05	0.24	0.29
	Estimated Proportion Consistently Classified: Total = 0.70, Proficient & Above = 0.90						

Table 8.B.53 Reliability of Classification for ELA, Grade Ten

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–25	0.05	0.02	0.00	0.00	0.00	0.07
	26–36	0.01	0.08	0.02	0.00	0.00	0.11
	37–52	0.00	0.02	0.25	0.03	0.00	0.30
	53–62	0.00	0.00	0.04	0.21	0.03	0.28
	63–75	0.00	0.00	0.00	0.04	0.20	0.24
	Estimated Proportion Correctly Classified: Total = 0.79, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–25	0.05	0.02	0.00	0.00	0.00	0.07
	26–36	0.01	0.07	0.03	0.00	0.00	0.11
	37–52	0.00	0.03	0.22	0.05	0.00	0.30
	53–62	0.00	0.00	0.06	0.18	0.05	0.28
	63–75	0.00	0.00	0.00	0.05	0.19	0.24
	Estimated Proportion Consistently Classified: Total = 0.70, Proficient & Above = 0.89						

Table 8.B.54 Reliability of Classification for ELA, Grade Eleven

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–26	0.07	0.02	0.00	0.00	0.00	0.10
	27–37	0.01	0.10	0.03	0.00	0.00	0.14
	38–51	0.00	0.03	0.22	0.04	0.00	0.29
	52–61	0.00	0.00	0.04	0.19	0.04	0.27
	62–75	0.00	0.00	0.00	0.03	0.17	0.21
	Estimated Proportion Correctly Classified: Total = 0.76, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–26	0.07	0.03	0.00	0.00	0.00	0.10
	27–37	0.02	0.08	0.03	0.00	0.00	0.14
	38–51	0.00	0.04	0.19	0.05	0.00	0.29
	52–61	0.00	0.00	0.05	0.16	0.05	0.27
	62–75	0.00	0.00	0.00	0.05	0.16	0.21
	Estimated Proportion Consistently Classified: Total = 0.66, Proficient & Above = 0.89						

Table 8.B.55 Reliability of Classification for History–Social Science, Grade Eight

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–26	0.09	0.02	0.00	0.00	0.00	0.12
	27–37	0.02	0.06	0.03	0.00	0.00	0.10
	38–51	0.00	0.02	0.21	0.03	0.00	0.26
	52–61	0.00	0.00	0.04	0.16	0.03	0.23
	62–75	0.00	0.00	0.00	0.03	0.26	0.29
	Estimated Proportion Correctly Classified: Total = 0.77, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–26	0.09	0.03	0.01	0.00	0.00	0.12
	27–37	0.02	0.04	0.03	0.00	0.00	0.10
	38–51	0.00	0.03	0.18	0.04	0.00	0.26
	52–61	0.00	0.00	0.05	0.14	0.05	0.23
	62–75	0.00	0.00	0.00	0.04	0.25	0.29
	Estimated Proportion Consistently Classified: Total = 0.69, Proficient & Above = 0.90						

Table 8.B.56 Reliability of Classification for World History

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–24	0.14	0.03	0.01	0.00	0.00	0.17
	25–29	0.02	0.05	0.03	0.00	0.00	0.09
	30–40	0.00	0.03	0.21	0.04	0.00	0.28
	41–48	0.00	0.00	0.04	0.16	0.03	0.23
	49–60	0.00	0.00	0.00	0.04	0.19	0.23
	Estimated Proportion Correctly Classified: Total = 0.75, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–24	0.13	0.03	0.01	0.00	0.00	0.17
	25–29	0.03	0.03	0.03	0.00	0.00	0.09
	30–40	0.01	0.04	0.18	0.05	0.00	0.28
	41–48	0.00	0.00	0.05	0.13	0.05	0.23
	49–60	0.00	0.00	0.00	0.04	0.18	0.23
	Estimated Proportion Consistently Classified: Total = 0.66, Proficient & Above = 0.89						

Table 8.B.57 Reliability of Classification for History–Social Science, Grade Eleven

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–22	0.10	0.03	0.01	0.01	0.00	0.14
	23–29	0.01	0.07	0.03	0.00	0.00	0.12
	30–39	0.00	0.02	0.19	0.03	0.00	0.24
	40–47	0.00	0.00	0.05	0.17	0.03	0.26
	48–60	0.00	0.00	0.00	0.04	0.19	0.24
	Estimated Proportion Correctly Classified: Total = 0.72, Proficient & Above = 0.91						
Decision Consistency Alternate Form	0–22	0.09	0.03	0.01	0.01	0.00	0.14
	23–29	0.02	0.06	0.04	0.00	0.00	0.12
	30–39	0.00	0.04	0.15	0.05	0.00	0.24
	40–47	0.00	0.01	0.06	0.14	0.05	0.26
	48–60	0.00	0.00	0.00	0.05	0.18	0.24
	Estimated Proportion Consistently Classified: Total = 0.63, Proficient & Above = 0.87						

Table 8.B.58 Reliability of Classification for Mathematics, Grade Two

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–23	0.02	0.01	0.00	0.00	0.00	0.04
	24–37	0.00	0.10	0.02	0.00	0.00	0.13
	38–47	0.00	0.02	0.14	0.03	0.00	0.19
	48–56	0.00	0.00	0.04	0.22	0.04	0.30
	57–65	0.00	0.00	0.00	0.05	0.29	0.35
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–23	0.02	0.01	0.00	0.00	0.00	0.04
	24–37	0.01	0.09	0.03	0.00	0.00	0.13
	38–47	0.00	0.03	0.12	0.04	0.00	0.19
	48–56	0.00	0.00	0.05	0.19	0.06	0.30
	57–65	0.00	0.00	0.00	0.06	0.28	0.35
	Estimated Proportion Consistently Classified: Total = 0.70, Proficient & Above = 0.89						

Table 8.B.59 Reliability of Classification for Mathematics, Grade Three

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–23	0.02	0.01	0.00	0.00	0.00	0.02
	24–37	0.00	0.09	0.02	0.00	0.00	0.12
	38–47	0.00	0.02	0.14	0.03	0.00	0.19
	48–56	0.00	0.00	0.03	0.20	0.03	0.26
	57–65	0.00	0.00	0.00	0.04	0.36	0.40
	Estimated Proportion Correctly Classified: Total = 0.81, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–23	0.01	0.01	0.00	0.00	0.00	0.02
	24–37	0.01	0.08	0.03	0.00	0.00	0.12
	38–47	0.00	0.03	0.12	0.04	0.00	0.19
	48–56	0.00	0.00	0.04	0.17	0.05	0.26
	57–65	0.00	0.00	0.00	0.05	0.35	0.40
	Estimated Proportion Consistently Classified: Total = 0.73, Proficient & Above = 0.91						

Table 8.B.60 Reliability of Classification for Mathematics, Grade Four

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–20	0.01	0.01	0.00	0.00	0.00	0.02
	21–35	0.00	0.07	0.02	0.00	0.00	0.10
	36–47	0.00	0.01	0.13	0.02	0.00	0.16
	48–56	0.00	0.00	0.03	0.20	0.03	0.26
	57–65	0.00	0.00	0.00	0.05	0.41	0.46
	Estimated Proportion Correctly Classified: Total = 0.82, Proficient & Above = 0.94						
Decision Consistency Alternate Form	0–20	0.01	0.01	0.00	0.00	0.00	0.02
	21–35	0.01	0.06	0.03	0.00	0.00	0.10
	36–47	0.00	0.02	0.11	0.03	0.00	0.16
	48–56	0.00	0.00	0.04	0.16	0.05	0.26
	57–65	0.00	0.00	0.00	0.06	0.40	0.46
	Estimated Proportion Consistently Classified: Total = 0.75, Proficient & Above = 0.91						

Table 8.B.61 Reliability of Classification for Mathematics, Grade Five

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–21	0.02	0.02	0.00	0.00	0.00	0.04
	22–31	0.01	0.09	0.03	0.00	0.00	0.12
	32–41	0.00	0.02	0.14	0.03	0.00	0.19
	42–54	0.00	0.00	0.03	0.27	0.03	0.33
	55–65	0.00	0.00	0.00	0.04	0.28	0.32
	Estimated Proportion Correctly Classified: Total = 0.80, Proficient & Above = 0.94						
Decision Consistency Alternate Form	0–21	0.02	0.02	0.00	0.00	0.00	0.04
	22–31	0.02	0.07	0.03	0.00	0.00	0.12
	32–41	0.00	0.03	0.11	0.04	0.00	0.19
	42–54	0.00	0.00	0.04	0.24	0.05	0.33
	55–65	0.00	0.00	0.00	0.05	0.27	0.32
	Estimated Proportion Consistently Classified: Total = 0.72, Proficient & Above = 0.91						

Table 8.B.62 Reliability of Classification for Mathematics, Grade Six

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.02	0.02	0.00	0.00	0.00	0.04
	20–30	0.01	0.12	0.03	0.00	0.00	0.16
	31–42	0.00	0.03	0.20	0.03	0.00	0.25
	43–54	0.00	0.00	0.03	0.24	0.02	0.30
	55–65	0.00	0.00	0.00	0.03	0.22	0.25
	Estimated Proportion Correctly Classified: Total = 0.79, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–19	0.02	0.02	0.00	0.00	0.00	0.04
	20–30	0.02	0.10	0.04	0.00	0.00	0.16
	31–42	0.00	0.04	0.17	0.05	0.00	0.25
	43–54	0.00	0.00	0.05	0.21	0.04	0.30
	55–65	0.00	0.00	0.00	0.04	0.21	0.25
	Estimated Proportion Consistently Classified: Total = 0.71, Proficient & Above = 0.90						

Table 8.B.63 Reliability of Classification for Mathematics, Grade Seven

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–18	0.02	0.02	0.00	0.00	0.00	0.04
	19–28	0.01	0.12	0.03	0.00	0.00	0.17
	29–40	0.00	0.03	0.22	0.04	0.00	0.28
	41–53	0.00	0.00	0.04	0.26	0.02	0.33
	54–65	0.00	0.00	0.00	0.03	0.16	0.19
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–18	0.02	0.02	0.00	0.00	0.00	0.04
	19–28	0.02	0.10	0.04	0.00	0.00	0.17
	29–40	0.00	0.04	0.18	0.05	0.00	0.28
	41–53	0.00	0.00	0.05	0.23	0.04	0.33
	54–65	0.00	0.00	0.00	0.04	0.15	0.19
	Estimated Proportion Consistently Classified: Total = 0.69, Proficient & Above = 0.89						

Table 8.B.64 Reliability of Classification for General Mathematics

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–18	0.08	0.05	0.00	0.00	0.00	0.13
	19–28	0.03	0.21	0.04	0.00	0.00	0.29
	29–40	0.00	0.04	0.23	0.03	0.00	0.31
	41–53	0.00	0.00	0.04	0.18	0.01	0.22
	54–65	0.00	0.00	0.00	0.02	0.04	0.05
	Estimated Proportion Correctly Classified: Total = 0.74, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–18	0.07	0.05	0.00	0.00	0.00	0.13
	19–28	0.05	0.18	0.06	0.00	0.00	0.29
	29–40	0.00	0.06	0.20	0.05	0.00	0.31
	41–53	0.00	0.00	0.05	0.16	0.02	0.22
	54–65	0.00	0.00	0.00	0.02	0.04	0.05
	Estimated Proportion Consistently Classified: Total = 0.64, Proficient & Above = 0.90						

Table 8.B.65 Reliability of Classification for Algebra I

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–18	0.10	0.02	0.00	0.00	0.00	0.12
	19–27	0.03	0.16	0.06	0.02	0.01	0.28
	28–37	0.00	0.02	0.19	0.03	0.00	0.24
	38–51	0.00	0.00	0.02	0.23	0.00	0.24
	52–65	0.00	0.00	0.01	0.03	0.07	0.12
	Estimated Proportion Correctly Classified: Total = 0.75, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–18	0.10	0.02	0.00	0.00	0.00	0.12
	19–27	0.05	0.14	0.07	0.02	0.01	0.28
	28–37	0.00	0.04	0.16	0.05	0.00	0.24
	38–51	0.00	0.00	0.03	0.20	0.01	0.24
	52–65	0.00	0.00	0.01	0.03	0.07	0.12
	Estimated Proportion Consistently Classified: Total = 0.66, Proficient & Above = 0.88						

Table 8.B.66 Reliability of Classification for Geometry

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.09	0.02	0.00	0.00	0.00	0.10
	20–32	0.03	0.24	0.06	0.02	0.01	0.36
	33–43	0.00	0.02	0.20	0.02	0.00	0.24
	44–55	0.00	0.00	0.02	0.18	0.00	0.20
	56–65	0.00	0.00	0.01	0.03	0.05	0.10
	Estimated Proportion Correctly Classified: Total = 0.76, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–19	0.08	0.02	0.00	0.00	0.00	0.10
	20–32	0.04	0.22	0.08	0.02	0.01	0.36
	33–43	0.00	0.04	0.17	0.04	0.00	0.24
	44–55	0.00	0.00	0.03	0.16	0.01	0.20
	56–65	0.00	0.01	0.01	0.03	0.05	0.10
	Estimated Proportion Consistently Classified: Total = 0.68, Proficient & Above = 0.89						

Table 8.B.67 Reliability of Classification for Algebra II

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–21	0.10	0.04	0.00	0.00	0.00	0.14
	22–30	0.03	0.18	0.04	0.00	0.00	0.25
	31–40	0.00	0.05	0.20	0.03	0.00	0.28
	41–52	0.00	0.00	0.04	0.18	0.01	0.23
	53–65	0.00	0.00	0.00	0.02	0.08	0.10
	Estimated Proportion Correctly Classified: Total = 0.74, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–21	0.09	0.05	0.00	0.00	0.00	0.14
	22–30	0.05	0.15	0.06	0.00	0.00	0.25
	31–40	0.00	0.06	0.16	0.05	0.00	0.28
	41–52	0.00	0.00	0.05	0.16	0.02	0.23
	53–65	0.00	0.00	0.00	0.02	0.08	0.10
	Estimated Proportion Consistently Classified: Total = 0.64, Proficient & Above = 0.90						

Table 8.B.68 Reliability of Classification for Summative High School Mathematics

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–22	0.02	0.01	0.00	0.00	0.00	0.04
	23–38	0.01	0.16	0.03	0.00	0.00	0.19
	39–48	0.00	0.03	0.17	0.04	0.00	0.23
	49–58	0.00	0.00	0.04	0.27	0.03	0.34
	59–65	0.00	0.00	0.00	0.04	0.16	0.19
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–22	0.02	0.01	0.00	0.00	0.00	0.04
	23–38	0.01	0.14	0.04	0.00	0.00	0.19
	39–48	0.00	0.04	0.14	0.05	0.00	0.23
	49–58	0.00	0.00	0.05	0.23	0.05	0.34
	59–65	0.00	0.00	0.00	0.05	0.15	0.19
	Estimated Proportion Consistently Classified: Total = 0.69, Proficient & Above = 0.89						

Table 8.B.69 Reliability of Classification for Integrated Mathematics 1

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–18	0.14	0.05	0.00	0.00	0.00	0.19
	19–28	0.04	0.32	0.07	0.01	0.00	0.45
	29–38	0.00	0.04	0.20	0.00	0.00	0.25
	39–51	0.00	0.00	0.03	0.07	0.00	0.10
	52–65	0.00	0.00	0.00	0.01	0.00	0.02
	Estimated Proportion Correctly Classified: Total = 0.72, Proficient & Above = 0.94						
Decision Consistency Alternate Form	0–18	0.13	0.06	0.00	0.00	0.00	0.19
	19–28	0.07	0.27	0.10	0.01	0.00	0.45
	29–38	0.00	0.06	0.16	0.02	0.00	0.25
	39–51	0.00	0.00	0.04	0.06	0.00	0.10
	52–65	0.00	0.00	0.00	0.01	0.00	0.02
	Estimated Proportion Consistently Classified: Total = 0.62, Proficient & Above = 0.92						

Table 8.B.70 Reliability of Classification for Integrated Mathematics 2

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–17	0.05	0.05	0.00	0.00	0.00	0.10
	18–25	0.02	0.20	0.06	0.00	0.00	0.28
	26–36	0.00	0.06	0.29	0.03	0.00	0.38
	37–49	0.00	0.00	0.05	0.15	0.00	0.20
	50–65	0.00	0.00	0.00	0.01	0.02	0.03
	Estimated Proportion Correctly Classified: Total = 0.71, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–17	0.05	0.05	0.01	0.00	0.00	0.10
	18–25	0.05	0.15	0.08	0.00	0.00	0.28
	26–36	0.00	0.08	0.24	0.06	0.00	0.38
	37–49	0.00	0.00	0.05	0.14	0.01	0.20
	50–65	0.00	0.00	0.00	0.01	0.02	0.03
	Estimated Proportion Consistently Classified: Total = 0.60, Proficient & Above = 0.89						

Table 8.B.71 Reliability of Classification for Integrated Mathematics 3

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–18	0.11	0.05	0.00	0.00	0.00	0.16
	19–26	0.03	0.15	0.04	0.00	0.00	0.22
	27–35	0.00	0.04	0.17	0.03	0.00	0.25
	36–48	0.00	0.00	0.04	0.21	0.02	0.26
	49–65	0.00	0.00	0.00	0.02	0.09	0.11
	Estimated Proportion Correctly Classified: Total = 0.73, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–18	0.10	0.05	0.01	0.00	0.00	0.16
	19–26	0.05	0.12	0.05	0.00	0.00	0.22
	27–35	0.00	0.05	0.14	0.05	0.00	0.25
	36–48	0.00	0.00	0.05	0.18	0.03	0.26
	49–65	0.00	0.00	0.00	0.03	0.09	0.11
	Estimated Proportion Consistently Classified: Total = 0.63, Proficient & Above = 0.90						

Table 8.B.72 Reliability of Classification for Science, Grade Five

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–22	0.04	0.02	0.00	0.00	0.00	0.06
	23–29	0.01	0.06	0.03	0.00	0.00	0.10
	30–41	0.00	0.02	0.21	0.04	0.00	0.28
	42–51	0.00	0.00	0.04	0.25	0.03	0.33
	52–60	0.00	0.00	0.00	0.04	0.20	0.24
	Estimated Proportion Correctly Classified: Total = 0.76, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–22	0.04	0.02	0.00	0.00	0.00	0.06
	23–29	0.02	0.05	0.03	0.00	0.00	0.10
	30–41	0.00	0.03	0.18	0.05	0.00	0.28
	42–51	0.00	0.00	0.06	0.22	0.05	0.33
	52–60	0.00	0.00	0.00	0.05	0.19	0.24
	Estimated Proportion Consistently Classified: Total = 0.67, Proficient & Above = 0.89						

Table 8.B.73 Reliability of Classification for Science, Grade Eight

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–23	0.05	0.02	0.00	0.00	0.00	0.07
	24–31	0.01	0.07	0.03	0.00	0.00	0.11
	32–38	0.00	0.02	0.09	0.04	0.00	0.16
	39–46	0.00	0.00	0.04	0.17	0.04	0.25
	47–60	0.00	0.00	0.00	0.04	0.37	0.42
	Estimated Proportion Correctly Classified: Total = 0.76, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–23	0.05	0.02	0.00	0.00	0.00	0.07
	24–31	0.02	0.06	0.03	0.00	0.00	0.11
	32–38	0.00	0.03	0.07	0.05	0.00	0.16
	39–46	0.00	0.01	0.05	0.14	0.06	0.25
	47–60	0.00	0.00	0.00	0.06	0.36	0.42
	Estimated Proportion Consistently Classified: Total = 0.67, Proficient & Above = 0.89						

Table 8.B.74 Reliability of Classification for Life Science (Grade 10)

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–20	0.06	0.02	0.00	0.00	0.00	0.09
	21–27	0.01	0.07	0.03	0.00	0.00	0.11
	28–39	0.00	0.02	0.20	0.03	0.00	0.26
	40–48	0.00	0.00	0.04	0.18	0.03	0.26
	49–60	0.00	0.00	0.00	0.04	0.25	0.28
	Estimated Proportion Correctly Classified: Total = 0.76, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–20	0.06	0.02	0.00	0.00	0.00	0.09
	21–27	0.02	0.05	0.04	0.00	0.00	0.11
	28–39	0.00	0.03	0.18	0.05	0.00	0.26
	40–48	0.00	0.00	0.05	0.15	0.05	0.26
	49–60	0.00	0.00	0.00	0.05	0.24	0.28
	Estimated Proportion Consistently Classified: Total = 0.68, Proficient & Above = 0.90						

Table 8.B.75 Reliability of Classification for Biology

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–18	0.05	0.02	0.00	0.00	0.00	0.08
	19–24	0.01	0.06	0.03	0.00	0.00	0.10
	25–38	0.00	0.02	0.26	0.03	0.00	0.32
	39–48	0.00	0.00	0.04	0.20	0.03	0.27
	49–60	0.00	0.00	0.00	0.03	0.19	0.22
	Estimated Proportion Correctly Classified: Total = 0.77, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–18	0.05	0.02	0.01	0.00	0.00	0.08
	19–24	0.02	0.04	0.04	0.00	0.00	0.10
	25–38	0.00	0.03	0.23	0.05	0.00	0.32
	39–48	0.00	0.00	0.05	0.17	0.05	0.27
	49–60	0.00	0.00	0.00	0.04	0.18	0.22
	Estimated Proportion Consistently Classified: Total = 0.68, Proficient & Above = 0.89						

Table 8.B.76 Reliability of Classification for Chemistry

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–20	0.05	0.03	0.00	0.00	0.00	0.08
	21–27	0.01	0.08	0.04	0.00	0.00	0.13
	28–41	0.00	0.03	0.32	0.04	0.00	0.39
	42–50	0.00	0.00	0.05	0.18	0.02	0.25
	51–60	0.00	0.00	0.00	0.03	0.11	0.15
	Estimated Proportion Correctly Classified: Total = 0.75, Proficient & Above = 0.91						
Decision Consistency Alternate Form	0–20	0.05	0.03	0.00	0.00	0.00	0.08
	21–27	0.02	0.06	0.04	0.00	0.00	0.13
	28–41	0.00	0.05	0.29	0.06	0.00	0.39
	42–50	0.00	0.00	0.06	0.16	0.04	0.25
	51–60	0.00	0.00	0.00	0.04	0.11	0.15
	Estimated Proportion Consistently Classified: Total = 0.66, Proficient & Above = 0.88						

Table 8.B.77 Reliability of Classification for Earth Science

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.09	0.03	0.00	0.00	0.00	0.12
	20–25	0.02	0.07	0.04	0.00	0.00	0.13
	26–39	0.00	0.03	0.30	0.04	0.00	0.37
	40–49	0.00	0.00	0.04	0.20	0.02	0.26
	50–60	0.00	0.00	0.00	0.03	0.08	0.11
	Estimated Proportion Correctly Classified: Total = 0.74, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–19	0.08	0.03	0.01	0.00	0.00	0.12
	20–25	0.03	0.06	0.04	0.00	0.00	0.13
	26–39	0.01	0.04	0.27	0.05	0.00	0.37
	40–49	0.00	0.00	0.06	0.17	0.04	0.26
	50–60	0.00	0.00	0.00	0.03	0.07	0.11
	Estimated Proportion Consistently Classified: Total = 0.64, Proficient & Above = 0.89						

Table 8.B.78 Reliability of Classification for Physics

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–18	0.04	0.02	0.00	0.00	0.00	0.07
	19–24	0.01	0.05	0.03	0.00	0.00	0.09
	25–38	0.00	0.02	0.26	0.04	0.00	0.32
	39–48	0.00	0.00	0.04	0.23	0.03	0.31
	49–60	0.00	0.00	0.00	0.04	0.19	0.22
	Estimated Proportion Correctly Classified: Total = 0.76, Proficient & Above = 0.91						
Decision Consistency Alternate Form	0–18	0.04	0.02	0.01	0.00	0.00	0.07
	19–24	0.02	0.04	0.03	0.00	0.00	0.09
	25–38	0.00	0.03	0.23	0.05	0.00	0.32
	39–48	0.00	0.00	0.06	0.19	0.05	0.31
	49–60	0.00	0.00	0.00	0.05	0.18	0.22
	Estimated Proportion Consistently Classified: Total = 0.68, Proficient & Above = 0.88						

Table 8.B.79 Reliability of Classification for Integrated/Coordinated Science 1

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–20	0.12	0.04	0.01	0.00	0.00	0.16
	21–26	0.02	0.09	0.04	0.00	0.00	0.15
	27–40	0.00	0.04	0.36	0.04	0.00	0.44
	41–49	0.00	0.00	0.04	0.15	0.01	0.20
	50–60	0.00	0.00	0.00	0.02	0.02	0.04
	Estimated Proportion Correctly Classified: Total = 0.74, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–20	0.11	0.04	0.01	0.00	0.00	0.16
	21–26	0.04	0.07	0.05	0.00	0.00	0.15
	27–40	0.01	0.05	0.32	0.06	0.00	0.44
	41–49	0.00	0.00	0.05	0.13	0.02	0.20
	50–60	0.00	0.00	0.00	0.02	0.02	0.04
	Estimated Proportion Consistently Classified: Total = 0.64, Proficient & Above = 0.89						

Table 8.B.80 Reliability of Classification for Integrated/Coordinated Science 2

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–18	0.07	0.06	0.00	0.00	0.00	0.13
	19–24	0.03	0.12	0.04	0.00	0.00	0.18
	25–38	0.01	0.06	0.36	0.03	0.00	0.46
	39–48	0.00	0.00	0.04	0.12	0.01	0.16
	49–60	0.00	0.00	0.00	0.02	0.04	0.06
	Estimated Proportion Correctly Classified: Total = 0.71, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–18	0.07	0.05	0.01	0.00	0.00	0.13
	19–24	0.04	0.08	0.06	0.00	0.00	0.18
	25–38	0.02	0.07	0.32	0.05	0.00	0.46
	39–48	0.00	0.00	0.05	0.10	0.02	0.16
	49–60	0.00	0.00	0.00	0.02	0.04	0.06
	Estimated Proportion Consistently Classified: Total = 0.61, Proficient & Above = 0.90						

Table 8.B.81 Reliability of Classification for Integrated/Coordinated Science 3

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–17	0.17	0.05	0.00	0.00	0.00	0.23
	18–24	0.04	0.17	0.08	0.01	0.00	0.31
	25–38	0.00	0.01	0.30	0.00	0.00	0.32
	39–47	0.00	0.00	0.04	0.07	0.00	0.11
	48–60	0.00	0.01	0.01	0.01	0.01	0.03
	Estimated Proportion Correctly Classified: Total = 0.73, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–17	0.17	0.06	0.01	0.00	0.00	0.23
	18–24	0.06	0.14	0.09	0.02	0.00	0.31
	25–38	0.00	0.04	0.27	0.01	0.00	0.32
	39–47	0.00	0.00	0.04	0.06	0.01	0.11
	48–60	0.00	0.01	0.01	0.01	0.01	0.03
	Estimated Proportion Consistently Classified: Total = 0.64, Proficient & Above = 0.91						

Table 8.B.82 Reliability of Classification for Integrated/Coordinated Science 4

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–21	0.40	0.07	0.00	0.00	0.00	0.48
	22–27	0.00	0.11	0.00	0.00	0.00	0.16
	28–40	0.00	0.06	0.22	0.00	0.00	0.29
	41–49	0.00	0.00	0.00	0.00	0.00	0.07
	50–60	0.00	0.00	0.00	0.00	0.00	0.00
	Estimated Proportion Correctly Classified: Total = 0.74, Proficient & Above = 0.94						
Decision Consistency Alternate Form	0–21	0.37	0.08	0.02	0.00	0.00	0.48
	22–27	0.05	0.07	0.03	0.01	0.00	0.16
	28–40	0.02	0.06	0.19	0.01	0.00	0.29
	41–49	0.01	0.01	0.03	0.02	0.00	0.07
	50–60	0.00	0.00	0.00	0.00	0.00	0.00
	Estimated Proportion Consistently Classified: Total = 0.66, Proficient & Above = 0.93						

Table 8.B.83 Reliability of Classification for Algebra I – Grade 8

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–18	0.03	0.03	0.00	0.00	0.00	0.06
	19–27	0.02	0.14	0.04	0.00	0.00	0.20
	28–37	0.00	0.03	0.18	0.03	0.00	0.24
	38–51	0.00	0.00	0.04	0.27	0.02	0.33
	52–65	0.00	0.00	0.00	0.03	0.15	0.17
	Estimated Proportion Correctly Classified: Total = 0.76, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–18	0.03	0.03	0.00	0.00	0.00	0.06
	19–27	0.03	0.11	0.05	0.00	0.00	0.19
	28–37	0.00	0.05	0.15	0.05	0.00	0.24
	38–51	0.00	0.00	0.05	0.24	0.04	0.33
	52–65	0.00	0.00	0.00	0.03	0.14	0.17
	Estimated Proportion Consistently Classified: Total = 0.67, Proficient & Above = 0.89						

Table 8.B.84 Reliability of Classification for Geometry – Grade 9

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.02	0.02	0.00	0.00	0.00	0.04
	20–32	0.01	0.19	0.04	0.00	0.00	0.23
	33–43	0.00	0.03	0.21	0.04	0.00	0.28
	44–55	0.00	0.00	0.04	0.24	0.02	0.31
	56–65	0.00	0.00	0.00	0.03	0.11	0.14
	Estimated Proportion Correctly Classified: Total = 0.77, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–19	0.02	0.02	0.00	0.00	0.00	0.04
	20–32	0.02	0.16	0.05	0.00	0.00	0.23
	33–43	0.00	0.05	0.18	0.05	0.00	0.28
	44–55	0.00	0.00	0.05	0.22	0.04	0.31
	56–65	0.00	0.00	0.00	0.03	0.10	0.14
	Estimated Proportion Consistently Classified: Total = 0.67, Proficient & Above = 0.89						

Table 8.B.85 Reliability of Classification for Algebra II – Grade 10

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–21	0.06	0.03	0.00	0.00	0.00	0.10
	22–30	0.02	0.15	0.04	0.00	0.00	0.21
	31–40	0.00	0.04	0.22	0.04	0.00	0.30
	41–52	0.00	0.00	0.04	0.23	0.01	0.28
	53–65	0.00	0.00	0.00	0.03	0.08	0.11
	Estimated Proportion Correctly Classified: Total = 0.74, Proficient & Above = 0.91						
Decision Consistency Alternate Form	0–21	0.06	0.03	0.00	0.00	0.00	0.10
	22–30	0.03	0.12	0.05	0.00	0.00	0.21
	31–40	0.00	0.06	0.18	0.06	0.00	0.30
	41–52	0.00	0.00	0.06	0.20	0.03	0.28
	53–65	0.00	0.00	0.00	0.03	0.08	0.11
	Estimated Proportion Consistently Classified: Total = 0.64, Proficient & Above = 0.88						

Table 8.B.86 Reliability of Classification for Summative High School Mathematics – Grade 11

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–22	0.03	0.01	0.00	0.00	0.00	0.04
	23–38	0.01	0.18	0.03	0.00	0.00	0.22
	39–48	0.00	0.03	0.18	0.04	0.00	0.25
	49–58	0.00	0.00	0.04	0.26	0.03	0.33
	59–65	0.00	0.00	0.00	0.03	0.13	0.16
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–22	0.03	0.01	0.00	0.00	0.00	0.04
	23–38	0.01	0.16	0.04	0.00	0.00	0.22
	39–48	0.00	0.04	0.15	0.05	0.00	0.25
	49–58	0.00	0.00	0.05	0.23	0.05	0.33
	59–65	0.00	0.00	0.00	0.04	0.12	0.16
	Estimated Proportion Consistently Classified: Total = 0.69, Proficient & Above = 0.89						

Table 8.B.87 Reliability of Classification for World History – Grade 10

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy	0–24	0.12	0.03	0.01	0.00	0.00	0.16
	25–29	0.02	0.04	0.03	0.00	0.00	0.09
	30–40	0.00	0.03	0.22	0.04	0.00	0.29
All-forms Average	41–48	0.00	0.00	0.04	0.16	0.03	0.24
	49–60	0.00	0.00	0.00	0.04	0.19	0.22
	Estimated Proportion Correctly Classified: Total = 0.73, Proficient & Above = 0.92						
Decision Consistency	0–24	0.12	0.03	0.01	0.00	0.00	0.16
	25–29	0.03	0.03	0.03	0.00	0.00	0.09
	30–40	0.01	0.04	0.18	0.05	0.00	0.29
Alternate Form	41–48	0.00	0.00	0.06	0.13	0.05	0.24
	49–60	0.00	0.00	0.00	0.05	0.18	0.22
	Estimated Proportion Consistently Classified: Total = 0.64, Proficient & Above = 0.88						

Table 8.B.88 Interrater Agreement Analyses for Writing, Grade Four

		Rater 1								
		1	**%**	**2**	**%**	**3**	**%**	**4**	**%**	**Total**
Rater 2	**1**	282	0.66	219	0.51	17	0.04	0	0.00	518
	2	265	0.62	6,782	15.93	3,764	8.84	98	0.23	10,909
	3	23	0.05	3,841	9.02	16,579	38.95	3,135	7.36	23,578
	4	2	0.00	113	0.27	3,096	7.27	4,354	10.23	7,565
	Total	572	1.34	10,955	25.73	23,456	55.10	7,587	17.82	42,570

Percent Exact = 65.77%

Percent Adjacent = 33.64%

Percent Exact + Adjacent = 99.41%

Kappa = 0.43

Weighted Kappa = 0.51

Table 8.B.89 Interrater Agreement Analyses for Writing, Grade Seven

		Rater 1								
		1	**%**	**2**	**%**	**3**	**%**	**4**	**%**	**Total**
Rater 2	**1**	254	0.59	203	0.47	16	0.04	1	0.00	474
	2	450	1.05	7,791	18.12	3,704	8.61	171	0.40	12,116
	3	25	0.06	3,725	8.66	15,616	36.32	3,375	7.85	22,741
	4	1	0.00	199	0.46	3,423	7.96	4,041	9.40	7,664
	Total	730	1.70	11,918	27.72	22,759	52.93	7,588	17.65	42,995

Percent Exact = 64.43%

Percent Adjacent = 34.61%

Percent Exact + Adjacent = 99.04%

Kappa = 0.42

Weighted Kappa = 0.50

Table 8.B.90 Descriptive Statistics for the Ratings by the Two Raters, Grade Four Writing

Grade	N *	Rater 1		Rater 2		
		Mean	Std	Mean	Std	*Pearson Correlation*
4	42,570	2.89	0.69	2.90	0.69	0.62

* Number of students who received valid ratings of 1–4

Table 8.B.91 Descriptive Statistics for the Ratings by the Two Raters, Grade Seven Writing

Grade	N *	Rater 1		Rater 2		
		Mean	Std	Mean	Std	*Pearson Correlation*
7	42,995	2.87	0.71	2.87	0.70	0.61

* Number of students who received valid ratings of 1–4

Table 8.B.92 Generalizability Analyses for Grade Four Writing—[(Person: Essay) x Rater]

Effect	Degrees of Freedom	Sum of Squares	Mean Squares	Estimated Variance Components	Percentage of Total Variance
E	1	18.87	18.87	0.01	2.50
P:E	42568	32757.45	0.77	0.29	60.49
R	1	0.20	0.20	0.00	0.02
ER	1	0.10	0.10	0.00	0.00
PR:E	42568	7670.69	0.18	0.18	36.99
Note: E = Essay Prompt, P = Person and R = Rating				**G-Coefficient = 0.77**	

Table 8.B.93 Generalizability Analyses for Grade Seven Writing—[(Person: Essay) x Rater]

Effect	Degrees of Freedom	Sum of Squares	Mean Squares	Estimated Variance Components	Percentage of Total Variance
E	1	0.78	0.78	0.00	0.01
P:E	42993	34374.05	0.80	0.30	61.18
R	1	1.77	1.77	0.00	0.04
ER	1	0.13	0.13	0.00	0.00
PR:E	42993	8269.10	0.19	0.19	38.76
Note: E = Essay Prompt, P = Person and R = Rating				**G-Coefficient = 0.76**	

Appendix 8.C—Validity Analyses

Note that, while the correlations in Appendix 8.C are reported only for samples that comprise 11 or more examinees, results based on samples that contain 50 or fewer examinees should be interpreted with caution due to small sample sizes. Correlations between scores on any two content-area tests where 10 or fewer examinees took the tests are expressed as hyphens. Correlations between scores on two content-area tests that cannot be administered together to the same group of students are expressed as "N/A."

Table 8.C.1 CST Content Area Correlations (Male)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**233,509**	0.79					
	2. Mathematics	232,954	**234,433**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**219,433**	0.79					
	2. Mathematics	218,262	**221,790**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**213,026**	0.75					
	2. Mathematics	212,142	**216,432**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**209,918**	0.75	0.82				
	2. Mathematics	208,676	**212,599**	0.75				
	3. Science	209,231	209,692	**211,341**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**212,371**	0.79					
	2. Mathematics	211,002	**214,513**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**216,576**	0.75	0.61				
	2. Mathematics	193,815	**196,571**	N/A				
	3. Algebra I	21,045	N/A	**21,073**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**215,331**	0.82	0.65	0.65	0.58	0.64	0.81
	2. History–Social Science	214,476	**232,256**	0.63	0.60	0.52	0.59	0.81
	3. General Mathematics	66,542	78,980	**79,735**	N/A	N/A	N/A	0.71
	4. Algebra I	130,170	130,934	N/A	**131,209**	N/A	N/A	0.69
	5. Geometry	15,756	15,753	N/A	N/A	**15,773**	N/A	0.62
	6. Algebra II	587	587	N/A	N/A	N/A	**588**	0.62
	7. Science	213,793	215,790	67,403	130,326	15,750	585	**216,293**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**229,615**	0.79	0.64	0.58	0.65	0.60	0.53	0.80	0.79	0.75	0.77
	2. World History	15,918	**16,632**	0.57	0.58	0.67	0.63	0.50	0.82	0.79	0.75	0.76
	3. General Mathematics	18,994	1,236	**24,162**	N/A	N/A	N/A	N/A	0.63	0.67	0.64	0.63
	4. Algebra I	119,262	6,028	N/A	**121,834**	N/A	N/A	N/A	0.62	0.71	0.55	0.67
	5. Geometry	67,683	6,121	N/A	N/A	**67,902**	N/A	N/A	0.69	0.83	0.64	0.78
9	**6. Algebra II**	18,146	2,366	N/A	N/A	N/A	**18,210**	N/A	0.64	0.79	0.53	0.75
	7. Summ. H.S. Mathematics	620	114	N/A	N/A	N/A	N/A	**622**	0.57	0.55	0.65	0.78
	8. Biology	112,237	9,935	3,923	46,250	48,263	13,767	423	**115,985**	N/A	N/A	N/A
	9. Chemistry	2,871	917	30	445	1,241	1,061	73	N/A	**2,950**	N/A	N/A
	10. Earth Science	61,948	1,478	9,037	44,771	9,041	858	20	N/A	N/A	**67,833**	N/A
	11. Physics	8,047	628	38	2,824	3,632	1,472	78	N/A	N/A	N/A	**8,256**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**223,768**	0.77	0.53	0.62	0.58	0.56	0.80	0.79	0.71	0.72	0.75
	2. World History	199,564	**211,129**	0.49	0.54	0.51	0.46	0.77	0.77	0.67	0.73	0.71
	3. Algebra I	50,699	46,705	**52,310**	N/A	N/A	N/A	0.53	0.55	0.61	0.52	0.65
	4. Geometry	74,646	70,473	N/A	**75,460**	N/A	N/A	0.63	0.64	0.72	0.56	0.75
	5. Algebra II	63,050	58,771	N/A	N/A	**63,440**	N/A	0.58	0.61	0.69	0.45	0.65
10	**6. Summ. H.S. Mathematics**	14,016	12,589	N/A	N/A	N/A	**14,038**	0.55	0.60	0.65	0.46	0.65
	7. Life Science	219,389	199,485	49,852	74,240	62,887	13,996	**222,564**	0.87	0.77	0.77	0.78
	8. Biology	105,135	105,225	31,368	45,279	19,431	2,896	105,212	**111,870**	N/A	N/A	N/A
	9. Chemistry	67,184	62,234	2,319	16,559	37,619	9,697	67,053	N/A	**67,744**	N/A	N/A
	10. Earth Science	15,100	15,413	7,238	5,048	1,214	119	15,098	N/A	N/A	**16,829**	N/A
	11. Physics	5,522	4,817	405	1,642	2,382	985	5,496	N/A	N/A	N/A	**5,622**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**217,502**	0.57	0.80	0.51	0.54	0.49	0.62	0.81	0.72	0.72	0.72
	2. World History	6,837	**7,337**	0.63	0.36	0.41	0.21	0.31	0.61	0.34	0.63	0.45
	3. History–Social Science	213,423	6,499	**224,493**	0.48	0.48	0.44	0.50	0.79	0.67	0.75	0.67
	4. Algebra I	24,154	2,172	24,019	**25,070**	N/A	N/A	N/A	0.53	0.60	0.48	0.64
	5. Geometry	38,996	1,493	38,987	N/A	**39,663**	N/A	N/A	0.58	0.62	0.52	0.65
11	**6. Algebra II**	56,818	783	57,332	N/A	N/A	**57,865**	N/A	0.50	0.61	0.43	0.61
	7. Summ. H.S. Mathematics	61,985	398	61,841	N/A	N/A	N/A	**62,156**	0.62	0.74	0.46	0.69
	8. Biology	43,999	2,003	45,460	7,000	9,612	9,298	13,349	**46,270**	N/A	N/A	N/A
	9. Chemistry	62,921	734	63,472	1,540	9,591	28,613	20,229	N/A	**63,920**	N/A	N/A
	10. Earth Science	20,699	992	22,229	5,620	5,942	3,183	1,922	N/A	N/A	**22,695**	N/A
	11. Physics	31,852	286	31,956	432	2,342	7,430	20,575	N/A	N/A	N/A	**32,170**

Table 8.C.2 CST Content Area Correlations (Female)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**225,084**	0.79					
	2. Mathematics	224,662	**225,411**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**216,581**	0.79					
	2. Mathematics	215,773	**217,118**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**213,218**	0.75					
	2. Mathematics	212,442	**214,204**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**210,651**	0.74	0.81				
	2. Mathematics	209,650	**211,191**	0.74				
	3. Science	210,093	209,949	**211,066**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**212,795**	0.78					
	2. Mathematics	211,668	**213,104**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**216,098**	0.75	0.62				
	2. Mathematics	194,890	**196,012**	N/A				
	3. Algebra I	19,865	N/A	**19,877**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**213,951**	0.82	0.64	0.64	0.60	0.67	0.81
	2. History–Social Science	213,332	**222,064**	0.62	0.62	0.58	0.67	0.81
	3. General Mathematics	60,293	66,277	**66,705**	N/A	N/A	N/A	0.69
	4. Algebra I	136,497	136,783	N/A	**136,999**	N/A	N/A	0.70
	5. Geometry	15,157	15,143	N/A	N/A	**15,181**	N/A	0.67
	6. Algebra II	416	415	N/A	N/A	N/A	**416**	0.71
	7. Science	212,867	213,782	60,573	136,489	15,143	415	**214,130**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**225,555**	0.79	0.63	0.57	0.66	0.62	0.57	0.80	0.80	0.74	0.76
	2. World History	15,637	**15,951**	0.54	0.59	0.66	0.68	0.49	0.81	0.84	0.72	0.77
	3. General Mathematics	15,105	903	**17,662**	N/A	N/A	N/A	N/A	0.60	0.55	0.60	0.81
	4. Algebra I	110,729	5,200	N/A	**112,014**	N/A	N/A	N/A	0.61	0.73	0.54	0.69
	5. Geometry	77,412	6,861	N/A	N/A	**77,548**	N/A	N/A	0.70	0.81	0.65	0.77
9	**6. Algebra II**	18,198	2,496	N/A	N/A	N/A	**18,239**	N/A	0.67	0.80	0.54	0.73
	7. Summ. H.S. Mathematics	380	79	N/A	N/A	N/A	N/A	**381**	0.57	0.57	–	0.75
	8. Biology	120,653	10,243	3,137	45,851	57,052	14,176	279	**122,619**	N/A	N/A	N/A
	9. Chemistry	2,736	720	18	391	1,303	935	44	N/A	**2,775**	N/A	N/A
	10. Earth Science	56,186	1,248	6,674	39,986	9,341	810	6	N/A	N/A	**59,208**	N/A
	11. Physics	8,030	689	40	2,597	3,968	1,356	43	N/A	N/A	N/A	**8,128**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**221,084**	0.77	0.50	0.60	0.57	0.56	0.80	0.79	0.71	0.73	0.74
	2. World History	199,624	**205,691**	0.47	0.55	0.54	0.54	0.77	0.77	0.69	0.74	0.72
	3. Algebra I	40,878	37,187	**41,689**	N/A	N/A	N/A	0.51	0.52	0.56	0.50	0.61
	4. Geometry	76,828	72,390	N/A	**77,298**	N/A	N/A	0.62	0.63	0.69	0.56	0.72
	5. Algebra II	72,933	68,024	N/A	N/A	**73,156**	N/A	0.59	0.62	0.70	0.49	0.66
10	**6. Summ. H.S. Mathematics**	13,103	11,802	N/A	N/A	N/A	**13,115**	0.59	0.64	0.69	0.65	0.65
	7. Life Science	217,580	198,817	40,217	76,331	72,586	13,066	**219,292**	0.87	0.76	0.77	0.77
	8. Biology	99,809	97,519	25,290	44,944	21,035	2,764	99,417	**103,491**	N/A	N/A	N/A
	9. Chemistry	77,982	72,392	2,447	19,297	45,859	9,248	77,765	N/A	**78,328**	N/A	N/A
	10. Earth Science	12,327	12,019	5,215	4,624	1,160	129	12,245	N/A	N/A	**13,174**	N/A
	11. Physics	4,837	4,212	314	1,652	2,118	653	4,814	N/A	N/A	N/A	**4,883**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**215,965**	0.57	0.81	0.49	0.52	0.47	0.61	0.80	0.70	0.75	0.73
	2. World History	5,343	**5,615**	0.61	0.39	0.36	0.26	0.27	0.57	0.37	0.54	0.35
	3. History–Social Science	212,488	5,011	**218,594**	0.47	0.47	0.43	0.53	0.78	0.67	0.76	0.69
	4. Algebra I	18,453	1,492	18,229	**18,913**	N/A	N/A	N/A	0.51	0.53	0.49	0.61
	5. Geometry	36,027	1,142	35,846	N/A	**36,400**	N/A	N/A	0.55	0.57	0.52	0.62
11	**6. Algebra II**	61,464	692	61,569	N/A	N/A	**62,131**	N/A	0.48	0.58	0.43	0.61
	7. Summ. H.S. Mathematics	70,242	410	69,943	N/A	N/A	N/A	**70,365**	0.64	0.74	0.52	0.71
	8. Biology	50,971	1,477	51,663	5,293	8,794	11,699	20,955	**52,261**	N/A	N/A	N/A
	9. Chemistry	68,833	685	68,958	1,462	10,079	31,738	22,156	N/A	**69,457**	N/A	N/A
	10. Earth Science	17,925	771	18,667	4,139	4,999	2,868	2,561	N/A	N/A	**19,035**	N/A
	11. Physics	26,094	202	26,100	317	1,938	6,230	16,735	N/A	N/A	N/A	**26,255**

Table 8.C.3 CST Content Area Correlations (Gender unknown)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**232**	0.83					
	2. Mathematics	230	**233**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**184**	0.79					
	2. Mathematics	179	**201**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**129**	0.80					
	2. Mathematics	125	**130**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**112**	0.72	0.83				
	2. Mathematics	111	**113**	0.74				
	3. Science	110	112	**113**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**144**	0.77					
	2. Mathematics	143	**144**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**136**	0.67	–				
	2. Mathematics	133	**135**	N/A				
	3. Algebra I	0	N/A	**0**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**156**	0.83	0.62	0.60	–	–	0.80
	2. History–Social Science	154	**201**	0.64	0.64	–	–	0.82
	3. General Mathematics	82	111	**118**	N/A	N/A	N/A	0.68
	4. Algebra I	65	68	N/A	**72**	N/A	N/A	0.72
	5. Geometry	4	4	N/A	N/A	**4**	N/A	–
	6. Algebra II	0	0	N/A	N/A	N/A	**0**	–
	7. Science	151	158	82	67	4	0	**158**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**144**	–	0.67	0.61	0.60	–	–	0.77	–	0.70	–
	2. World History	10	**11**	–	–	–	–	–	–	–	–	–
	3. General Mathematics	21	1	**28**	N/A	N/A	N/A	N/A	–	–	–	–
	4. Algebra I	92	4	N/A	**94**	N/A	N/A	N/A	0.83	–	0.55	–
	5. Geometry	16	3	N/A	N/A	**17**	N/A	N/A	0.57	–	–	–
9	**6. Algebra II**	5	2	N/A	N/A	N/A	**5**	N/A	–	–	–	–
	7. Summ. H.S. Mathematics	0	0	N/A	N/A	N/A	N/A	**0**	–	–	–	–
	8. Biology	52	9	1	35	11	4	0	**55**	N/A	N/A	N/A
	9. Chemistry	1	1	0	0	1	0	0	N/A	**1**	N/A	N/A
	10. Earth Science	41	1	7	28	4	1	0	N/A	N/A	**47**	N/A
	11. Physics	1	0	0	1	0	0	0	N/A	N/A	N/A	**1**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**166**	0.67	0.35	0.38	0.77	–	0.71	0.62	0.70	0.48	–
	2. World History	122	**135**	0.53	0.21	0.71	–	0.55	0.77	0.35	0.74	–
	3. Algebra I	56	42	**56**	N/A	N/A	N/A	0.30	0.39	–	–	–
	4. Geometry	54	43	N/A	**55**	N/A	N/A	0.42	0.36	0.50	–	–
	5. Algebra II	13	12	N/A	N/A	**15**	N/A	0.85	–	–	–	–
10	**6. Summ. H.S. Mathematics**	6	6	N/A	N/A	N/A	**6**	–	–	–	–	–
	7. Life Science	153	120	52	51	13	6	**157**	0.64	0.72	0.79	–
	8. Biology	60	64	23	27	2	0	58	**69**	N/A	N/A	N/A
	9. Chemistry	30	24	4	14	6	5	30	N/A	**30**	N/A	N/A
	10. Earth Science	20	16	7	6	1	1	19	N/A	N/A	**24**	N/A
	11. Physics	2	2	0	2	0	0	2	N/A	N/A	N/A	**2**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**156**	–	0.76	0.53	0.36	0.45	–	0.73	0.59	0.70	–
	2. World History	5	**8**	–	–	–	–	–	–	–	–	–
	3. History–Social Science	141	5	**154**	0.32	0.31	0.51	–	0.66	0.71	0.67	–
	4. Algebra I	25	1	25	**27**	N/A	N/A	N/A	–0.02	–	–	–
	5. Geometry	26	0	27	N/A	**27**	N/A	N/A	–	–	–	–
11	**6. Algebra II**	29	2	26	N/A	N/A	**29**	N/A	–	0.76	–	–
	7. Summ. H.S. Mathematics	7	0	7	N/A	N/A	N/A	**7**	–	–	–	–
	8. Biology	23	2	22	12	6	1	0	**25**	N/A	N/A	N/A
	9. Chemistry	28	0	27	2	6	17	0	N/A	**28**	N/A	N/A
	10. Earth Science	17	1	18	5	6	2	1	N/A	N/A	**20**	N/A
	11. Physics	5	0	4	0	0	3	2	N/A	N/A	N/A	**6**

Table 8.C.4 CST Content Area Correlations (American Indian)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**3,040**	0.79					
	2. Mathematics	3,027	**3,053**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**3,031**	0.76					
	2. Mathematics	3,010	**3,061**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**2,705**	0.75					
	2. Mathematics	2,686	**2,751**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**2,764**	0.72	0.80				
	2. Mathematics	2,742	**2,780**	0.73				
	3. Science	2,752	2,758	**2,785**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**2,682**	0.76					
	2. Mathematics	2,650	**2,687**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**2,733**	0.72	0.62				
	2. Mathematics	2,562	**2,598**	N/A				
	3. Algebra I	135	N/A	**135**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**2,782**	0.78	0.61	0.60	0.53	–	0.76
	2. History–Social Science	2,767	**2,989**	0.61	0.59	0.55	–	0.79
	3. General Mathematics	1,139	1,292	**1,307**	N/A	N/A	N/A	0.70
	4. Algebra I	1,518	1,525	N/A	**1,529**	N/A	N/A	0.66
	5. Geometry	86	85	N/A	N/A	**86**	N/A	0.63
	6. Algebra II	2	2	N/A	N/A	N/A	**2**	–
	7. Science	2,749	2,769	1,141	1,514	86	2	**2,777**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**3,141**	0.70	0.62	0.56	0.64	0.52	–	0.79	0.75	0.72	0.72
	2. World History	161	**166**	0.18	0.37	0.68	0.76	–	0.76	–	0.75	–
	3. General Mathematics	446	21	**552**	N/A	N/A	N/A	N/A	0.43	–	0.59	–
	4. Algebra I	1,706	77	N/A	**1,742**	N/A	N/A	N/A	0.63	–	0.57	0.75
	5. Geometry	765	37	N/A	N/A	**766**	N/A	N/A	0.68	0.93	0.53	0.78
9	**6. Algebra II**	134	22	N/A	N/A	N/A	**136**	N/A	0.64	–	–	–
	7. Summ. H. S. Mathematics	0	0	N/A	N/A	N/A	N/A	**0**	–	–	–	–
	8. Biology	1,215	91	70	547	510	96	0	**1,260**	N/A	N/A	N/A
	9. Chemistry	24	6	0	4	14	8	0	N/A	**27**	N/A	N/A
	10. Earth Science	1,044	26	243	710	110	10	0	N/A	N/A	**1,141**	N/A
	11. Physics	68	3	1	25	35	7	0	N/A	N/A	N/A	**71**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**3,027**	0.71	0.51	0.55	0.56	0.41	0.76	0.74	0.67	0.68	0.48
	2. World History	2,676	**2,820**	0.46	0.53	0.47	0.31	0.76	0.73	0.62	0.74	0.59
	3. Algebra I	868	794	**894**	N/A	N/A	N/A	0.53	0.51	0.55	0.50	–
	4. Geometry	1,023	974	N/A	**1,030**	N/A	N/A	0.62	0.61	0.68	0.60	0.59
	5. Algebra II	636	604	N/A	N/A	**641**	N/A	0.55	0.58	0.65	0.56	0.75
10	**6. Summ. H.S. Mathematics**	84	76	N/A	N/A	N/A	**85**	0.39	0.56	0.73	–	–
	7. Life Science	2,935	2,665	844	1,009	632	85	**2,993**	0.85	0.74	0.73	0.64
	8. Biology	1,544	1,540	543	648	215	24	1,533	**1,634**	N/A	N/A	N/A
	9. Chemistry	617	583	22	177	360	49	617	N/A	**621**	N/A	N/A
	10. Earth Science	245	237	113	68	13	1	239	N/A	N/A	**266**	N/A
	11. Physics	52	49	5	23	15	7	51	N/A	N/A	N/A	**53**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**2,994**	0.57	0.76	0.58	0.56	0.47	0.61	0.78	0.65	0.69	0.68
	2. World History	120	**126**	0.70	0.39	0.62	0.81	–	0.65	–	0.44	–
	3. History–Social Science	2,895	107	**3,063**	0.49	0.46	0.40	0.48	0.77	0.58	0.70	0.66
	4. Algebra I	418	44	414	**441**	N/A	N/A	N/A	0.59	0.86	0.61	–
	5. Geometry	626	16	619	N/A	**635**	N/A	N/A	0.57	0.56	0.62	0.86
11	**6. Algebra II**	706	12	705	N/A	N/A	**713**	N/A	0.47	0.57	0.51	0.62
	7. Summ. H.S. Mathematics	573	4	567	N/A	N/A	N/A	**575**	0.54	0.69	0.48	0.78
	8. Biology	615	45	632	110	162	110	128	**650**	N/A	N/A	N/A
	9. Chemistry	716	9	716	18	131	338	184	N/A	**724**	N/A	N/A
	10. Earth Science	339	17	348	99	95	47	19	N/A	N/A	**360**	N/A
	11. Physics	293	5	294	5	23	77	176	N/A	N/A	N/A	**296**

Table 8.C.5 CST Content Area Correlations (Asian American)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**39,538**	0.75					
	2. Mathematics	39,499	**39,596**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**40,403**	0.75					
	2. Mathematics	40,331	**40,499**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**40,001**	0.70					
	2. Mathematics	39,942	**40,211**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**38,937**	0.71	0.78				
	2. Mathematics	38,878	**39,109**	0.72				
	3. Science	38,894	38,921	**38,978**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**39,073**	0.75					
	2. Mathematics	39,012	**39,258**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**41,193**	0.72	0.56				
	2. Mathematics	30,222	**30,387**	N/A				
	3. Algebra I	10,885	N/A	**10,886**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**38,429**	0.80	0.60	0.61	0.54	0.55	0.78
	2. History–Social Science	38,370	**39,075**	0.60	0.57	0.51	0.52	0.78
	3. General Mathematics	4,267	4,737	**4,763**	N/A	N/A	N/A	0.71
	4. Algebra I	24,743	24,793	N/A	**24,827**	N/A	N/A	0.68
	5. Geometry	8,906	8,902	N/A	N/A	**8,908**	N/A	0.60
	6. Algebra II	381	381	N/A	N/A	N/A	**381**	0.59
	7. Science	38,361	38,443	4,310	24,750	8,906	381	**38,472**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**39,154**	0.66	0.63	0.45	0.60	0.52	0.44	0.75	0.62	0.74	0.72
	2. World History	4,830	**4,855**	0.60	0.43	0.48	0.45	0.28	0.68	0.74	0.69	0.72
	3. General Mathematics	758	77	**937**	N/A	N/A	N/A	N/A	0.61	–	0.62	–
	4. Algebra I	8,923	542	N/A	**9,046**	N/A	N/A	N/A	0.59	0.75	0.47	0.58
	5. Geometry	19,286	2,428	N/A	N/A	**19,308**	N/A	N/A	0.66	0.71	0.59	0.70
9	**6. Algebra II**	9,395	1,666	N/A	N/A	N/A	**9,408**	N/A	0.58	0.62	0.46	0.73
	7. Summ. H.S. Mathematics	542	107	N/A	N/A	N/A	N/A	**542**	0.54	0.43	–	0.64
	8. Biology	26,936	3,487	160	3,697	15,203	7,476	385	**27,080**	N/A	N/A	N/A
	9. Chemistry	948	152	2	28	214	640	62	N/A	**949**	N/A	N/A
	10. Earth Science	5,112	168	332	3,073	1,525	238	9	N/A	N/A	**5,286**	N/A
	11. Physics	1,695	211	2	216	838	576	66	N/A	N/A	N/A	**1,706**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**41,725**	0.74	0.33	0.53	0.50	0.52	0.77	0.81	0.65	0.75	0.72
	2. World History	36,693	**37,142**	0.42	0.47	0.48	0.48	0.75	0.78	0.65	0.72	0.74
	3. Algebra I	2,697	2,349	**2,770**	N/A	N/A	N/A	0.37	0.50	0.53	0.38	0.47
	4. Geometry	8,664	7,922	N/A	**8,725**	N/A	N/A	0.58	0.56	0.73	0.49	0.79
	5. Algebra II	19,845	17,636	N/A	N/A	**19,881**	N/A	0.54	0.56	0.67	0.23	0.60
10	**6. Summ. H.S. Mathematics**	9,574	8,231	N/A	N/A	N/A	**9,579**	0.54	0.56	0.65	0.57	0.63
	7. Life Science	41,454	36,602	2,617	8,638	19,821	9,564	**41,587**	0.88	0.73	0.78	0.77
	8. Biology	13,741	12,769	1,672	4,878	4,992	1,945	13,688	**14,018**	N/A	N/A	N/A
	9. Chemistry	23,354	20,587	147	2,520	13,662	6,881	23,331	N/A	**23,378**	N/A	N/A
	10. Earth Science	1,034	986	299	454	177	58	1,034	N/A	N/A	**1,098**	N/A
	11. Physics	1,465	1,235	25	255	594	583	1,465	N/A	N/A	N/A	**1,474**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**42,387**	0.54	0.78	0.34	0.36	0.32	0.59	0.76	0.73	0.75	0.65
	2. World History	608	**626**	0.61	0.31	0.29	0.22	0.23	0.65	0.30	0.71	0.19
	3. History–Social Science	41,944	493	**42,383**	0.30	0.32	0.28	0.51	0.74	0.69	0.79	0.64
	4. Algebra I	1,124	109	1,082	**1,162**	N/A	N/A	N/A	0.47	0.55	0.39	0.69
	5. Geometry	2,988	133	2,961	N/A	**3,024**	N/A	N/A	0.43	0.60	0.47	0.67
11	**6. Algebra II**	8,551	129	8,527	N/A	N/A	**8,623**	N/A	0.37	0.62	0.34	0.57
	7. Summ. H.S. Mathematics	27,738	163	27,633	N/A	N/A	N/A	**27,779**	0.61	0.73	0.53	0.68
	8. Biology	11,179	206	11,162	330	789	1,700	8,015	**11,262**	N/A	N/A	N/A
	9. Chemistry	14,405	118	14,377	77	819	4,280	8,887	N/A	**14,468**	N/A	N/A
	10. Earth Science	1,889	65	1,932	232	346	377	761	N/A	N/A	**1,966**	N/A
	11. Physics	9,525	52	9,491	23	157	1,120	8,071	N/A	N/A	N/A	**9,551**

Table 8.C.6 CST Content Area Correlations (Pacific Islander)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**2,305**	0.76					
	2. Mathematics	2,302	**2,309**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**2,368**	0.79					
	2. Mathematics	2,354	**2,367**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**2,227**	0.73					
	2. Mathematics	2,220	**2,240**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**2,320**	0.72	0.79				
	2. Mathematics	2,303	**2,325**	0.73				
	3. Science	2,310	2,310	**2,328**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**2,314**	0.77					
	2. Mathematics	2,302	**2,330**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**2,486**	0.73	0.45				
	2. Mathematics	2,286	**2,305**	N/A				
	3. Algebra I	181	N/A	**181**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**2,461**	0.78	0.63	0.60	0.62	–	0.77
	2. History–Social Science	2,451	**2,556**	0.58	0.57	0.55	–	0.79
	3. General Mathematics	699	773	**780**	N/A	N/A	N/A	0.66
	4. Algebra I	1,609	1,608	N/A	**1,611**	N/A	N/A	0.66
	5. Geometry	134	133	N/A	N/A	**134**	N/A	0.63
	6. Algebra II	2	2	N/A	N/A	N/A	**2**	–
	7. Science	2,447	2,454	698	1,609	134	2	**2,460**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**2,571**	0.75	0.61	0.57	0.68	0.55	–	0.79	0.72	0.70	0.71
	2. World History	159	**162**	0.25	0.62	0.67	0.64	–	0.85	–	–0.07	–
	3. General Mathematics	165	12	**198**	N/A	N/A	N/A	N/A	0.42	–	0.69	–
	4. Algebra I	1,353	70	N/A	**1,365**	N/A	N/A	N/A	0.54	–	0.51	0.76
	5. Geometry	868	61	N/A	N/A	**871**	N/A	N/A	0.71	0.79	0.63	0.67
9	**6. Algebra II**	136	15	N/A	N/A	N/A	**136**	N/A	0.56	–	–	–
	7. Summ. H.S. Mathematics	5	0	N/A	N/A	N/A	N/A	**5**	–	–	–	–
	8. Biology	1,243	92	26	516	593	104	3	**1,266**	N/A	N/A	N/A
	9. Chemistry	21	3	0	2	12	6	2	N/A	**22**	N/A	N/A
	10. Earth Science	722	13	79	521	128	7	0	N/A	N/A	**759**	N/A
	11. Physics	94	10	0	32	51	9	0	N/A	N/A	N/A	**95**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**2,588**	0.72	0.51	0.62	0.61	0.56	0.77	0.75	0.68	0.74	0.75
	2. World History	2,345	**2,437**	0.42	0.53	0.49	0.55	0.72	0.74	0.62	0.58	0.70
	3. Algebra I	545	495	**562**	N/A	N/A	N/A	0.48	0.53	0.35	0.54	–
	4. Geometry	1,010	965	N/A	**1,016**	N/A	N/A	0.62	0.60	0.67	0.36	0.75
	5. Algebra II	707	664	N/A	N/A	**712**	N/A	0.61	0.64	0.70	–	0.62
10	**6. Summ. H.S. Mathematics**	112	106	N/A	N/A	N/A	**112**	0.57	0.58	0.65	–	–
	7. Life Science	2,532	2,336	532	1,000	707	112	**2,558**	0.85	0.73	0.69	0.77
	8. Biology	1,309	1,302	356	634	235	18	1,304	**1,372**	N/A	N/A	N/A
	9. Chemistry	765	719	35	221	407	85	766	N/A	**774**	N/A	N/A
	10. Earth Science	148	145	65	60	10	2	147	N/A	N/A	**156**	N/A
	11. Physics	73	59	10	32	23	4	72	N/A	N/A	N/A	**73**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**2,517**	0.58	0.76	0.44	0.50	0.47	0.56	0.79	0.67	0.73	0.67
	2. World History	75	**80**	0.64	0.74	–0.36	–	–	0.79	0.45	0.63	–
	3. History–Social Science	2,465	69	**2,526**	0.38	0.48	0.47	0.52	0.74	0.66	0.68	0.64
	4. Algebra I	238	21	232	**243**	N/A	N/A	N/A	0.55	0.87	0.55	–
	5. Geometry	515	18	509	N/A	**522**	N/A	N/A	0.64	0.65	0.48	0.75
11	**6. Algebra II**	748	10	738	N/A	N/A	**751**	N/A	0.48	0.66	0.53	0.50
	7. Summ. H.S. Mathematics	614	7	615	N/A	N/A	N/A	**615**	0.60	0.75	0.54	0.63
	8. Biology	593	28	589	75	129	159	165	**604**	N/A	N/A	N/A
	9. Chemistry	762	12	766	13	136	376	194	N/A	**774**	N/A	N/A
	10. Earth Science	221	11	220	40	84	30	21	N/A	N/A	**228**	N/A
	11. Physics	283	1	283	8	31	73	162	N/A	N/A	N/A	**284**

Table 8.C.7 CST Content Area Correlations (Filipino)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**9,714**	0.75					
	2. Mathematics	9,697	**9,722**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**10,166**	0.74					
	2. Mathematics	10,134	**10,172**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**10,959**	0.71					
	2. Mathematics	10,939	**11,007**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**11,002**	0.71	0.75				
	2. Mathematics	10,975	**11,041**	0.70				
	3. Science	10,979	10,988	**11,010**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**11,775**	0.74					
	2. Mathematics	11,749	**11,796**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**12,174**	0.73	0.54				
	2. Mathematics	10,199	**10,237**	N/A				
	3. Algebra I	1,935	N/A	**1,936**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**12,590**	0.76	0.66	0.63	0.54	0.59	0.76
	2. History–Social Science	12,568	**12,848**	0.60	0.56	0.51	0.56	0.75
	3. General Mathematics	1,976	2,163	**2,173**	N/A	N/A	N/A	0.69
	4. Algebra I	8,896	8,905	N/A	**8,917**	N/A	N/A	0.66
	5. Geometry	1,587	1,586	N/A	N/A	**1,587**	N/A	0.62
	6. Algebra II	64	64	N/A	N/A	N/A	**64**	0.60
	7. Science	12,545	12,571	1,986	8,887	1,583	64	**12,585**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**13,529**	0.66	0.67	0.57	0.63	0.54	0.39	0.75	0.66	0.69	0.69
	2. World History	1,181	**1,191**	0.73	0.58	0.53	0.53	–	0.70	0.80	0.63	0.65
	3. General Mathematics	340	21	**421**	N/A	N/A	N/A	N/A	0.57	–	0.70	–
	4. Algebra I	4,937	266	N/A	**4,972**	N/A	N/A	N/A	0.60	0.33	0.52	0.66
	5. Geometry	6,454	615	N/A	N/A	**6,458**	N/A	N/A	0.65	0.73	0.63	0.67
9	**6. Algebra II**	1,657	271	N/A	N/A	N/A	**1,658**	N/A	0.63	0.62	0.54	0.66
	7. Summ. H.S. Mathematics	27	5	N/A	N/A	N/A	N/A	**27**	0.34	–	–	–
	8. Biology	8,543	858	80	2,310	4,777	1,346	19	**8,591**	N/A	N/A	N/A
	9. Chemistry	196	23	3	15	107	66	4	N/A	**196**	N/A	N/A
	10. Earth Science	2,458	52	144	1,561	716	44	0	N/A	N/A	**2,532**	N/A
	11. Physics	785	70	0	158	485	136	4	N/A	N/A	N/A	**789**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**13,593**	0.69	0.56	0.62	0.55	0.53	0.74	0.77	0.64	0.68	0.68
	2. World History	12,573	**12,740**	0.47	0.54	0.47	0.50	0.71	0.72	0.62	0.74	0.64
	3. Algebra I	1,385	1,270	**1,407**	N/A	N/A	N/A	0.57	0.56	0.60	0.55	0.68
	4. Geometry	4,397	4,130	N/A	**4,410**	N/A	N/A	0.63	0.64	0.68	0.57	0.76
	5. Algebra II	6,151	5,785	N/A	N/A	**6,160**	N/A	0.56	0.62	0.66	0.33	0.62
10	**6. Summ. H.S. Mathematics**	1,184	1,070	N/A	N/A	N/A	**1,186**	0.56	0.59	0.63	0.51	0.67
	7. Life Science	13,493	12,549	1,368	4,389	6,129	1,183	**13,533**	0.86	0.71	0.76	0.76
	8. Biology	5,626	5,412	894	2,489	1,836	236	5,612	**5,717**	N/A	N/A	N/A
	9. Chemistry	6,288	5,863	106	1,347	3,913	852	6,282	N/A	**6,300**	N/A	N/A
	10. Earth Science	487	462	176	189	57	22	486	N/A	N/A	**515**	N/A
	11. Physics	364	309	20	101	181	60	363	N/A	N/A	N/A	**365**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**13,558**	0.47	0.74	0.52	0.52	0.47	0.58	0.76	0.69	0.71	0.67
	2. World History	232	**236**	0.51	0.00	0.46	–0.06	0.15	0.44	0.18	0.72	0.21
	3. History–Social Science	13,418	206	**13,571**	0.44	0.45	0.43	0.49	0.72	0.65	0.74	0.62
	4. Algebra I	585	50	568	**597**	N/A	N/A	N/A	0.63	0.47	0.50	0.60
	5. Geometry	1,639	61	1,637	N/A	**1,653**	N/A	N/A	0.56	0.59	0.48	0.59
11	**6. Algebra II**	3,947	41	3,946	N/A	N/A	**3,975**	N/A	0.52	0.63	0.32	0.64
	7. Summ. H.S. Mathematics	6,386	30	6,355	N/A	N/A	N/A	**6,393**	0.57	0.70	0.43	0.68
	8. Biology	3,299	65	3,299	185	441	816	1,690	**3,337**	N/A	N/A	N/A
	9. Chemistry	4,895	43	4,891	58	501	2,020	2,133	N/A	**4,916**	N/A	N/A
	10. Earth Science	704	24	719	98	196	146	168	N/A	N/A	**725**	N/A
	11. Physics	2,476	16	2,479	20	116	480	1,799	N/A	N/A	N/A	**2,488**

Table 8.C.8 CST Content Area Correlations (Hispanic)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**250,247**	0.77					
	2. Mathematics	249,729	**250,977**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**230,580**	0.77					
	2. Mathematics	229,558	**232,341**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**223,351**	0.72					
	2. Mathematics	222,557	**226,053**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**219,873**	0.71	0.79				
	2. Mathematics	218,865	**222,153**	0.71				
	3. Science	219,317	219,653	**221,171**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**221,274**	0.75					
	2. Mathematics	220,143	**223,214**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**223,211**	0.72	0.57				
	2. Mathematics	209,154	**211,537**	N/A				
	3. Algebra I	12,594	N/A	**12,611**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**219,644**	0.78	0.61	0.61	0.55	0.59	0.76
	2. History–Social Science	218,908	**235,845**	0.59	0.56	0.52	0.59	0.78
	3. General Mathematics	73,176	84,942	**85,562**	N/A	N/A	N/A	0.66
	4. Algebra I	135,829	136,610	N/A	**136,831**	N/A	N/A	0.64
	5. Geometry	8,409	8,407	N/A	N/A	**8,439**	N/A	0.62
	6. Algebra II	224	223	N/A	N/A	N/A	**224**	0.64
	7. Science	218,317	220,147	73,991	135,997	8,407	222	**220,589**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**236,257**	0.76	0.60	0.56	0.64	0.62	0.66	0.78	0.78	0.70	0.73
	2. World History	14,841	**15,543**	0.51	0.53	0.68	0.68	0.80	0.82	0.63	0.72	0.76
	3. General Mathematics	19,381	1,195	**24,011**	N/A	N/A	N/A	N/A	0.60	0.33	0.60	0.56
	4. Algebra I	137,417	6,435	N/A	**139,913**	N/A	N/A	N/A	0.59	0.69	0.50	0.69
	5. Geometry	62,206	5,508	N/A	N/A	**62,424**	N/A	N/A	0.68	0.81	0.62	0.75
9	**6. Algebra II**	12,238	1,607	N/A	N/A	N/A	**12,303**	N/A	0.65	0.83	0.54	0.73
	7. Summ. H.S. Mathematics	136	19	N/A	N/A	N/A	N/A	**138**	0.58	–	–	0.81
	8. Biology	110,993	9,200	4,100	54,693	43,426	9,036	105	**114,712**	N/A	N/A	N/A
	9. Chemistry	2,763	1,206	32	637	1,444	587	7	N/A	**2,864**	N/A	N/A
	10. Earth Science	66,161	1,275	8,518	49,847	8,680	699	4	N/A	N/A	**71,743**	N/A
	11. Physics	7,598	567	44	3,151	3,349	1,033	16	N/A	N/A	N/A	**7,793**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**226,046**	0.73	0.51	0.59	0.58	0.56	0.77	0.76	0.69	0.69	0.70
	2. World History	202,272	**213,368**	0.45	0.52	0.51	0.49	0.75	0.74	0.66	0.73	0.68
	3. Algebra I	57,227	52,326	**58,674**	N/A	N/A	N/A	0.51	0.52	0.55	0.50	0.59
	4. Geometry	83,019	78,782	N/A	**83,798**	N/A	N/A	0.61	0.62	0.68	0.54	0.70
	5. Algebra II	56,967	53,799	N/A	N/A	**57,339**	N/A	0.58	0.61	0.67	0.53	0.67
10	**6. Summ. H.S. Mathematics**	6,113	5,607	N/A	N/A	N/A	**6,122**	0.59	0.65	0.67	0.72	0.60
	7. Life Science	221,660	202,087	56,381	82,573	56,743	6,094	**224,676**	0.85	0.75	0.75	0.74
	8. Biology	112,656	113,027	35,467	50,046	18,915	1,427	112,647	**119,256**	N/A	N/A	N/A
	9. Chemistry	60,350	56,560	3,164	19,192	32,762	4,145	60,202	N/A	**60,937**	N/A	N/A
	10. Earth Science	15,189	15,499	7,438	5,153	1,156	46	15,199	N/A	N/A	**16,822**	N/A
	11. Physics	4,193	3,649	436	1,634	1,713	292	4,179	N/A	N/A	N/A	**4,276**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**214,233**	0.56	0.77	0.51	0.52	0.49	0.58	0.78	0.66	0.68	0.70
	2. World History	7,259	**7,711**	0.64	0.38	0.41	0.26	0.34	0.58	0.36	0.58	0.40
	3. History–Social Science	210,273	6,956	**220,844**	0.47	0.48	0.46	0.51	0.77	0.64	0.73	0.68
	4. Algebra I	26,972	2,281	26,741	**27,792**	N/A	N/A	N/A	0.51	0.53	0.46	0.62
	5. Geometry	45,414	1,662	45,351	N/A	**46,026**	N/A	N/A	0.56	0.59	0.51	0.62
11	**6. Algebra II**	61,195	839	61,778	N/A	N/A	**62,309**	N/A	0.51	0.59	0.45	0.61
	7. Summ. H.S. Mathematics	44,516	302	44,452	N/A	N/A	N/A	**44,645**	0.59	0.70	0.46	0.68
	8. Biology	44,492	2,106	45,905	7,888	11,116	10,396	10,307	**46,640**	N/A	N/A	N/A
	9. Chemistry	65,385	806	66,016	1,901	12,374	32,101	15,803	N/A	**66,458**	N/A	N/A
	10. Earth Science	22,053	1,064	23,596	6,438	6,947	3,182	1,361	N/A	N/A	**24,067**	N/A
	11. Physics	23,390	218	23,555	469	2,642	7,196	12,227	N/A	N/A	N/A	**23,679**

Table 8.C.9 CST Content Area Correlations (African American)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**26,221**	0.79					
	2. Mathematics	26,100	**26,313**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**24,666**	0.79					
	2. Mathematics	24,414	**24,719**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**24,397**	0.75					
	2. Mathematics	24,195	**24,557**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**25,071**	0.73	0.79				
	2. Mathematics	24,814	**25,140**	0.74				
	3. Science	24,934	24,888	**25,194**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**25,993**	0.76					
	2. Mathematics	25,730	**26,035**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**26,494**	0.73	0.61				
	2. Mathematics	24,882	**25,135**	N/A				
	3. Algebra I	1,279	N/A	**1,283**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**27,213**	0.78	0.62	0.63	0.54	0.57	0.77
	2. History–Social Science	27,030	**29,988**	0.61	0.60	0.50	0.55	0.79
	3. General Mathematics	9,523	11,414	**11,572**	N/A	N/A	N/A	0.68
	4. Algebra I	16,350	16,410	N/A	**16,464**	N/A	N/A	0.67
	5. Geometry	831	831	N/A	N/A	**832**	N/A	0.62
	6. Algebra II	37	37	N/A	N/A	N/A	**37**	0.70
	7. Science	26,910	27,216	9,657	16,358	830	37	**27,330**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**28,736**	0.78	0.64	0.57	0.67	0.63	0.85	0.79	0.77	0.71	0.74
	2. World History	1,763	**1,882**	0.45	0.60	0.70	0.68	–	0.84	0.73	0.70	0.76
	3. General Mathematics	2,653	194	**3,390**	N/A	N/A	N/A	N/A	0.56	–	0.55	–
	4. Algebra I	17,059	793	N/A	**17,442**	N/A	N/A	N/A	0.59	0.63	0.53	0.65
	5. Geometry	6,782	578	N/A	N/A	**6,814**	N/A	N/A	0.69	0.82	0.66	0.74
9	**6. Algebra II**	1,321	189	N/A	N/A	N/A	**1,331**	N/A	0.66	0.86	0.62	0.73
	7. Summ. H.S. Mathematics	11	2	N/A	N/A	N/A	N/A	**11**	–	–	–	–
	8. Biology	13,896	1,015	574	7,588	4,725	988	8	**14,638**	N/A	N/A	N/A
	9. Chemistry	253	121	3	46	115	83	1	N/A	**258**	N/A	N/A
	10. Earth Science	7,305	192	1,113	5,482	866	53	1	N/A	N/A	**8,238**	N/A
	11. Physics	1,125	102	6	455	540	121	1	N/A	N/A	N/A	**1,177**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**27,546**	0.74	0.54	0.61	0.59	0.55	0.77	0.76	0.70	0.70	0.70
	2. World History	24,028	**25,962**	0.51	0.56	0.54	0.48	0.76	0.75	0.69	0.73	0.72
	3. Algebra I	6,750	6,157	**7,021**	N/A	N/A	N/A	0.53	0.53	0.62	0.58	0.78
	4. Geometry	10,425	9,782	N/A	**10,563**	N/A	N/A	0.63	0.63	0.70	0.54	0.74
	5. Algebra II	6,295	5,885	N/A	N/A	**6,357**	N/A	0.61	0.63	0.69	0.35	0.65
10	**6. Summ. H.S. Mathematics**	639	577	N/A	N/A	N/A	**643**	0.61	0.62	0.64	–	0.68
	7. Life Science	26,679	23,935	6,570	10,308	6,267	640	**27,180**	0.84	0.76	0.76	0.70
	8. Biology	13,213	13,352	4,157	5,965	2,025	121	13,157	**14,323**	N/A	N/A	N/A
	9. Chemistry	7,332	6,857	388	2,663	3,673	473	7,306	N/A	**7,461**	N/A	N/A
	10. Earth Science	1,712	1,768	806	598	107	4	1,701	N/A	N/A	**1,961**	N/A
	11. Physics	438	368	52	187	159	26	429	N/A	N/A	N/A	**459**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**26,565**	0.56	0.78	0.49	0.53	0.52	0.62	0.78	0.67	0.69	0.73
	2. World History	1,113	**1,199**	0.62	0.33	0.43	0.33	0.48	0.58	0.44	0.59	0.45
	3. History–Social Science	25,767	1,065	**27,665**	0.48	0.47	0.49	0.55	0.78	0.65	0.74	0.69
	4. Algebra I	3,261	397	3,233	**3,406**	N/A	N/A	N/A	0.50	0.50	0.47	0.58
	5. Geometry	5,858	235	5,843	N/A	**5,984**	N/A	N/A	0.55	0.53	0.53	0.66
11	**6. Algebra II**	7,543	122	7,619	N/A	N/A	**7,740**	N/A	0.54	0.61	0.42	0.61
	7. Summ. H.S. Mathematics	4,696	39	4,670	N/A	N/A	N/A	**4,708**	0.64	0.72	0.44	0.72
	8. Biology	5,774	335	6,047	1,027	1,544	1,341	1,213	**6,207**	N/A	N/A	N/A
	9. Chemistry	7,906	117	8,009	254	1,643	4,024	1,538	N/A	**8,104**	N/A	N/A
	10. Earth Science	2,278	158	2,470	654	653	324	142	N/A	N/A	**2,554**	N/A
	11. Physics	2,675	43	2,703	61	423	790	1,273	N/A	N/A	N/A	**2,736**

Table 8.C.10 CST Content Area Correlations (White)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**111,954**	0.75					
	2. Mathematics	111,724	**112,257**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**111,034**	0.74					
	2. Mathematics	110,525	**111,912**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**110,487**	0.71					
	2. Mathematics	109,970	**111,585**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**109,205**	0.71	0.75				
	2. Mathematics	108,425	**109,787**	0.71				
	3. Science	108,786	108,770	**109,516**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**110,536**	0.75					
	2. Mathematics	109,638	**110,742**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**113,242**	0.72	0.52				
	2. Mathematics	99,731	**100,626**	N/A				
	3. Algebra I	12,524	N/A	**12,541**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**115,478**	0.77	0.63	0.61	0.51	0.62	0.75
	2. History–Social Science	115,085	**119,916**	0.62	0.57	0.47	0.58	0.77
	3. General Mathematics	32,999	36,554	**36,854**	N/A	N/A	N/A	0.70
	4. Algebra I	71,220	71,353	N/A	**71,495**	N/A	N/A	0.66
	5. Geometry	9,990	9,982	N/A	N/A	**9,996**	N/A	0.57
	6. Algebra II	255	255	N/A	N/A	N/A	**256**	0.58
	7. Science	114,725	115,321	33,122	71,204	9,979	254	**115,528**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**119,189**	0.70	0.63	0.56	0.59	0.49	0.47	0.73	0.58	0.69	0.69
	2. World History	7,698	**7,845**	0.58	0.50	0.54	0.49	0.50	0.71	0.70	0.71	0.64
	3. General Mathematics	9,307	544	**11,095**	N/A	N/A	N/A	N/A	0.64	–	0.62	0.75
	4. Algebra I	52,925	2,741	N/A	**53,610**	N/A	N/A	N/A	0.58	0.72	0.53	0.57
	5. Geometry	44,356	3,374	N/A	N/A	**44,424**	N/A	N/A	0.63	0.70	0.59	0.72
9	**6. Algebra II**	10,282	945	N/A	N/A	N/A	**10,294**	N/A	0.55	0.68	0.46	0.67
	7. Summ. H.S. Mathematics	239	50	N/A	N/A	N/A	N/A	**240**	0.52	0.55	0.24	0.84
	8. Biology	63,628	4,852	1,858	20,599	32,932	8,018	152	**64,540**	N/A	N/A	N/A
	9. Chemistry	1,279	118	8	98	586	543	39	N/A	**1,286**	N/A	N/A
	10. Earth Science	31,912	905	4,814	21,238	5,762	554	11	N/A	N/A	**33,727**	N/A
	11. Physics	4,080	267	23	1,234	1,961	816	28	N/A	N/A	N/A	**4,114**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**119,646**	0.70	0.53	0.58	0.51	0.48	0.74	0.76	0.61	0.67	0.69
	2. World History	109,158	**112,591**	0.47	0.50	0.44	0.44	0.73	0.74	0.62	0.71	0.66
	3. Algebra I	20,078	18,679	**20,605**	N/A	N/A	N/A	0.53	0.54	0.59	0.49	0.69
	4. Geometry	39,614	37,218	N/A	**39,871**	N/A	N/A	0.59	0.61	0.67	0.55	0.72
	5. Algebra II	41,930	39,225	N/A	N/A	**42,045**	N/A	0.52	0.57	0.65	0.41	0.59
10	**6. Summ. H.S. Mathematics**	8,634	8,023	N/A	N/A	N/A	**8,647**	0.50	0.56	0.61	0.51	0.61
	7. Life Science	117,772	108,742	19,783	39,359	41,737	8,609	**118,794**	0.85	0.71	0.75	0.73
	8. Biology	52,170	50,794	12,325	23,602	11,251	1,752	52,029	**54,163**	N/A	N/A	N/A
	9. Chemistry	42,847	40,136	822	8,964	26,557	5,903	42,708	N/A	**42,968**	N/A	N/A
	10. Earth Science	7,974	7,727	3,263	2,931	804	114	7,924	N/A	N/A	**8,511**	N/A
	11. Physics	3,446	3,070	155	972	1,665	598	3,426	N/A	N/A	N/A	**3,475**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**120,956**	0.52	0.75	0.52	0.53	0.45	0.56	0.76	0.66	0.68	0.64
	2. World History	2,503	**2,684**	0.58	0.35	0.34	0.12	0.24	0.54	0.27	0.59	0.36
	3. History–Social Science	119,117	2,363	**122,677**	0.47	0.48	0.39	0.47	0.75	0.63	0.74	0.63
	4. Algebra I	9,080	687	9,053	**9,373**	N/A	N/A	N/A	0.52	0.59	0.48	0.59
	5. Geometry	16,459	445	16,414	N/A	**16,673**	N/A	N/A	0.58	0.61	0.50	0.64
11	**6. Algebra II**	32,904	288	32,911	N/A	N/A	**33,176**	N/A	0.45	0.56	0.39	0.58
	7. Summ. H.S. Mathematics	44,294	252	44,100	N/A	N/A	N/A	**44,385**	0.58	0.71	0.48	0.65
	8. Biology	26,828	626	27,278	2,415	3,881	6,006	11,899	**27,577**	N/A	N/A	N/A
	9. Chemistry	34,785	284	34,754	620	3,710	15,912	12,612	N/A	**34,999**	N/A	N/A
	10. Earth Science	10,269	380	10,726	1,982	2,405	1,805	1,885	N/A	N/A	**10,920**	N/A
	11. Physics	17,768	142	17,722	146	794	3,565	12,596	N/A	N/A	N/A	**17,850**

Table 8.C.11 CST Content Area Correlations (Ethnicity unknown)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**15,806**	0.77					
	2. Mathematics	15,768	**15,850**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**13,950**	0.77					
	2. Mathematics	13,888	**14,038**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**12,246**	0.74					
	2. Mathematics	12,200	**12,362**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**11,509**	0.73	0.78				
	2. Mathematics	11,435	**11,568**	0.74				
	3. Science	11,462	11,465	**11,538**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**11,663**	0.77					
	2. Mathematics	11,589	**11,699**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**11,277**	0.74	0.57				
	2. Mathematics	9,802	**9,893**	N/A				
	3. Algebra I	1,377	N/A	**1,377**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**10,841**	0.80	0.66	0.63	0.52	0.61	0.78
	2. History–Social Science	10,783	**11,304**	0.65	0.60	0.54	0.61	0.81
	3. General Mathematics	3,138	3,493	**3,547**	N/A	N/A	N/A	0.72
	4. Algebra I	6,567	6,581	N/A	**6,606**	N/A	N/A	0.69
	5. Geometry	974	974	N/A	N/A	**976**	N/A	0.60
	6. Algebra II	38	38	N/A	N/A	N/A	**38**	0.68
	7. Science	10,757	10,809	3,153	6,563	972	38	**10,840**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**12,737**	0.77	0.64	0.58	0.60	0.51	0.64	0.77	0.66	0.70	0.75
	2. World History	932	**950**	0.54	0.68	0.60	0.64	–	0.82	–	0.76	0.72
	3. General Mathematics	1,070	76	**1,248**	N/A	N/A	N/A	N/A	0.61	–	0.65	–
	4. Algebra I	5,763	308	N/A	**5,852**	N/A	N/A	N/A	0.62	–	0.53	0.65
	5. Geometry	4,394	384	N/A	N/A	**4,402**	N/A	N/A	0.66	0.80	0.57	0.76
9	**6. Algebra II**	1,186	149	N/A	N/A	N/A	**1,188**	N/A	0.61	0.64	0.49	0.65
	7. Summ. H.S. Mathematics	40	10	N/A	N/A	N/A	N/A	**40**	0.60	–	–	–
	8. Biology	6,488	592	193	2,186	3,160	883	30	**6,572**	N/A	N/A	N/A
	9. Chemistry	124	9	0	6	53	63	2	N/A	**124**	N/A	N/A
	10. Earth Science	3,461	96	475	2,353	599	64	1	N/A	N/A	**3,662**	N/A
	11. Physics	633	87	2	151	341	130	6	N/A	N/A	N/A	**640**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**10,847**	0.74	0.56	0.59	0.53	0.50	0.78	0.77	0.65	0.73	0.74
	2. World History	9,565	**9,895**	0.49	0.52	0.49	0.46	0.75	0.75	0.64	0.76	0.71
	3. Algebra I	2,083	1,864	**2,122**	N/A	N/A	N/A	0.55	0.58	0.56	0.49	0.86
	4. Geometry	3,376	3,133	N/A	**3,400**	N/A	N/A	0.62	0.58	0.76	0.60	0.71
	5. Algebra II	3,465	3,209	N/A	N/A	**3,476**	N/A	0.55	0.57	0.68	0.49	0.69
10	**6. Summ. H.S. Mathematics**	785	707	N/A	N/A	N/A	**785**	0.52	0.55	0.66	–	0.76
	7. Life Science	10,597	9,506	2,026	3,346	3,450	781	**10,692**	0.86	0.74	0.77	0.79
	8. Biology	4,745	4,612	1,267	1,988	999	137	4,717	**4,947**	N/A	N/A	N/A
	9. Chemistry	3,643	3,345	86	786	2,150	562	3,636	N/A	**3,663**	N/A	N/A
	10. Earth Science	658	624	300	225	51	2	632	N/A	N/A	**698**	N/A
	11. Physics	330	292	16	92	150	68	327	N/A	N/A	N/A	**332**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**10,413**	0.62	0.79	0.55	0.47	0.46	0.59	0.79	0.68	0.70	0.69
	2. World History	275	**298**	0.67	0.33	0.31	0.43	0.76	0.72	0.45	0.87	0.67
	3. History–Social Science	10,173	256	**10,512**	0.48	0.42	0.41	0.51	0.75	0.65	0.76	0.66
	4. Algebra I	954	76	950	**996**	N/A	N/A	N/A	0.51	0.51	0.64	0.80
	5. Geometry	1,550	65	1,526	N/A	**1,573**	N/A	N/A	0.42	0.56	0.49	0.68
11	**6. Algebra II**	2,717	36	2,703	N/A	N/A	**2,738**	N/A	0.50	0.58	0.50	0.61
	7. Summ. H.S. Mathematics	3,417	11	3,399	N/A	N/A	N/A	**3,428**	0.60	0.74	0.48	0.66
	8. Biology	2,213	71	2,233	275	350	470	887	**2,279**	N/A	N/A	N/A
	9. Chemistry	2,928	30	2,928	63	362	1,317	1,034	N/A	**2,962**	N/A	N/A
	10. Earth Science	888	45	903	221	221	142	127	N/A	N/A	**930**	N/A
	11. Physics	1,541	11	1,533	17	94	362	1,008	N/A	N/A	N/A	**1,547**

Table 8.C.12 CST Content Area Correlations (English Only)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**262,769**	0.78					
	2. Mathematics	262,100	**263,494**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**247,648**	0.78					
	2. Mathematics	246,291	**249,297**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**240,732**	0.74					
	2. Mathematics	239,552	**243,071**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**235,326**	0.74	0.79				
	2. Mathematics	233,699	**236,663**	0.74				
	3. Science	234,412	234,390	**236,124**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**236,835**	0.78					
	2. Mathematics	235,007	**237,562**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**241,087**	0.75	0.59				
	2. Mathematics	215,327	**217,395**	N/A				
	3. Algebra I	23,573	N/A	**23,604**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**241,280**	0.79	0.65	0.65	0.56	0.65	0.78
	2. History–Social Science	240,257	**254,242**	0.64	0.61	0.52	0.65	0.80
	3. General Mathematics	71,849	81,547	**82,367**	N/A	N/A	N/A	0.71
	4. Algebra I	148,436	148,863	N/A	**149,190**	N/A	N/A	0.69
	5. Geometry	17,921	17,912	N/A	N/A	**17,937**	N/A	0.62
	6. Algebra II	554	553	N/A	N/A	N/A	**555**	0.66
	7. Science	239,472	241,006	72,306	148,448	17,906	552	**241,587**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**255,236**	0.75	0.64	0.59	0.64	0.58	0.45	0.78	0.72	0.71	0.75
	2. World History	16,668	**17,153**	0.55	0.56	0.62	0.61	0.49	0.78	0.83	0.72	0.72
	3. General Mathematics	20,827	1,379	**25,385**	N/A	N/A	N/A	N/A	0.63	0.88	0.63	0.77
	4. Algebra I	125,239	6,052	N/A	**127,254**	N/A	N/A	N/A	0.62	0.75	0.55	0.64
	5. Geometry	83,680	6,767	N/A	N/A	**83,852**	N/A	N/A	0.68	0.77	0.63	0.77
9	**6. Algebra II**	19,852	2,307	N/A	N/A	N/A	**19,892**	N/A	0.62	0.76	0.52	0.72
	7. Summ. H.S. Mathematics	483	110	N/A	N/A	N/A	N/A	**486**	0.55	0.57	0.58	0.65
	8. Biology	131,941	10,371	4,233	50,035	61,805	15,477	329	**134,826**	N/A	N/A	N/A
	9. Chemistry	2,763	505	16	283	1,286	1,082	75	N/A	**2,790**	N/A	N/A
	10. Earth Science	68,624	1,809	9,986	48,347	10,670	928	16	N/A	N/A	**73,697**	N/A
	11. Physics	8,292	658	45	2,646	3,998	1,530	50	N/A	N/A	N/A	**8,445**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**246,981**	0.73	0.55	0.61	0.56	0.52	0.77	0.77	0.67	0.69	0.72
	2. World History	221,792	**231,195**	0.49	0.54	0.49	0.47	0.76	0.76	0.66	0.73	0.70
	3. Algebra I	49,098	45,143	**50,467**	N/A	N/A	N/A	0.55	0.55	0.60	0.53	0.65
	4. Geometry	83,386	78,560	N/A	**84,051**	N/A	N/A	0.63	0.64	0.71	0.58	0.74
	5. Algebra II	76,307	71,354	N/A	N/A	**76,619**	N/A	0.57	0.62	0.69	0.46	0.63
10	**6. Summ. H.S. Mathematics**	15,011	13,642	N/A	N/A	N/A	**15,032**	0.54	0.59	0.65	0.53	0.65
	7. Life Science	242,222	221,034	48,222	82,796	75,978	14,971	**244,903**	0.86	0.75	0.77	0.76
	8. Biology	110,627	108,971	30,067	49,395	21,098	2,892	110,338	**116,149**	N/A	N/A	N/A
	9. Chemistry	81,870	76,407	2,307	19,602	48,088	10,643	81,639	N/A	**82,284**	N/A	N/A
	10. Earth Science	16,281	16,078	7,228	5,711	1,415	153	16,152	N/A	N/A	**17,660**	N/A
	11. Physics	6,145	5,441	369	1,901	2,810	954	6,107	N/A	N/A	N/A	**6,232**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**241,413**	0.57	0.78	0.53	0.55	0.49	0.59	0.79	0.69	0.70	0.69
	2. World History	6,353	**6,804**	0.63	0.39	0.38	0.18	0.31	0.60	0.34	0.63	0.45
	3. History–Social Science	237,012	6,046	**246,423**	0.49	0.50	0.44	0.51	0.77	0.66	0.75	0.67
	4. Algebra I	22,859	1,981	22,741	**23,659**	N/A	N/A	N/A	0.54	0.59	0.50	0.63
	5. Geometry	39,310	1,208	39,213	N/A	**39,874**	N/A	N/A	0.59	0.61	0.53	0.67
11	**6. Algebra II**	64,397	665	64,582	N/A	N/A	**65,186**	N/A	0.50	0.59	0.43	0.62
	7. Summ. H.S. Mathematics	75,096	446	74,786	N/A	N/A	N/A	**75,256**	0.62	0.74	0.50	0.68
	8. Biology	53,852	1,759	55,089	6,487	9,621	11,810	20,399	**55,881**	N/A	N/A	N/A
	9. Chemistry	69,185	663	69,377	1,552	9,628	32,053	22,218	N/A	**69,902**	N/A	N/A
	10. Earth Science	21,661	954	22,839	5,150	5,723	3,417	2,819	N/A	N/A	**23,321**	N/A
	11. Physics	31,909	256	31,928	392	2,126	7,033	21,183	N/A	N/A	N/A	**32,162**

Table 8.C.13 CST Content Area Correlations (Initially Fluent English Proficient)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**17,072**	0.73					
	2. Mathematics	17,056	**17,077**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**19,186**	0.74					
	2. Mathematics	19,166	**19,223**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**20,442**	0.72					
	2. Mathematics	20,412	**20,522**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**19,791**	0.73	0.75				
	2. Mathematics	19,759	**19,824**	0.74				
	3. Science	19,771	19,776	**19,805**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**19,930**	0.78					
	2. Mathematics	19,883	**19,952**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**30,992**	0.75	0.64				
	2. Mathematics	25,321	**25,408**	N/A				
	3. Algebra I	5,585	N/A	**5,585**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**33,642**	0.79	0.64	0.67	0.60	0.59	0.79
	2. History–Social Science	33,600	**34,167**	0.61	0.62	0.58	0.49	0.79
	3. General Mathematics	6,025	6,398	**6,422**	N/A	N/A	N/A	0.70
	4. Algebra I	22,437	22,461	N/A	**22,479**	N/A	N/A	0.71
	5. Geometry	4,780	4,778	N/A	N/A	**4,787**	N/A	0.66
	6. Algebra II	224	224	N/A	N/A	N/A	**224**	0.61
	7. Science	33,557	33,632	6,053	22,431	4,778	224	**33,653**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**37,714**	0.75	0.61	0.56	0.64	0.62	0.58	0.77	0.75	0.68	0.74
	2. World History	3,687	**3,717**	0.67	0.60	0.61	0.57	0.36	0.78	0.85	0.72	0.82
	3. General Mathematics	1,329	103	**1,482**	N/A	N/A	N/A	N/A	0.55	–	0.54	–
	4. Algebra I	15,192	845	N/A	**15,337**	N/A	N/A	N/A	0.59	0.74	0.49	0.65
	5. Geometry	14,720	1,737	N/A	N/A	**14,734**	N/A	N/A	0.70	0.79	0.63	0.77
9	**6. Algebra II**	5,726	912	N/A	N/A	N/A	**5,732**	N/A	0.68	0.74	0.59	0.76
	7. Summ. H.S. Mathematics	301	54	N/A	N/A	N/A	N/A	**301**	0.57	0.25	–	0.84
	8. Biology	23,212	2,589	290	6,986	11,129	4,534	216	**23,395**	N/A	N/A	N/A
	9. Chemistry	721	177	2	58	272	350	30	N/A	**726**	N/A	N/A
	10. Earth Science	6,916	152	558	4,830	1,362	178	7	N/A	N/A	**7,145**	N/A
	11. Physics	1,723	157	3	443	851	384	40	N/A	N/A	N/A	**1,731**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**34,238**	0.73	0.52	0.61	0.58	0.53	0.77	0.78	0.68	0.67	0.73
	2. World History	30,697	**31,092**	0.45	0.53	0.53	0.52	0.76	0.76	0.68	0.74	0.76
	3. Algebra I	4,459	4,012	**4,514**	N/A	N/A	N/A	0.53	0.54	0.52	0.45	0.59
	4. Geometry	10,031	9,360	N/A	**10,065**	N/A	N/A	0.61	0.63	0.70	0.51	0.77
	5. Algebra II	13,378	12,154	N/A	N/A	**13,397**	N/A	0.61	0.65	0.71	0.44	0.67
10	**6. Summ. H.S. Mathematics**	4,730	4,197	N/A	N/A	N/A	**4,733**	0.59	0.59	0.67	0.69	0.68
	7. Life Science	33,865	30,551	4,380	9,965	13,328	4,726	**33,999**	0.87	0.76	0.75	0.80
	8. Biology	13,756	12,992	2,866	5,734	3,649	945	13,685	**13,999**	N/A	N/A	N/A
	9. Chemistry	15,500	14,037	307	2,889	8,775	3,369	15,455	N/A	**15,525**	N/A	N/A
	10. Earth Science	1,271	1,217	540	445	170	38	1,256	N/A	N/A	**1,330**	N/A
	11. Physics	986	855	57	242	380	293	981	N/A	N/A	N/A	**992**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**32,542**	0.46	0.77	0.53	0.51	0.47	0.63	0.79	0.72	0.69	0.67
	2. World History	644	**667**	0.56	0.49	0.40	0.31	0.06	0.58	0.23	0.63	0.39
	3. History–Social Science	32,164	602	**32,631**	0.46	0.47	0.41	0.53	0.75	0.67	0.75	0.65
	4. Algebra I	1,980	148	1,976	**2,022**	N/A	N/A	N/A	0.54	0.57	0.49	0.64
	5. Geometry	4,267	152	4,251	N/A	**4,302**	N/A	N/A	0.60	0.58	0.49	0.65
11	**6. Algebra II**	8,082	98	8,063	N/A	N/A	**8,135**	N/A	0.48	0.63	0.41	0.62
	7. Summ. H.S. Mathematics	15,017	67	14,957	N/A	N/A	N/A	**15,042**	0.66	0.76	0.48	0.71
	8. Biology	7,828	187	7,862	596	1,038	1,514	4,198	**7,932**	N/A	N/A	N/A
	9. Chemistry	10,900	103	10,883	167	1,260	4,219	4,827	N/A	**10,952**	N/A	N/A
	10. Earth Science	2,232	98	2,305	479	588	342	470	N/A	N/A	**2,338**	N/A
	11. Physics	5,774	28	5,765	38	291	1,039	4,249	N/A	N/A	N/A	**5,793**

Table 8.C.14 CST Content Area Correlations (English Learner)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**171,606**	0.77					
	2. Mathematics	171,319	**172,116**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**136,684**	0.76					
	2. Mathematics	136,121	**137,906**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**106,869**	0.67					
	2. Mathematics	106,468	**108,818**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**86,613**	0.61	0.74				
	2. Mathematics	86,124	**88,410**	0.64				
	3. Science	86,365	86,708	**87,624**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**68,839**	0.65					
	2. Mathematics	68,374	**70,428**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**60,673**	0.60	0.59				
	2. Mathematics	59,497	**60,908**	N/A				
	3. Algebra I	643	N/A	**648**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**50,905**	0.67	0.48	0.51	0.48	0.76	0.64
	2. History–Social Science	50,654	**61,101**	0.48	0.46	0.48	0.84	0.68
	3. General Mathematics	26,809	34,247	**34,506**	N/A	N/A	N/A	0.58
	4. Algebra I	23,198	23,680	N/A	**23,758**	N/A	N/A	0.61
	5. Geometry	213	211	N/A	N/A	**214**	N/A	0.64
	6. Algebra II	14	14	N/A	N/A	N/A	**14**	0.88
	7. Science	50,466	51,596	27,452	23,336	212	14	**51,746**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**54,882**	0.65	0.50	0.42	0.54	0.52	0.53	0.70	0.67	0.59	0.65
	2. World History	3,273	**3,693**	0.47	0.41	0.65	0.63	–	0.69	0.52	0.70	0.59
	3. General Mathematics	7,487	406	**10,082**	N/A	N/A	N/A	N/A	0.50	–0.04	0.50	0.48
	4. Algebra I	38,060	1,868	N/A	**39,353**	N/A	N/A	N/A	0.53	0.48	0.41	0.65
	5. Geometry	6,723	797	N/A	N/A	**6,816**	N/A	N/A	0.66	0.76	0.56	0.72
9	**6. Algebra II**	938	198	N/A	N/A	N/A	**977**	N/A	0.61	0.72	0.51	0.78
	7. Summ. H.S. Mathematics	25	3	N/A	N/A	N/A	N/A	**25**	0.73	–	–	–
	8. Biology	17,435	1,823	1,466	12,207	3,674	561	13	**19,485**	N/A	N/A	N/A
	9. Chemistry	544	387	14	219	225	89	1	N/A	**613**	N/A	N/A
	10. Earth Science	18,635	296	3,437	14,780	1,429	70	0	N/A	N/A	**21,662**	N/A
	11. Physics	1,402	78	18	817	523	51	1	N/A	N/A	N/A	**1,512**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**52,403**	0.64	0.37	0.44	0.50	0.50	0.66	0.65	0.66	0.58	0.65
	2. World History	44,742	**51,251**	0.37	0.44	0.52	0.55	0.65	0.65	0.67	0.63	0.66
	3. Algebra I	20,832	18,876	**21,636**	N/A	N/A	N/A	0.39	0.44	0.48	0.36	0.51
	4. Geometry	18,132	17,136	N/A	**18,529**	N/A	N/A	0.50	0.51	0.64	0.41	0.68
	5. Algebra II	5,791	5,328	N/A	N/A	**5,965**	N/A	0.54	0.56	0.74	0.36	0.74
10	**6. Summ. H.S. Mathematics**	337	266	N/A	N/A	N/A	**343**	0.58	0.62	0.75	–	0.37
	7. Life Science	50,817	45,089	20,481	18,081	5,777	335	**52,381**	0.74	0.71	0.62	0.68
	8. Biology	29,501	31,243	12,899	11,976	2,792	130	29,746	**33,327**	N/A	N/A	N/A
	9. Chemistry	5,975	5,549	763	2,698	2,223	151	5,976	N/A	**6,304**	N/A	N/A
	10. Earth Science	4,774	5,243	2,722	1,384	192	5	4,849	N/A	N/A	**5,749**	N/A
	11. Physics	684	585	146	288	193	28	686	N/A	N/A	N/A	**723**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**47,415**	0.57	0.67	0.33	0.37	0.37	0.49	0.63	0.57	0.56	0.65
	2. World History	2,818	**3,082**	0.62	0.32	0.36	0.40	0.47	0.58	0.51	0.50	0.72
	3. History–Social Science	45,803	2,635	**51,787**	0.31	0.33	0.33	0.40	0.62	0.55	0.61	0.62
	4. Algebra I	10,326	988	10,179	**10,747**	N/A	N/A	N/A	0.40	0.43	0.34	0.34
	5. Geometry	12,538	707	12,539	N/A	**12,840**	N/A	N/A	0.48	0.53	0.34	0.46
11	**6. Algebra II**	10,649	296	11,081	N/A	N/A	**11,283**	N/A	0.46	0.61	0.36	0.63
	7. Summ. H.S. Mathematics	2,980	91	2,993	N/A	N/A	N/A	**3,038**	0.53	0.71	0.42	0.72
	8. Biology	10,452	945	11,257	3,124	3,506	1,987	530	**11,617**	N/A	N/A	N/A
	9. Chemistry	10,283	236	10,783	504	2,721	5,243	1,372	N/A	**10,923**	N/A	N/A
	10. Earth Science	6,427	445	7,279	2,467	1,984	729	76	N/A	N/A	**7,507**	N/A
	11. Physics	2,415	66	2,529	162	517	967	646	N/A	N/A	N/A	**2,574**

Table 8.C.15 CST Content Area Correlations (Reclassified Fluent English Proficient)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**6,697**	0.65					
	2. Mathematics	6,693	**6,702**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**32,122**	0.65					
	2. Mathematics	32,086	**32,108**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**57,776**	0.63					
	2. Mathematics	57,731	**57,788**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**78,482**	0.65	0.70				
	2. Mathematics	78,392	**78,532**	0.66				
	3. Science	78,421	78,411	**78,491**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**99,196**	0.72					
	2. Mathematics	99,046	**99,299**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**99,466**	0.68	0.64				
	2. Mathematics	88,129	**88,421**	N/A				
	3. Algebra I	11,094	N/A	**11,097**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**103,007**	0.74	0.55	0.61	0.61	0.65	0.72
	2. History–Social Science	102,859	**104,351**	0.49	0.55	0.57	0.58	0.74
	3. General Mathematics	21,926	22,830	**22,908**	N/A	N/A	N/A	0.60
	4. Algebra I	72,395	72,513	N/A	**72,576**	N/A	N/A	0.64
	5. Geometry	7,991	7,987	N/A	N/A	**8,006**	N/A	0.67
	6. Algebra II	211	211	N/A	N/A	N/A	**211**	0.64
	7. Science	102,724	102,890	21,939	72,397	7,989	210	**102,985**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**106,793**	0.74	0.52	0.49	0.63	0.64	0.56	0.75	0.77	0.63	0.71
	2. World History	7,887	**7,981**	0.45	0.48	0.64	0.69	0.59	0.78	0.67	0.73	0.75
	3. General Mathematics	4,372	245	**4,780**	N/A	N/A	N/A	N/A	0.52	0.31	0.55	0.50
	4. Algebra I	51,188	2,445	N/A	**51,586**	N/A	N/A	N/A	0.55	0.68	0.43	0.69
	5. Geometry	39,871	3,675	N/A	N/A	**39,946**	N/A	N/A	0.68	0.82	0.58	0.73
9	**6. Algebra II**	9,810	1,441	N/A	N/A	N/A	**9,829**	N/A	0.69	0.80	0.53	0.75
	7. Summ. H.S. Mathematics	189	26	N/A	N/A	N/A	N/A	**189**	0.61	0.80	–	0.71
	8. Biology	60,098	5,376	1,062	22,761	28,640	7,360	143	**60,683**	N/A	N/A	N/A
	9. Chemistry	1,578	567	16	276	761	474	11	N/A	**1,595**	N/A	N/A
	10. Earth Science	23,805	466	1,691	16,699	4,908	490	3	N/A	N/A	**24,376**	N/A
	11. Physics	4,626	421	12	1,500	2,213	860	30	N/A	N/A	N/A	**4,662**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**110,740**	0.68	0.46	0.54	0.57	0.59	0.73	0.72	0.68	0.62	0.71
	2. World History	101,558	**102,866**	0.37	0.46	0.51	0.55	0.72	0.70	0.66	0.66	0.67
	3. Algebra I	17,004	15,705	**17,192**	N/A	N/A	N/A	0.45	0.46	0.51	0.42	0.59
	4. Geometry	39,797	37,689	N/A	**39,983**	N/A	N/A	0.57	0.57	0.67	0.49	0.72
	5. Algebra II	40,423	37,885	N/A	N/A	**40,529**	N/A	0.58	0.61	0.69	0.51	0.68
10	**6. Summ. H.S. Mathematics**	7,032	6,279	N/A	N/A	N/A	**7,036**	0.61	0.66	0.71	0.63	0.67
	7. Life Science	109,608	101,240	16,815	39,604	40,306	7,021	**110,099**	0.84	0.75	0.71	0.75
	8. Biology	50,821	49,328	10,726	23,032	12,897	1,689	50,628	**51,644**	N/A	N/A	N/A
	9. Chemistry	41,758	38,573	1,386	10,654	24,351	4,779	41,682	N/A	**41,888**	N/A	N/A
	10. Earth Science	5,061	4,857	1,932	2,126	597	53	5,048	N/A	N/A	**5,220**	N/A
	11. Physics	2,536	2,141	144	861	1,116	361	2,528	N/A	N/A	N/A	**2,550**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**111,654**	0.45	0.72	0.46	0.46	0.44	0.61	0.75	0.65	0.61	0.68
	2. World History	2,343	**2,374**	0.56	0.27	0.39	0.23	0.30	0.50	0.30	0.40	0.18
	3. History–Social Science	110,516	2,204	**111,796**	0.42	0.41	0.40	0.52	0.73	0.62	0.69	0.65
	4. Algebra I	7,353	537	7,263	**7,460**	N/A	N/A	N/A	0.51	0.46	0.42	0.64
	5. Geometry	18,827	565	18,750	N/A	**18,965**	N/A	N/A	0.51	0.56	0.49	0.60
11	**6. Algebra II**	35,056	412	35,082	N/A	N/A	**35,291**	N/A	0.47	0.57	0.40	0.57
	7. Summ. H.S. Mathematics	39,068	204	38,985	N/A	N/A	N/A	**39,119**	0.64	0.73	0.45	0.71
	8. Biology	22,739	581	22,811	2,062	4,222	5,658	9,170	**22,990**	N/A	N/A	N/A
	9. Chemistry	41,307	414	41,309	775	6,046	18,804	13,943	N/A	**41,519**	N/A	N/A
	10. Earth Science	8,263	266	8,433	1,646	2,634	1,561	1,116	N/A	N/A	**8,521**	N/A
	11. Physics	17,803	137	17,790	156	1,339	4,602	11,219	N/A	N/A	N/A	**17,851**

Table 8.C.16 CST Content Area Correlations (English Fluency unknown)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**681**	0.81					
	2. Mathematics	678	**688**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**558**	0.77					
	2. Mathematics	550	**575**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**554**	0.73					
	2. Mathematics	546	**567**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**469**	0.76	0.84				
	2. Mathematics	463	**474**	0.73				
	3. Science	465	468	**476**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**510**	0.79					
	2. Mathematics	503	**520**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**592**	0.70	0.78				
	2. Mathematics	564	**586**	N/A				
	3. Algebra I	15	N/A	**16**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**604**	0.82	0.62	0.57	0.61	–	0.81
	2. History–Social Science	592	**660**	0.62	0.60	0.70	–	0.83
	3. General Mathematics	308	346	**355**	N/A	N/A	N/A	0.72
	4. Algebra I	266	268	N/A	**277**	N/A	N/A	0.68
	5. Geometry	12	12	N/A	N/A	**14**	N/A	0.74
	6. Algebra II	0	0	N/A	N/A	N/A	**0**	–
	7. Science	592	606	308	270	12	0	**610**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**689**	0.79	0.74	0.55	0.62	0.59	–	0.79	–	0.72	0.69
	2. World History	50	**50**	–	0.37	–	–	–	0.57	–	–	–
	3. General Mathematics	105	7	**123**	N/A	N/A	N/A	N/A	–	–	0.53	–
	4. Algebra I	404	22	N/A	**412**	N/A	N/A	N/A	0.60	–	0.38	0.80
	5. Geometry	117	9	N/A	N/A	**119**	N/A	N/A	0.76	–	0.90	0.95
9	**6. Algebra II**	23	6	N/A	N/A	N/A	**24**	N/A	0.17	–	–	–
	7. Summ. H.S. Mathematics	2	0	N/A	N/A	N/A	N/A	**2**	–	–	–	–
	8. Biology	256	28	10	147	78	15	1	**270**	N/A	N/A	N/A
	9. Chemistry	2	2	0	0	1	1	0	N/A	**2**	N/A	N/A
	10. Earth Science	195	4	46	129	17	3	0	N/A	N/A	**208**	N/A
	11. Physics	35	3	0	16	15	3	0	N/A	N/A	N/A	**35**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**656**	0.73	0.51	0.38	0.43	0.54	0.74	0.76	0.59	0.68	–
	2. World History	521	**551**	0.40	0.43	0.45	0.42	0.73	0.78	0.63	0.78	–
	3. Algebra I	240	198	**246**	N/A	N/A	N/A	0.50	0.55	–	0.23	–
	4. Geometry	182	161	N/A	**185**	N/A	N/A	0.47	0.55	0.74	0.26	–
	5. Algebra II	97	86	N/A	N/A	**101**	N/A	0.42	0.31	0.64	–	–
10	**6. Summ. H.S. Mathematics**	15	13	N/A	N/A	N/A	**15**	0.53	–	–	–	–
	7. Life Science	610	508	223	176	97	15	**631**	0.81	0.70	0.76	–
	8. Biology	299	274	123	113	32	4	290	**311**	N/A	N/A	N/A
	9. Chemistry	93	84	7	27	47	8	96	N/A	**101**	N/A	N/A
	10. Earth Science	60	53	38	12	1	0	57	N/A	N/A	**68**	N/A
	11. Physics	10	9	3	4	1	2	10	N/A	N/A	N/A	**10**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**599**	0.31	0.77	0.58	0.37	0.42	0.43	0.80	0.70	0.69	0.70
	2. World History	27	**33**	0.43	–0.16	–	–	–	–	–	–	–
	3. History–Social Science	557	28	**604**	0.44	0.20	0.43	0.35	0.77	0.60	0.77	0.58
	4. Algebra I	114	11	114	**122**	N/A	N/A	N/A	0.72	–	0.40	–
	5. Geometry	107	3	107	N/A	**109**	N/A	N/A	0.20	0.47	0.76	–
11	**6. Algebra II**	127	6	119	N/A	N/A	**130**	N/A	0.61	0.56	–	0.43
	7. Summ. H.S. Mathematics	73	0	70	N/A	N/A	N/A	**73**	–	0.75	–	0.91
	8. Biology	122	10	126	36	25	29	7	**136**	N/A	N/A	N/A
	9. Chemistry	107	3	105	6	21	49	25	N/A	**109**	N/A	N/A
	10. Earth Science	58	1	58	22	18	4	3	N/A	N/A	**63**	N/A
	11. Physics	50	1	48	1	7	22	15	N/A	N/A	N/A	**51**

Table 8.C.17 CST Content Area Correlations (Not Economically Disadvantaged)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**169,933**	0.75					
	2. Mathematics	169,666	**170,262**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**167,942**	0.74					
	2. Mathematics	167,290	**168,711**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**166,474**	0.70					
	2. Mathematics	165,877	**167,680**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**164,255**	0.71	0.75				
	2. Mathematics	163,448	**164,974**	0.71				
	3. Science	163,825	163,863	**164,646**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**166,946**	0.75					
	2. Mathematics	166,039	**167,352**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**175,767**	0.72	0.55				
	2. Mathematics	148,850	**149,927**	N/A				
	3. Algebra I	25,772	N/A	**25,791**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**177,733**	0.78	0.63	0.62	0.53	0.60	0.77
	2. History–Social Science	177,218	**183,160**	0.62	0.58	0.50	0.57	0.78
	3. General Mathematics	41,313	45,430	**45,763**	N/A	N/A	N/A	0.71
	4. Algebra I	113,678	113,867	N/A	**114,087**	N/A	N/A	0.68
	5. Geometry	20,661	20,649	N/A	N/A	**20,684**	N/A	0.60
	6. Algebra II	727	726	N/A	N/A	N/A	**728**	0.63
	7. Science	176,804	177,493	41,489	113,658	20,643	725	**177,785**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**198,934**	0.73	0.64	0.57	0.60	0.53	0.47	0.76	0.69	0.70	0.72
	2. World History	15,847	**16,138**	0.55	0.54	0.57	0.53	0.40	0.75	0.83	0.68	0.72
	3. General Mathematics	10,995	793	**13,173**	N/A	N/A	N/A	N/A	0.63	–	0.62	0.78
	4. Algebra I	84,595	4,791	N/A	**85,629**	N/A	N/A	N/A	0.61	0.74	0.53	0.62
	5. Geometry	77,153	7,157	N/A	N/A	**77,258**	N/A	N/A	0.66	0.76	0.58	0.74
9	**6. Algebra II**	22,426	2,907	N/A	N/A	N/A	**22,457**	N/A	0.59	0.70	0.48	0.72
	7. Summ. H.S. Mathematics	794	155	N/A	N/A	N/A	N/A	**796**	0.54	0.54	0.55	0.73
	8. Biology	115,868	10,456	2,485	36,178	58,782	17,677	544	**117,342**	N/A	N/A	N/A
	9. Chemistry	2,883	429	10	205	1,190	1,357	109	N/A	**2,903**	N/A	N/A
	10. Earth Science	44,257	1,210	5,260	30,279	8,342	881	20	N/A	N/A	**46,566**	N/A
	11. Physics	7,344	630	31	1,966	3,624	1,619	94	N/A	N/A	N/A	**7,438**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**199,464**	0.72	0.52	0.59	0.53	0.50	0.76	0.77	0.65	0.68	0.70
	2. World History	180,250	**184,984**	0.48	0.51	0.47	0.46	0.75	0.75	0.65	0.72	0.69
	3. Algebra I	30,095	27,837	**30,805**	N/A	N/A	N/A	0.53	0.55	0.60	0.49	0.69
	4. Geometry	63,431	59,209	N/A	**63,806**	N/A	N/A	0.61	0.62	0.70	0.55	0.75
	5. Algebra II	73,770	68,041	N/A	N/A	**73,962**	N/A	0.55	0.59	0.68	0.42	0.63
10	**6. Summ. H.S. Mathematics**	19,311	17,296	N/A	N/A	N/A	**19,332**	0.52	0.56	0.65	0.51	0.65
	7. Life Science	196,795	179,688	29,698	63,092	73,490	19,273	**198,208**	0.86	0.74	0.76	0.75
	8. Biology	82,037	78,871	18,700	36,569	18,740	3,688	81,841	**84,750**	N/A	N/A	N/A
	9. Chemistry	81,136	74,712	1,602	16,146	48,564	13,784	80,923	N/A	**81,373**	N/A	N/A
	10. Earth Science	11,249	11,053	4,559	4,328	1,191	163	11,227	N/A	N/A	**12,013**	N/A
	11. Physics	5,818	5,101	262	1,499	2,706	1,280	5,788	N/A	N/A	N/A	**5,875**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**200,233**	0.51	0.76	0.52	0.53	0.46	0.57	0.78	0.69	0.70	0.67
	2. World History	3,712	**3,943**	0.56	0.35	0.34	0.09	0.22	0.56	0.26	0.58	0.30
	3. History–Social Science	197,312	3,440	**202,346**	0.47	0.47	0.40	0.49	0.75	0.66	0.75	0.65
	4. Algebra I	13,484	1,018	13,421	**13,898**	N/A	N/A	N/A	0.54	0.59	0.48	0.61
	5. Geometry	27,004	753	26,897	N/A	**27,334**	N/A	N/A	0.58	0.61	0.51	0.67
11	**6. Algebra II**	54,075	476	54,091	N/A	N/A	**54,582**	N/A	0.46	0.59	0.41	0.60
	7. Summ. H.S. Mathematics	80,859	454	80,504	N/A	N/A	N/A	**81,004**	0.62	0.74	0.47	0.67
	8. Biology	47,264	1,071	47,805	3,977	6,689	10,317	22,663	**48,349**	N/A	N/A	N/A
	9. Chemistry	60,894	500	60,918	1,077	6,790	26,560	23,674	N/A	**61,340**	N/A	N/A
	10. Earth Science	14,898	491	15,501	2,844	3,732	2,740	2,874	N/A	N/A	**15,759**	N/A
	11. Physics	32,462	234	32,407	258	1,493	6,305	23,418	N/A	N/A	N/A	**32,623**

Table 8.C.18 CST Content Area Correlations (Economically Disadvantaged)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	1. English–Language Arts	**287,916**	0.77					
	2. Mathematics	287,213	**288,822**					
Grade	**CST**	**1.**	**2.**					
3	1. English–Language Arts	**267,485**	0.77					
	2. Mathematics	266,162	**269,592**					
Grade	**CST**	**1.**	**2.**					
4	1. English–Language Arts	**259,189**	0.73					
	2. Mathematics	258,132	**262,360**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	1. English–Language Arts	**255,816**	0.70	0.79				
	2. Mathematics	254,394	**258,312**	0.71				
	3. Science	255,012	255,284	**257,253**				
Grade	**CST**	**1.**	**2.**					
6	1. English–Language Arts	**257,707**	0.75					
	2. Mathematics	256,127	**259,738**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	1. English–Language Arts	**256,224**	0.72	0.58				
	2. Mathematics	239,216	**241,994**	N/A				
	3. Algebra I	15,114	N/A	**15,134**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	1. English–Language Arts	**250,948**	0.78	0.61	0.60	0.55	0.66	0.76
	2. History–Social Science	250,008	**270,515**	0.59	0.56	0.52	0.67	0.78
	3. General Mathematics	85,213	99,483	**100,329**	N/A	N/A	N/A	0.67
	4. Algebra I	152,735	153,600	N/A	**153,862**	N/A	N/A	0.64
	5. Geometry	10,241	10,236	N/A	N/A	**10,257**	N/A	0.63
	6. Algebra II	276	276	N/A	N/A	N/A	**276**	0.68
	7. Science	249,270	251,488	86,179	152,903	10,239	275	**252,038**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**255,560**	0.77	0.61	0.54	0.62	0.61	0.54	0.78	0.77	0.70	0.73
	2. World History	15,662	**16,398**	0.53	0.54	0.67	0.71	0.72	0.82	0.66	0.76	0.76
	3. General Mathematics	23,004	1,340	**28,531**	N/A	N/A	N/A	N/A	0.60	0.48	0.60	0.49
	4. Algebra I	145,009	6,415	N/A	**147,821**	N/A	N/A	N/A	0.59	0.67	0.50	0.69
	5. Geometry	67,818	5,815	N/A	N/A	**68,065**	N/A	N/A	0.67	0.80	0.62	0.76
9	**6. Algebra II**	13,896	1,950	N/A	N/A	N/A	**13,969**	N/A	0.66	0.83	0.52	0.73
	7. Summ. H.S. Mathematics	204	38	N/A	N/A	N/A	N/A	**205**	0.61	–	–	0.62
	8. Biology	116,746	9,694	4,559	55,777	46,443	10,250	157	**120,970**	N/A	N/A	N/A
	9. Chemistry	2,720	1,206	38	631	1,352	637	8	N/A	**2,818**	N/A	N/A
	10. Earth Science	73,680	1,513	10,406	54,347	10,026	784	6	N/A	N/A	**80,268**	N/A
	11. Physics	8,720	685	47	3,448	3,971	1,208	27	N/A	N/A	N/A	**8,933**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**244,737**	0.73	0.50	0.58	0.56	0.55	0.77	0.76	0.69	0.69	0.71
	2. World History	218,397	**231,265**	0.45	0.52	0.51	0.51	0.75	0.75	0.67	0.73	0.69
	3. Algebra I	61,235	55,848	**62,937**	N/A	N/A	N/A	0.50	0.52	0.57	0.49	0.59
	4. Geometry	87,854	83,485	N/A	**88,760**	N/A	N/A	0.61	0.61	0.69	0.53	0.71
	5. Algebra II	62,119	58,668	N/A	N/A	**62,536**	N/A	0.57	0.60	0.68	0.47	0.66
10	**6. Summ. H.S. Mathematics**	7,796	7,084	N/A	N/A	N/A	**7,809**	0.60	0.64	0.68	0.63	0.59
	7. Life Science	239,572	218,091	60,143	87,300	61,889	7,777	**243,024**	0.85	0.75	0.75	0.75
	8. Biology	122,597	123,582	37,824	53,538	21,691	1,968	122,484	**130,286**	N/A	N/A	N/A
	9. Chemistry	63,949	59,832	3,160	19,686	34,872	5,154	63,812	N/A	**64,611**	N/A	N/A
	10. Earth Science	16,113	16,322	7,853	5,334	1,181	86	16,055	N/A	N/A	**17,919**	N/A
	11. Physics	4,529	3,918	454	1,793	1,792	357	4,510	N/A	N/A	N/A	**4,618**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**232,606**	0.58	0.77	0.49	0.51	0.46	0.57	0.78	0.67	0.68	0.70
	2. World History	8,438	**8,975**	0.66	0.37	0.41	0.32	0.42	0.61	0.42	0.60	0.56
	3. History–Social Science	228,022	8,046	**240,119**	0.46	0.47	0.44	0.50	0.77	0.65	0.74	0.68
	4. Algebra I	29,007	2,634	28,717	**29,963**	N/A	N/A	N/A	0.50	0.53	0.47	0.63
	5. Geometry	47,887	1,873	47,814	N/A	**48,595**	N/A	N/A	0.54	0.59	0.51	0.63
11	**6. Algebra II**	64,072	998	64,677	N/A	N/A	**65,274**	N/A	0.49	0.59	0.43	0.61
	7. Summ. H.S. Mathematics	51,291	354	51,206	N/A	N/A	N/A	**51,440**	0.59	0.71	0.49	0.69
	8. Biology	47,571	2,396	49,184	8,292	11,682	10,647	11,631	**50,036**	N/A	N/A	N/A
	9. Chemistry	70,736	918	71,387	1,917	12,855	33,732	18,685	N/A	**71,908**	N/A	N/A
	10. Earth Science	23,662	1,269	25,333	6,890	7,194	3,305	1,606	N/A	N/A	**25,904**	N/A
	11. Physics	25,432	251	25,599	488	2,776	7,340	13,875	N/A	N/A	N/A	**25,750**

Table 8.C.19 CST Content Area Correlations (Unknown Economic Status)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**976**	0.80					
	2. Mathematics	967	**993**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**771**	0.80					
	2. Mathematics	762	**806**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**710**	0.73					
	2. Mathematics	700	**726**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**610**	0.69	0.80				
	2. Mathematics	595	**617**	0.70				
	3. Science	597	606	**621**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**657**	0.77					
	2. Mathematics	647	**671**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**819**	0.70	0.75				
	2. Mathematics	772	**797**	N/A				
	3. Algebra I	24	N/A	**25**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**757**	0.80	0.64	0.62	0.73	–	0.80
	2. History–Social Science	736	**846**	0.63	0.64	0.73	–	0.82
	3. General Mathematics	391	455	**466**	N/A	N/A	N/A	0.67
	4. Algebra I	319	318	N/A	**331**	N/A	N/A	0.71
	5. Geometry	15	15	N/A	N/A	**17**	N/A	0.83
	6. Algebra II	0	0	N/A	N/A	N/A	**0**	–
	7. Science	737	749	390	321	15	0	**758**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**820**	0.80	0.68	0.46	0.57	0.29	–	0.80	–	0.73	0.64
	2. World History	56	**58**	–	0.44	0.28	–	–	0.73	–	–	–
	3. General Mathematics	121	7	**148**	N/A	N/A	N/A	N/A	–0.22	–	0.41	–
	4. Algebra I	479	26	N/A	**492**	N/A	N/A	N/A	0.56	–	0.43	–
	5. Geometry	140	13	N/A	N/A	**144**	N/A	N/A	0.63	–	0.86	–
9	**6. Algebra II**	27	7	N/A	N/A	N/A	**28**	N/A	0.40	–	–	–
	7. Summ. H.S. Mathematics	2	0	N/A	N/A	N/A	N/A	**2**	–	–	–	–
	8. Biology	328	37	17	181	101	20	1	**347**	N/A	N/A	N/A
	9. Chemistry	5	3	0	0	3	2	0	N/A	**5**	N/A	N/A
	10. Earth Science	238	4	52	159	18	4	0	N/A	N/A	**254**	N/A
	11. Physics	14	2	0	8	5	1	0	N/A	N/A	N/A	**14**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**817**	0.74	0.49	0.51	0.44	0.41	0.74	0.76	0.64	0.71	0.82
	2. World History	663	**706**	0.48	0.52	0.47	0.25	0.74	0.78	0.62	0.76	0.87
	3. Algebra I	303	249	**313**	N/A	N/A	N/A	0.49	0.56	–	0.47	–
	4. Geometry	243	212	N/A	**247**	N/A	N/A	0.50	0.52	0.69	0.46	–
	5. Algebra II	107	98	N/A	N/A	**113**	N/A	0.49	0.54	0.66	–	–
10	**6. Summ. H.S. Mathematics**	18	17	N/A	N/A	N/A	**18**	0.36	–	0.44	–	–
	7. Life Science	755	643	280	230	107	18	**781**	0.79	0.73	0.66	0.81
	8. Biology	370	355	157	143	37	4	362	**394**	N/A	N/A	N/A
	9. Chemistry	111	106	8	38	48	12	113	N/A	**118**	N/A	N/A
	10. Earth Science	85	73	48	16	3	0	80	N/A	N/A	**95**	N/A
	11. Physics	14	12	3	4	2	1	14	N/A	N/A	N/A	**14**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**784**	0.35	0.75	0.53	0.29	0.46	0.59	0.76	0.71	0.62	0.71
	2. World History	35	**42**	0.38	0.24	–	–	–	0.76	–	–	–
	3. History–Social Science	718	29	**776**	0.40	0.22	0.41	0.53	0.77	0.67	0.66	0.63
	4. Algebra I	141	13	135	**149**	N/A	N/A	N/A	0.66	–	0.65	–
	5. Geometry	158	9	149	N/A	**161**	N/A	N/A	0.22	0.59	0.66	–0.00
11	**6. Algebra II**	164	3	159	N/A	N/A	**169**	N/A	0.63	0.61	–	0.52
	7. Summ. H.S. Mathematics	84	0	81	N/A	N/A	N/A	**84**	–	0.87	–	0.87
	8. Biology	158	15	156	36	41	34	10	**171**	N/A	N/A	N/A
	9. Chemistry	152	1	152	10	31	76	26	N/A	**157**	N/A	N/A
	10. Earth Science	81	4	80	30	21	8	4	N/A	N/A	**87**	N/A
	11. Physics	57	3	54	3	11	18	19	N/A	N/A	N/A	**58**

Table 8.C.20 CST Content Area Correlations (No Special Education Services)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**423,575**	0.77					
	2. Mathematics	422,791	**423,443**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**411,838**	0.78					
	2. Mathematics	411,141	**411,567**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**404,556**	0.75					
	2. Mathematics	404,085	**404,360**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**399,395**	0.74	0.80				
	2. Mathematics	398,945	**399,193**	0.74				
	3. Science	398,770	398,742	**399,005**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**404,866**	0.78					
	2. Mathematics	404,384	**404,644**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**412,923**	0.75	0.61				
	2. Mathematics	371,967	**372,349**	N/A				
	3. Algebra I	40,268	N/A	**40,284**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**411,006**	0.80	0.64	0.64	0.58	0.64	0.79
	2. History–Social Science	409,727	**410,227**	0.60	0.60	0.55	0.62	0.80
	3. General Mathematics	116,584	116,288	**116,891**	N/A	N/A	N/A	0.70
	4. Algebra I	260,081	259,872	N/A	**260,312**	N/A	N/A	0.69
	5. Geometry	30,628	30,607	N/A	N/A	**30,664**	N/A	0.64
	6. Algebra II	993	992	N/A	N/A	N/A	**994**	0.65
	7. Science	409,598	409,346	116,211	259,850	30,604	990	**410,070**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**433,729**	0.77	0.63	0.57	0.65	0.60	0.53	0.79	0.78	0.72	0.75
	2. World History	29,914	**30,046**	0.52	0.57	0.65	0.64	0.52	0.80	0.82	0.72	0.75
	3. General Mathematics	28,735	1,637	**29,044**	N/A	N/A	N/A	N/A	0.59	0.68	0.60	0.67
	4. Algebra I	218,786	10,341	N/A	**219,784**	N/A	N/A	N/A	0.61	0.72	0.53	0.67
	5. Geometry	142,889	12,667	N/A	N/A	**143,052**	N/A	N/A	0.69	0.82	0.64	0.77
9	**6. Algebra II**	36,043	4,796	N/A	N/A	N/A	**36,083**	N/A	0.65	0.78	0.54	0.74
	7. Summ. H.S. Mathematics	987	189	N/A	N/A	N/A	N/A	**989**	0.58	0.55	0.57	0.75
	8. Biology	225,713	19,078	4,962	87,295	103,843	27,713	693	**226,197**	N/A	N/A	N/A
	9. Chemistry	5,487	1,515	44	799	2,499	1,954	116	N/A	**5,510**	N/A	N/A
	10. Earth Science	111,422	2,424	10,782	79,993	17,999	1,641	25	N/A	N/A	**111,887**	N/A
	11. Physics	15,499	1,257	38	5,076	7,420	2,797	118	N/A	N/A	N/A	**15,523**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**422,966**	0.75	0.51	0.60	0.57	0.55	0.78	0.78	0.69	0.70	0.73
	2. World History	380,728	**381,940**	0.47	0.54	0.51	0.51	0.77	0.75	0.68	0.72	0.72
	3. Algebra I	84,150	75,861	**84,802**	N/A	N/A	N/A	0.52	0.53	0.59	0.50	0.63
	4. Geometry	145,548	136,675	N/A	**145,944**	N/A	N/A	0.62	0.63	0.70	0.55	0.73
	5. Algebra II	133,862	124,524	N/A	N/A	**134,035**	N/A	0.58	0.61	0.69	0.44	0.65
10	**6. Summ. H.S. Mathematics**	26,958	24,243	N/A	N/A	N/A	**26,983**	0.58	0.62	0.68	0.55	0.66
	7. Life Science	416,615	377,888	82,515	144,480	133,277	26,903	**417,972**	0.86	0.77	0.76	0.77
	8. Biology	193,888	183,714	51,721	86,088	39,440	5,621	192,286	**194,646**	N/A	N/A	N/A
	9. Chemistry	142,813	131,981	4,566	34,795	82,477	18,844	142,384	N/A	**143,008**	N/A	N/A
	10. Earth Science	24,948	23,003	10,984	9,124	2,257	247	24,550	N/A	N/A	**25,083**	N/A
	11. Physics	10,073	8,748	664	3,171	4,399	1,629	10,010	N/A	N/A	N/A	**10,096**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**412,143**	0.55	0.78	0.50	0.52	0.47	0.60	0.80	0.70	0.70	0.71
	2. World History	11,256	**11,353**	0.62	0.37	0.39	0.23	0.28	0.58	0.33	0.59	0.40
	3. History–Social Science	405,544	10,296	**407,054**	0.46	0.47	0.42	0.52	0.77	0.67	0.75	0.68
	4. Algebra I	38,485	3,305	37,474	**38,922**	N/A	N/A	N/A	0.51	0.56	0.47	0.63
	5. Geometry	70,754	2,450	70,022	N/A	**71,096**	N/A	N/A	0.56	0.60	0.52	0.64
11	**6. Algebra II**	114,725	1,394	114,072	N/A	N/A	**115,058**	N/A	0.48	0.60	0.42	0.61
	7. Summ. H.S. Mathematics	131,067	793	130,526	N/A	N/A	N/A	**131,243**	0.63	0.74	0.49	0.70
	8. Biology	90,777	3,074	90,015	11,048	17,192	20,147	34,093	**91,123**	N/A	N/A	N/A
	9. Chemistry	128,393	1,325	127,805	2,802	18,866	58,413	41,888	N/A	**128,677**	N/A	N/A
	10. Earth Science	35,784	1,556	35,374	8,730	10,184	5,629	4,446	N/A	N/A	**35,980**	N/A
	11. Physics	56,855	449	56,618	700	4,078	13,209	36,964	N/A	N/A	N/A	**56,944**

Table 8.C.21 CST Content Area Correlations (Special Education Services)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**35,210**	0.82					
	2. Mathematics	35,016	**36,592**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**24,315**	0.80					
	2. Mathematics	23,049	**27,435**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**20,145**	0.74					
	2. Mathematics	19,050	**24,566**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**19,630**	0.73	0.81				
	2. Mathematics	17,966	**23,027**	0.74				
	3. Science	19,036	19,440	**21,797**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**18,846**	0.77					
	2. Mathematics	16,924	**21,510**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**18,381**	0.71	0.64				
	2. Mathematics	15,562	**18,985**	N/A				
	3. Algebra I	543	N/A	**567**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**18,390**	0.79	0.58	0.63	0.51	–	0.78
	2. History–Social Science	18,195	**44,045**	0.56	0.60	0.50	–	0.80
	3. General Mathematics	10,315	28,921	**29,500**	N/A	N/A	N/A	0.69
	4. Algebra I	6,639	7,894	N/A	**7,949**	N/A	N/A	0.68
	5. Geometry	289	293	N/A	N/A	**294**	N/A	0.64
	6. Algebra II	10	10	N/A	N/A	N/A	**10**	–
	7. Science	17,184	20,331	11,822	7,018	293	10	**20,458**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**21,558**	0.76	0.59	0.54	0.73	0.72	0.62	0.82	0.80	0.73	0.74
	2. World History	1,648	**2,541**	0.61	0.54	0.76	0.87	–	0.83	0.51	0.76	0.73
	3. General Mathematics	5,380	503	**12,756**	N/A	N/A	N/A	N/A	0.57	–	0.58	0.66
	4. Algebra I	11,285	889	N/A	**14,129**	N/A	N/A	N/A	0.60	0.65	0.52	0.67
	5. Geometry	2,222	318	N/A	N/A	**2,414**	N/A	N/A	0.77	0.80	0.70	0.85
9	**6. Algebra II**	305	68	N/A	N/A	N/A	**370**	N/A	0.78	0.88	0.79	0.72
	7. Summ. H.S. Mathematics	13	4	N/A	N/A	N/A	N/A	**14**	–	–	–	–
	8. Biology	7,221	1,107	2,093	4,835	1,482	233	9	**12,434**	N/A	N/A	N/A
	9. Chemistry	121	123	4	37	46	42	1	N/A	**216**	N/A	N/A
	10. Earth Science	6,743	303	4,920	4,779	387	28	1	N/A	N/A	**15,142**	N/A
	11. Physics	577	60	39	345	180	31	3	N/A	N/A	N/A	**856**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**22,016**	0.76	0.51	0.65	0.65	0.71	0.79	0.78	0.77	0.69	0.79
	2. World History	18,552	**34,908**	0.46	0.58	0.64	0.69	0.77	0.76	0.79	0.72	0.79
	3. Algebra I	7,471	8,058	**9,233**	N/A	N/A	N/A	0.52	0.52	0.63	0.51	0.70
	4. Geometry	5,977	6,226	N/A	**6,863**	N/A	N/A	0.68	0.66	0.76	0.60	0.79
	5. Algebra II	2,130	2,277	N/A	N/A	**2,567**	N/A	0.69	0.68	0.79	0.49	0.80
10	**6. Summ. H.S. Mathematics**	167	154	N/A	N/A	N/A	**176**	0.72	0.71	0.76	–	–
	7. Life Science	20,476	20,497	7,593	6,138	2,203	165	**23,987**	0.85	0.85	0.77	0.82
	8. Biology	11,094	19,035	4,948	4,157	1,023	39	12,374	**20,713**	N/A	N/A	N/A
	9. Chemistry	2,382	2,664	204	1,074	1,006	106	2,462	N/A	**3,088**	N/A	N/A
	10. Earth Science	2,496	4,432	1,473	554	118	2	2,806	N/A	N/A	**4,930**	N/A
	11. Physics	288	282	55	125	101	9	302	N/A	N/A	N/A	**410**
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
	1. English–Language Arts	**21,451**	0.56	0.78	0.47	0.57	0.51	0.68	0.76	0.72	0.71	0.78
	2. World History	928	**1,602**	0.57	0.25	0.30	0.23	0.81	0.55	0.42	0.61	0.54
	3. History–Social Science	20,484	1,216	**36,102**	0.43	0.51	0.50	0.63	0.75	0.71	0.71	0.79
	4. Algebra I	4,140	360	4,789	**5,077**	N/A	N/A	N/A	0.47	0.63	0.48	0.41
	5. Geometry	4,292	185	4,832	N/A	**4,988**	N/A	N/A	0.60	0.62	0.51	0.71
11	**6. Algebra II**	3,583	83	4,851	N/A	N/A	**4,962**	N/A	0.57	0.64	0.49	0.71
	7. Summ. H.S. Mathematics	1,167	15	1,265	N/A	N/A	N/A	**1,285**	0.73	0.83	0.69	0.76
	8. Biology	4,212	406	7,114	1,253	1,218	850	211	**7,416**	N/A	N/A	N/A
	9. Chemistry	3,387	94	4,647	202	810	1,955	497	N/A	**4,723**	N/A	N/A
	10. Earth Science	2,853	207	5,527	1,034	761	424	38	N/A	N/A	**5,755**	N/A
	11. Physics	1,096	39	1,440	49	202	454	348	N/A	N/A	N/A	**1,485**

Table 8.C.22 CST Content Area Correlations (Special Education unknown)

Grade	CST	1.	2.	3.	4.	5.	6.	7.
2	**1. English–Language Arts**	**40**	0.85					
	2. Mathematics	39	**42**					
Grade	**CST**	**1.**	**2.**					
3	**1. English–Language Arts**	**45**	0.90					
	2. Mathematics	24	**107**					
Grade	**CST**	**1.**	**2.**					
4	**1. English–Language Arts**	**1,672**	0.77					
	2. Mathematics	1,574	**1,840**					
Grade	**CST**	**1.**	**2.**	**3.**				
5	**1. English–Language Arts**	**1,656**	0.77	0.83				
	2. Mathematics	1,526	**1,683**	0.78				
	3. Science	1,628	1,571	**1,718**				
Grade	**CST**	**1.**	**2.**					
6	**1. English–Language Arts**	**1,598**	0.79					
	2. Mathematics	1,505	**1,607**					
Grade	**CST**	**1.**	**2.**	**3.**				
7	**1. English–Language Arts**	**1,506**	0.76	0.68				
	2. Mathematics	1,309	**1,384**	N/A				
	3. Algebra I	99	N/A	**99**				
Grade	**CST**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
8	**1. English–Language Arts**	**42**	0.84	0.54	0.84	–	–	0.78
	2. History–Social Science	40	**249**	0.37	0.83	–	–	0.76
	3. General Mathematics	18	159	**167**	N/A	N/A	N/A	0.71
	4. Algebra I	12	19	N/A	**19**	N/A	N/A	0.86
	5. Geometry	0	0	N/A	N/A	**0**	N/A	–
	6. Algebra II	0	0	N/A	N/A	N/A	**0**	–
	7. Science	29	53	25	14	0	0	**53**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**27**	–	–	0.33	–	–	–	–	–	–	–
	2. World History	3	**7**	–	–	–	–	–	–	–	–	–
	3. General Mathematics	5	0	**52**	N/A	N/A	N/A	N/A	–	–	0.36	–
	4. Algebra I	12	2	N/A	**29**	N/A	N/A	N/A	–	–	0.51	–
	5. Geometry	0	0	N/A	N/A	**1**	N/A	N/A	–	–	–	–
9	**6. Algebra II**	1	0	N/A	N/A	N/A	**1**	N/A	–	–	–	–
	7. Summ. H.S. Mathematics	0	0	N/A	N/A	N/A	N/A	**0**	–	–	–	–
	8. Biology	8	2	6	6	1	1	0	**28**	N/A	N/A	N/A
	9. Chemistry	0	0	0	0	0	0	0	N/A	**0**	N/A	N/A
	10. Earth Science	10	0	16	13	0	0	0	N/A	N/A	**59**	N/A
	11. Physics	2	0	1	1	0	0	0	N/A	N/A	N/A	**6**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**36**	0.81	0.78	–	–	–	0.80	0.87	–	–	–
	2. World History	30	**107**	0.29	–	–	–	0.86	0.85	–	0.70	–
	3. Algebra I	12	15	**20**	N/A	N/A	N/A	0.45	0.46	–	–	–
	4. Geometry	3	5	N/A	**6**	N/A	N/A	–	–	–	–	–
	5. Algebra II	4	6	N/A	N/A	**9**	N/A	–	–	–	–	–
10	**6. Summ. H.S. Mathematics**	0	0	N/A	N/A	N/A	**0**	–	–	–	–	–
	7. Life Science	31	37	13	4	6	0	**54**	0.92	–	–	–
	8. Biology	22	59	12	5	5	0	27	**71**	N/A	N/A	N/A
	9. Chemistry	1	5	0	1	1	0	2	N/A	**6**	N/A	N/A
	10. Earth Science	3	13	3	0	0	0	6	N/A	N/A	**14**	N/A
	11. Physics	0	1	0	0	0	0	0	N/A	N/A	N/A	**1**

Grade	CST	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	1. English–Language Arts	**29**	–	0.73	–	–	–	–	–	–	–	–
	2. World History	1	**5**	–	–	–	–	–	–	–	–	–
	3. History–Social Science	24	3	**85**	–	–	–	–	0.50	–	0.62	–
	4. Algebra I	7	0	10	**11**	N/A	N/A	N/A	–	–	–	–
	5. Geometry	3	0	6	N/A	**6**	N/A	N/A	–	–	–	–
11	**6. Algebra II**	3	0	4	N/A	N/A	**5**	N/A	–	–	–	–
	7. Summ. H.S. Mathematics	0	0	0	N/A	N/A	N/A	**0**	–	–	–	–
	8. Biology	4	2	16	4	2	1	0	**17**	N/A	N/A	N/A
	9. Chemistry	2	0	5	0	0	0	0	N/A	**5**	N/A	N/A
	10. Earth Science	4	1	13	0	2	0	0	N/A	N/A	**15**	N/A
	11. Physics	0	0	2	0	0	0	0	N/A	N/A	N/A	**2**

Appendix 8.D—IRT Analyses

Table 8.D.1 IRT *b*-values for ELA, Grade Ten

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Word Analysis and Vocabulary Development	8	–0.29	0.72	–1.69	0.51
Reading Comprehension	18	–0.43	0.51	–1.85	0.13
Literary Response and Analysis	16	–0.09	0.56	–1.20	1.16
Written Conventions	13	–0.37	0.79	–1.62	1.10
Writing Strategies	20	–0.23	0.71	–1.56	1.23
All operational items	75	–0.28	0.67	–1.85	1.23

Table 8.D.2 IRT *b*-values for ELA, Grade Eleven

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Word Analysis and Vocabulary Development	8	–0.31	0.61	–1.28	0.71
Reading Comprehension	19	–0.26	0.67	–1.51	1.25
Literary Response and Analysis	17	–0.24	0.80	–1.94	1.48
Written Conventions	9	–0.43	0.59	–1.49	0.55
Writing Strategies	22	–0.13	0.41	–1.02	0.54
All operational items	75	–0.24	0.63	–1.94	1.48

Table 8.D.3 IRT *b*-values for History–Social Science, Grade Eight

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
World History and Geography: Ancient Civ.	16	–0.09	0.70	–1.53	1.10
Late Antiquity and the Middle Ages	14	–0.06	0.59	–1.32	1.14
Renaissance/Reformation	10	–0.25	0.58	–1.40	0.47
U.S. Constitution and the Early Republic	22	–0.01	0.64	–1.25	1.32
Civil War and Its Aftermath	13	–0.13	0.49	–1.12	0.79
All operational items	75	–0.09	0.62	–1.53	1.32

Table 8.D.4 IRT *b*-values for World History

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Development of Modern Political Thought	12	–0.15	0.71	–1.31	1.15
Industrial Expansion and Imperialism	10	–0.35	0.56	–1.46	0.62
Causes and Effects of the First World War	14	–0.24	0.41	–1.02	0.55
Causes and Effects of the Second World War	12	–0.23	0.47	–1.14	0.42
International Developments in the Post–WW II Era	10	–0.10	0.58	–1.26	1.00
All operational items	58	–0.21	0.56	–1.46	1.15

Table 8.D.5 IRT *b*-values for History–Social Science Grade Eleven

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Foundations of Amer. Pol. and Social Thought	10	–0.25	0.80	–1.63	1.11
Industrialization and the U.S. Role as a World Power	13	–0.40	0.74	–2.25	0.78
United States Between the World Wars	12	–0.24	0.68	–1.40	1.08
World War II and Foreign Affairs	12	–0.27	0.72	–1.73	0.94
Post–World War II Domestic Issues	13	–0.22	0.62	–1.61	0.87
All operational items	60	–0.28	0.71	–2.25	1.11

Table 8.D.6 IRT *b*-values for General Mathematics

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Rational Numbers	14	0.05	0.61	–1.23	0.88
Exponents, Powers, and Roots	10	0.43	0.37	–0.08	1.10
Quant. Relationships and Evaluating Expressions	11	0.19	0.58	–0.75	1.24
Multistep Problems, Graphing, and Functions	10	0.02	0.62	–1.03	1.16
Measurement and Geometry	11	0.50	0.37	–0.04	1.26
Statistics, Data Analysis, and Probability	9	–0.02	0.70	–1.03	0.91
All operational items	65	0.19	0.59	–1.23	1.26

Table 8.D.7 IRT *b*-values for Summative High School Mathematics

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Algebra I	18	–0.99	0.62	–2.09	0.18
Geometry	19	–0.88	0.62	–1.98	0.36
Algebra II	23	–0.72	0.70	–1.88	1.01
Probability and Statistics	5	–0.46	0.72	–1.36	0.43
All operational items	65	–0.82	0.68	–2.09	1.01

Table 8.D.8 IRT *b*-values for Biology

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Cell Biology	9	–0.03	0.59	–1.16	0.63
Genetics	18	–0.41	0.72	–1.91	0.75
Ecology and Evolution	16	–0.22	0.54	–1.42	0.72
Physiology	11	–0.44	0.50	–1.28	0.70
Investigation and Experimentation	6	–0.32	0.67	–1.09	0.91
All operational items	60	–0.30	0.63	–1.91	0.91

Table 8.D.9 Distribution of IRT *b*-values for ELA, Grades Ten and Eleven

IRT *b*–value	Grade 10	Grade 11
>=3.5		
3.0 – < 3.5		
2.5 – < 3.0		
2.0 – < 2.5		
1.5 – < 2.0		
1.0 – < 1.5	3	2
0.5 – < 1.0	3	5
0.0 – < 0.5	22	16
–0.5 – < 0.0	23	29
–1.0 – < –0.5	12	13
–1.5 – < –1.0	7	8
–2.0 – < –1.5	5	2
–2.5 – < –2.0		
–3.0 – < –2.5		
–3.5 – < –3.0		
< –3.5		
Total	75	75

Table 8.D.10 Distribution of IRT *b*-values for History–Social Science

IRT *b*–value	Grade 8	World History	Grade 11
>=3.5			
3.0 – < 3.5			
2.5 – < 3.0			
2.0 – < 2.5			
1.5 – < 2.0			
1.0 – < 1.5	4	1	2
0.5 – < 1.0	7	5	7
0.0 – < 0.5	26	15	12
–0.5 – < 0.0	21	23	17
–1.0 – < –0.5	9	9	13
–1.5 – < –1.0	7	5	5
–2.0 – < –1.5	1		3
–2.5 – < –2.0			1
–3.0 – < –2.5			
–3.5 – < –3.0			
< –3.5			
Total	75	58	60

Table 8.D.11 Distribution of IRT *b*-values for General Mathematics and Summative High School Mathematics

IRT *b*–value	General Mathematics	Summ. H.S. Mathematics
>=3.5		
3.0 – < 3.5		
2.5 – < 3.0		
2.0 – < 2.5		
1.5 – < 2.0		
1.0 – < 1.5	5	1
0.5 – < 1.0	15	1
0.0 – < 0.5	24	6
–0.5 – < 0.0	12	10
–1.0 – < –0.5	6	20
–1.5 – < –1.0	3	14
–2.0 – < –1.5		12
–2.5 – < –2.0		1
–3.0 – < –2.5		
–3.5 – < –3.0		
< –3.5		
Total	65	65

Table 8.D.12 Distribution of IRT *b*-values for Biology

IRT *b*–value	Biology
>=3.5	
3.0 – < 3.5	
2.5 – < 3.0	
2.0 – < 2.5	
1.5 – < 2.0	
1.0 – < 1.5	
0.5 – < 1.0	5
0.0 – < 0.5	12
–0.5 – < 0.0	21
–1.0 – < –0.5	14
–1.5 – < –1.0	6
–2.0 – < –1.5	2
–2.5 – < –2.0	
–3.0 – < –2.5	
–3.5 – < –3.0	
< –3.5	
Total	60

Scaling and Pre-Equating Results

Table 8.D.13 New Conversions for ELA, Grades Two and Three

Grade 2										Grade 3									
Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	8.0009	150	**33**	6,227	–0.1135	306.5691	307	**0**	–	N/A	–12.3991	150	**33**	6,625	–0.3946	288.8689	289
1	–	–4.5419	81.4008	150	**34**	6,520	–0.0447	310.1034	310	**1**	–	–4.8362	49.3334	150	**34**	7,244	–0.3253	292.6653	293
2	–	–3.8255	119.2432	150	**35**	6,777	0.0242	313.6157	314	**2**	–	–4.1196	87.5789	150	**35**	7,334	–0.2558	296.4744	296
3	–	–3.3964	141.5726	150	**36**	7,099	0.0935	317.1078	317	**3**	–	–3.6903	111.7762	150	**36**	7,836	–0.1860	300.2956	300
4	–	–3.0847	156.9851	157	**37**	7,474	0.1632	320.5765	321	**4**	–	–3.3784	128.9954	150	**37**	8,246	–0.1159	303.6348	304
5	–	–2.8373	169.4540	169	**38**	7,665	0.2334	324.0221	324	**5**	–	–3.1307	142.5005	150	**38**	8,651	–0.0451	307.4407	307
6	25	–2.6305	180.0798	180	**39**	8,320	0.3043	327.5097	328	**6**	11	–2.9236	153.7145	154	**39**	8,989	0.0263	311.2932	311
7	39	–2.4515	189.1368	189	**40**	8,711	0.3760	331.1465	331	**7**	15	–2.7443	163.3184	163	**40**	9,457	0.0985	315.1547	315
8	99	–2.2929	196.9787	197	**41**	9,259	0.4486	334.8157	335	**8**	34	–2.5853	171.7227	172	**41**	9,854	0.1717	319.0249	319
9	241	–2.1498	204.1375	204	**42**	9,703	0.5224	338.5690	339	**9**	102	–2.4418	179.4042	179	**42**	10,537	0.2461	322.9506	323
10	494	–2.0188	210.6988	211	**43**	10,135	0.5976	342.4452	342	**10**	217	–2.3105	186.5251	187	**43**	10,763	0.3218	327.3137	327
11	859	–1.8975	216.8410	217	**44**	10,504	0.6742	346.2884	346	**11**	357	–2.1888	193.0805	193	**44**	11,276	0.3991	331.2401	331
12	1,416	–1.7842	222.6486	223	**45**	11,131	0.7527	350.1065	350	**12**	586	–2.0751	199.1038	199	**45**	11,758	0.4782	335.5090	336
13	1,956	–1.6776	227.9396	228	**46**	11,635	0.8331	354.0763	354	**13**	909	–1.9680	204.7762	205	**46**	12,222	0.5593	339.9592	340
14	2,667	–1.5765	233.0388	233	**47**	12,181	0.9158	358.3579	358	**14**	1,312	–1.8665	210.2117	210	**47**	12,763	0.6427	344.1098	344
15	3,467	–1.4802	237.8165	238	**48**	12,818	1.0011	362.6368	363	**15**	1,733	–1.7698	215.3910	215	**48**	13,049	0.7288	348.8250	349
16	4,234	–1.3880	242.5973	243	**49**	13,284	1.0895	367.0946	367	**16**	2,212	–1.6771	220.6018	221	**49**	13,523	0.8180	353.7941	354
17	4,847	–1.2993	247.0449	247	**50**	13,623	1.1814	371.7800	372	**17**	2,628	–1.5879	225.3914	225	**50**	14,042	0.9107	358.7490	359
18	5,218	–1.2136	251.2217	251	**51**	13,983	1.2773	376.4735	376	**18**	2,904	–1.5018	230.0483	230	**51**	14,166	1.0076	363.9511	364
19	5,700	–1.1307	255.4814	255	**52**	14,565	1.3780	381.4082	381	**19**	3,362	–1.4184	234.2457	234	**52**	14,613	1.1092	369.1772	369
20	5,639	–1.0500	259.5056	260	**53**	14,873	1.4842	386.8053	387	**20**	3,571	–1.3372	238.5560	239	**53**	14,722	1.2164	374.9085	375
21	5,741	–0.9713	263.4313	263	**54**	14,836	1.5971	392.6005	393	**21**	3,771	–1.2581	242.8166	243	**54**	15,023	1.3305	381.1290	381
22	5,557	–0.8945	267.4256	267	**55**	15,245	1.7179	398.6286	399	**22**	4,021	–1.1808	246.8159	247	**55**	14,890	1.4525	387.5593	388
23	5,379	–0.8191	271.2114	271	**56**	14,864	1.8484	405.1109	405	**23**	4,071	–1.1050	250.9827	251	**56**	14,834	1.5843	394.5184	395
24	5,226	–0.7451	274.9208	275	**57**	14,946	1.9909	412.2247	412	**24**	4,330	–1.0305	254.8264	255	**57**	14,692	1.7284	402.2015	402
25	5,364	–0.6723	278.6149	279	**58**	14,673	2.1491	420.2521	420	**25**	4,515	–0.9572	258.9177	259	**58**	13,976	1.8880	410.8514	411
26	5,128	–0.6005	282.2849	282	**59**	14,068	2.3274	429.3306	429	**26**	4,724	–0.8849	262.7047	263	**59**	13,022	2.0681	420.4206	420
27	5,133	–0.5295	285.7637	286	**60**	13,359	2.5336	439.7212	440	**27**	4,979	–0.8134	266.3942	266	**60**	12,133	2.2762	431.5724	432
28	5,183	–0.4592	289.1037	289	**61**	11,946	2.7803	452.3815	452	**28**	5,120	–0.7426	270.3448	270	**61**	10,541	2.5250	445.1442	445
29	5,468	–0.3894	292.7337	293	**62**	10,432	3.0914	468.5397	469	**29**	5,444	–0.6724	274.3095	274	**62**	8,559	2.8381	462.1315	462
30	5,624	–0.3201	296.3459	296	**63**	8,201	3.5198	491.6270	492	**30**	5,760	–0.6026	278.0931	278	**63**	6,368	3.2691	485.3668	485
31	5,692	–0.2511	299.7815	300	**64**	5,266	4.2354	526.8720	527	**31**	5,986	–0.5331	281.4129	281	**64**	3,868	3.9875	524.3201	524
32	5,879	–0.1823	303.0143	303	**65**	2,209	N/A	578.9992	600	**32**	6,387	–0.4638	285.0859	285	**65**	1,553	N/A	594.9791	600

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.14 New Conversions for ELA, Grades Four and Five

Grade 4										Grade 5									
Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	0.0014	150	**38**	5,622	0.1133	324.9069	325	**0**	–	N/A	25.0010	150	**38**	5,286	–0.2472	307.6183	308
1	–	–4.4933	89.4201	150	**39**	5,850	0.1730	327.5974	328	**1**	–	–4.9206	69.8445	150	**39**	5,511	–0.1859	310.7525	311
2	–	–3.7770	127.9759	150	**40**	6,223	0.2327	330.6943	331	**2**	–	–4.2022	104.9385	150	**40**	5,829	–0.1246	313.9009	314
3	–	–3.3482	150.5067	151	**41**	6,370	0.2926	333.7759	334	**3**	–	–3.7713	130.0279	150	**41**	6,091	–0.0631	317.0630	317
4	–	–3.0372	166.4070	166	**42**	6,550	0.3527	336.8416	337	**4**	–	–3.4582	145.6872	150	**42**	6,359	–0.0013	320.0599	320
5	–	–2.7907	178.9073	179	**43**	6,854	0.4132	339.8910	340	**5**	–	–3.2096	158.4945	158	**43**	6,931	0.0608	322.9273	323
6	–	–2.5850	189.3592	189	**44**	7,076	0.4742	342.9238	343	**6**	–	–3.0019	169.2804	169	**44**	7,235	0.1234	326.1284	326
7	–	–2.4075	198.1898	198	**45**	7,365	0.5356	345.9394	346	**7**	–	–2.8223	178.4433	178	**45**	7,476	0.1865	329.3422	329
8	–	–2.2505	205.9547	206	**46**	7,743	0.5976	349.0108	349	**8**	–	–2.6633	186.4423	186	**46**	7,782	0.2502	332.5676	333
9	27	–2.1093	213.2048	213	**47**	7,969	0.6604	352.4147	352	**9**	–	–2.5200	193.6984	194	**47**	8,143	0.3147	335.8050	336
10	67	–1.9803	219.5591	220	**48**	8,231	0.7240	355.4048	355	**10**	30	–2.3891	200.2917	200	**48**	8,567	0.3799	339.0537	339
11	152	–1.8614	225.5124	226	**49**	8,342	0.7885	358.5892	359	**11**	54	–2.2682	206.3575	206	**49**	8,891	0.4462	342.3132	342
12	246	–1.7506	231.1710	231	**50**	8,735	0.8541	362.0502	362	**12**	111	–2.1555	212.2049	212	**50**	9,440	0.5136	345.5894	346
13	419	–1.6467	236.4879	236	**51**	8,890	0.9209	365.2126	365	**13**	159	–2.0496	217.4378	217	**51**	9,659	0.5822	349.2524	349
14	713	–1.5485	241.2263	241	**52**	9,208	0.9891	368.6137	369	**14**	281	–1.9496	222.4158	222	**52**	10,176	0.6521	352.6583	353
15	1,072	–1.4554	245.8522	246	**53**	9,608	1.0588	372.4865	372	**15**	392	–1.8546	227.2248	227	**53**	10,378	0.7237	356.2656	356
16	1,478	–1.3665	250.4749	250	**54**	9,833	1.1302	375.9185	376	**16**	593	–1.7639	231.8383	232	**54**	10,877	0.7970	359.7988	360
17	1,965	–1.2813	254.6330	255	**55**	10,502	1.2035	379.5031	380	**17**	814	–1.6769	236.1323	236	**55**	11,583	0.8723	363.7079	364
18	2,414	–1.1994	259.0225	259	**56**	10,594	1.2791	383.4247	383	**18**	1,077	–1.5932	240.1838	240	**56**	11,951	0.9498	367.7005	368
19	2,742	–1.1204	263.0053	263	**57**	10,819	1.3572	387.3216	387	**19**	1,326	–1.5124	244.4494	244	**57**	12,153	1.0299	371.7030	372
20	3,182	–1.0439	266.4741	266	**58**	11,250	1.4380	391.2254	391	**20**	1,544	–1.4341	248.3525	248	**58**	12,658	1.1128	375.7146	376
21	3,593	–0.9697	270.4129	270	**59**	11,482	1.5220	395.4461	395	**21**	1,772	–1.3581	252.0395	252	**59**	12,985	1.1990	380.0588	380
22	3,849	–0.8975	274.0493	274	**60**	11,776	1.6097	399.8351	400	**22**	2,031	–1.2842	255.6530	256	**60**	13,540	1.2889	384.7224	385
23	3,962	–0.8270	277.3412	277	**61**	11,826	1.7017	404.6036	405	**23**	2,231	–1.2120	259.2184	259	**61**	13,895	1.3831	389.4309	389
24	4,177	–0.7582	281.1094	281	**62**	12,146	1.7984	409.4533	409	**24**	2,403	–1.1415	262.7530	263	**62**	14,038	1.4823	394.1988	394
25	4,227	–0.6907	284.3796	284	**63**	12,208	1.9009	414.7361	415	**25**	2,642	–1.0724	266.3718	266	**63**	14,306	1.5873	399.3377	399
26	4,245	–0.6246	287.6422	288	**64**	12,068	2.0102	420.0677	420	**26**	2,788	–1.0045	269.6085	270	**64**	14,135	1.6991	404.9589	405
27	4,277	–0.5595	290.8966	291	**65**	12,222	2.1276	425.8979	426	**27**	2,979	–0.9378	273.1246	273	**65**	13,773	1.8192	410.9623	411
28	4,393	–0.4954	294.1434	294	**66**	12,225	2.2548	432.3084	432	**28**	3,143	–0.8721	276.2554	276	**66**	13,614	1.9492	417.5354	418
29	4,429	–0.4322	297.3787	297	**67**	11,808	2.3943	439.5665	440	**29**	3,389	–0.8073	279.5193	280	**67**	12,811	2.0917	424.6770	425
30	4,532	–0.3698	300.5949	301	**68**	11,290	2.5493	447.3858	447	**30**	3,476	–0.7432	282.8876	283	**68**	12,002	2.2499	432.7352	433
31	4,577	–0.3081	303.6806	304	**69**	10,636	2.7248	456.1292	456	**31**	3,675	–0.6798	286.0772	286	**69**	10,981	2.4288	441.4077	441
32	4,809	–0.2469	306.5236	307	**70**	9,291	2.9284	466.1228	466	**32**	3,876	–0.6170	289.1304	289	**70**	9,268	2.6358	451.8703	452
33	4,770	–0.1861	309.7161	310	**71**	8,151	3.1725	478.5970	479	**33**	3,963	–0.5547	292.1722	292	**71**	7,474	2.8836	464.4359	464
34	4,915	–0.1258	312.8798	313	**72**	6,446	3.4811	494.5536	495	**34**	4,322	–0.4927	295.2303	295	**72**	5,590	3.1965	480.1830	480
35	5,070	–0.0658	315.8856	316	**73**	4,525	3.9072	516.4735	516	**35**	4,546	–0.4311	298.3041	298	**73**	3,578	3.6270	502.9025	503
36	5,385	–0.0059	318.7185	319	**74**	2,547	4.6205	551.5540	552	**36**	4,831	–0.3697	301.3937	301	**74**	1,805	4.3453	541.0959	541
37	5,467	0.0537	321.8588	322	**75**	893	N/A	607.4990	600	**37**	4,877	–0.3084	304.4986	304	**75**	551	N/A	611.4990	600

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.15 New Conversions for ELA, Grades Six and Seven

Grade 6										Grade 7									
Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	0.0011	150	**38**	6,082	–0.0620	313.7233	314	**0**	–	N/A	0.0006	150	**38**	6,413	0.1290	306.7265	307
1	–	–4.7032	73.5557	150	**39**	6,428	–0.0005	316.8593	317	**1**	–	–4.5039	43.7005	150	**39**	6,845	0.1908	310.1918	310
2	–	–3.9876	112.4586	150	**40**	6,487	0.0612	319.9789	320	**2**	–	–3.7895	85.0430	150	**40**	7,071	0.2527	313.6420	314
3	–	–3.5594	135.2026	150	**41**	6,992	0.1230	323.0812	323	**3**	–	–3.3623	109.7695	150	**41**	7,445	0.3148	317.0763	317
4	–	–3.2488	150.9451	151	**42**	7,243	0.1852	326.1669	326	**4**	–	–3.0527	127.4037	150	**42**	7,838	0.3773	320.5646	321
5	–	–3.0026	163.9128	164	**43**	7,531	0.2477	329.3704	329	**5**	–	–2.8073	141.2302	150	**43**	8,275	0.4400	324.3560	324
6	–	–2.7970	174.2866	174	**44**	7,728	0.3106	332.7917	333	**6**	–	–2.6025	152.7589	153	**44**	8,821	0.5033	327.8525	328
7	–	–2.6194	183.4966	183	**45**	8,280	0.3741	335.8980	336	**7**	–	–2.4257	162.8320	163	**45**	9,342	0.5671	331.3934	331
8	–	–2.4623	191.4371	191	**46**	8,731	0.4382	339.1905	339	**8**	13	–2.2693	171.6637	172	**46**	9,515	0.6315	335.1744	335
9	11	–2.3208	198.5310	199	**47**	9,121	0.5031	342.4469	342	**9**	16	–2.1284	179.6233	180	**47**	9,976	0.6967	338.7738	339
10	34	–2.1915	205.0757	205	**48**	9,692	0.5688	345.8157	346	**10**	31	–1.9997	186.8424	187	**48**	10,408	0.7627	342.4324	342
11	69	–2.0721	211.2073	211	**49**	10,001	0.6355	348.9626	349	**11**	68	–1.8807	193.5681	194	**49**	10,755	0.8297	346.2195	346
12	102	–1.9608	216.8603	217	**50**	10,651	0.7032	352.4801	352	**12**	109	–1.7699	199.9678	200	**50**	11,109	0.8978	350.1320	350
13	226	–1.8562	222.3312	222	**51**	10,986	0.7722	356.0332	356	**13**	201	–1.6657	205.7389	206	**51**	11,495	0.9671	354.0178	354
14	363	–1.7574	227.3207	227	**52**	11,471	0.8426	359.7722	360	**14**	339	–1.5672	211.2240	211	**52**	11,450	1.0378	357.8742	358
15	528	–1.6634	232.1290	232	**53**	11,929	0.9145	363.4725	363	**15**	487	–1.4736	216.5488	217	**53**	11,869	1.1101	361.7826	362
16	783	–1.5737	236.8417	237	**54**	12,003	0.9881	367.2264	367	**16**	680	–1.3841	221.6289	222	**54**	12,216	1.1841	365.9938	366
17	1,079	–1.4876	241.1250	241	**55**	12,744	1.0637	370.8018	371	**17**	1,004	–1.2982	226.4189	226	**55**	12,163	1.2601	370.3851	370
18	1,363	–1.4047	245.2143	245	**56**	13,035	1.1416	374.7968	375	**18**	1,270	–1.2155	231.2920	231	**56**	12,477	1.3383	374.7425	375
19	1,705	–1.3246	249.2921	249	**57**	13,058	1.2219	379.0843	379	**19**	1,575	–1.1356	235.6908	236	**57**	12,398	1.4189	379.2740	379
20	2,125	–1.2470	253.3582	253	**58**	13,307	1.3050	383.1479	383	**20**	1,819	–1.0581	240.0747	240	**58**	12,612	1.5024	384.0714	384
21	2,350	–1.1716	257.1066	257	**59**	13,518	1.3913	387.6888	388	**21**	2,093	–0.9828	244.3656	244	**59**	12,634	1.5892	388.9130	389
22	2,558	–1.0982	260.8383	261	**60**	13,681	1.4813	392.3397	392	**22**	2,470	–0.9094	248.2563	248	**60**	12,548	1.6796	394.0079	394
23	2,895	–1.0265	264.6038	265	**61**	13,598	1.5756	396.9129	397	**23**	2,609	–0.8377	252.2015	252	**61**	12,483	1.7742	399.3018	399
24	3,056	–0.9563	268.1888	268	**62**	13,157	1.6747	401.9882	402	**24**	2,845	–0.7675	256.3791	256	**62**	12,367	1.8737	404.9254	405
25	3,225	–0.8875	271.5945	272	**63**	13,051	1.7795	407.4961	407	**25**	2,934	–0.6987	260.2167	260	**63**	12,059	1.9789	410.6998	411
26	3,480	–0.8199	275.0912	275	**64**	12,480	1.8911	413.2359	413	**26**	3,256	–0.6310	264.1642	264	**64**	11,708	2.0909	416.7990	417
27	3,561	–0.7534	278.6501	279	**65**	11,898	2.0108	419.2407	419	**27**	3,431	–0.5644	267.7729	268	**65**	11,326	2.2111	423.7611	424
28	3,640	–0.6879	282.0325	282	**66**	11,007	2.1404	425.9199	426	**28**	3,630	–0.4988	271.3679	271	**66**	10,853	2.3412	431.0093	431
29	3,872	–0.6231	285.3160	285	**67**	10,056	2.2823	433.2504	433	**29**	3,762	–0.4339	274.9535	275	**67**	10,416	2.4834	438.9023	439
30	4,095	–0.5591	288.5862	289	**68**	8,921	2.4397	441.2281	441	**30**	3,974	–0.3698	278.5287	279	**68**	9,606	2.6413	447.7370	448
31	4,361	–0.4957	291.7990	292	**69**	7,852	2.6176	450.3311	450	**31**	4,165	–0.3062	282.0941	282	**69**	8,580	2.8196	457.7945	458
32	4,505	–0.4329	294.8144	295	**70**	6,096	2.8235	460.9954	461	**32**	4,457	–0.2432	285.6490	286	**70**	7,295	3.0260	469.5002	470
33	4,747	–0.3705	297.8048	298	**71**	4,693	3.0702	473.7862	474	**33**	4,709	–0.1806	289.1930	289	**71**	6,234	3.2731	483.7134	484
34	4,887	–0.3084	301.0190	301	**72**	3,182	3.3812	490.3627	490	**34**	5,195	–0.1183	292.7254	293	**72**	4,700	3.5846	501.7728	502
35	5,255	–0.2466	304.2183	304	**73**	1,828	3.8097	514.1266	514	**35**	5,220	–0.0563	296.2454	296	**73**	3,144	4.0137	526.9643	527
36	5,392	–0.1850	307.4024	307	**74**	707	4.5259	549.8006	550	**36**	5,650	0.0056	299.7527	300	**74**	1,706	4.7298	565.8094	566
37	5,632	–0.1235	310.5709	311	**75**	170	N/A	602.2691	600	**37**	5,991	0.0673	303.2465	303	**75**	645	N/A	625.1589	600

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.16 New Conversions for ELA, Grades Eight and Nine

Grade 8										Grade 9									
Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	0.0007	150	**38**	7,216	–0.0665	313.1465	313	**0**	–	N/A	0.0007	150	**38**	6,921	–0.0448	315.3460	315
1	–	–4.6626	52.3041	150	**39**	7,484	–0.0064	316.4954	316	**1**	–	–4.6285	52.3418	150	**39**	7,203	0.0152	318.7939	319
2	–	–3.9484	94.8478	150	**40**	7,893	0.0538	319.8367	320	**2**	–	–3.9147	94.1455	150	**40**	7,530	0.0752	322.2277	322
3	–	–3.5216	119.4113	150	**41**	8,232	0.1142	323.2726	323	**3**	–	–3.4881	119.1976	150	**41**	7,797	0.1355	325.6476	326
4	–	–3.2123	136.8417	150	**42**	8,456	0.1749	327.0077	327	**4**	–	–3.1792	137.3903	150	**42**	8,162	0.1960	329.0534	329
5	–	–2.9674	150.6918	151	**43**	9,047	0.2359	330.2930	330	**5**	–	–2.9346	151.4617	151	**43**	8,506	0.2569	332.4450	332
6	–	–2.7631	161.8916	162	**44**	9,026	0.2973	333.6211	334	**6**	–	–2.7306	162.9332	163	**44**	8,965	0.3183	335.8221	336
7	–	–2.5867	171.9457	172	**45**	9,569	0.3592	337.2794	337	**7**	–	–2.5546	173.0821	173	**45**	8,957	0.3802	339.2618	339
8	–	–2.4309	180.6418	181	**46**	9,695	0.4217	340.6206	341	**8**	20	–2.3991	181.9037	182	**46**	9,593	0.4427	342.8907	343
9	15	–2.2906	188.4831	188	**47**	10,015	0.4849	343.9750	344	**9**	43	–2.2591	189.7519	190	**47**	9,887	0.5059	346.4336	346
10	46	–2.1625	195.8174	196	**48**	10,170	0.5490	347.7950	348	**10**	69	–2.1313	197.0013	197	**48**	10,328	0.5700	349.9217	350
11	90	–2.0443	202.1702	202	**49**	10,439	0.6140	351.3769	351	**11**	124	–2.0134	203.8277	204	**49**	10,710	0.6351	353.7879	354
12	136	–1.9341	208.6258	209	**50**	10,636	0.6800	354.8943	355	**12**	200	–1.9036	210.1628	210	**50**	11,213	0.7013	357.5177	358
13	258	–1.8307	214.1661	214	**51**	10,981	0.7472	358.7180	359	**13**	362	–1.8006	215.8157	216	**51**	11,394	0.7687	361.0948	361
14	415	–1.7330	219.9445	220	**52**	11,288	0.8157	362.9241	363	**14**	526	–1.7033	221.3873	221	**52**	11,821	0.8375	364.9976	365
15	622	–1.6402	225.1353	225	**53**	11,147	0.8858	366.7576	367	**15**	847	–1.6108	226.6246	227	**53**	12,354	0.9078	369.0062	369
16	854	–1.5516	229.8819	230	**54**	11,284	0.9576	370.5619	371	**16**	1,159	–1.5226	231.7629	232	**54**	12,898	0.9799	373.1634	373
17	1,169	–1.4667	234.8357	235	**55**	11,567	1.0313	374.8865	375	**17**	1,517	–1.4380	236.5572	237	**55**	13,207	1.0540	377.3385	377
18	1,437	–1.3849	239.2546	239	**56**	11,552	1.1071	379.1876	379	**18**	1,961	–1.3566	241.0031	241	**56**	13,574	1.1303	381.6845	382
19	1,745	–1.3060	243.6540	244	**57**	11,659	1.1854	383.4735	383	**19**	2,271	–1.2780	245.4348	245	**57**	13,923	1.2090	386.1117	386
20	2,152	–1.2295	248.0129	248	**58**	11,707	1.2664	388.0052	388	**20**	2,638	–1.2020	249.8530	250	**58**	14,199	1.2907	390.7940	391
21	2,516	–1.1553	252.1589	252	**59**	11,604	1.3507	392.8442	393	**21**	3,025	–1.1281	254.1500	254	**59**	14,421	1.3755	395.7821	396
22	2,767	–1.0830	256.1102	256	**60**	11,711	1.4386	397.6572	398	**22**	3,188	–1.0562	258.0369	258	**60**	14,552	1.4640	400.8025	401
23	3,106	–1.0124	259.9724	260	**61**	11,446	1.5306	402.8435	403	**23**	3,492	–0.9860	262.1090	262	**61**	14,465	1.5567	406.1045	406
24	3,286	–0.9434	264.0771	264	**62**	11,512	1.6275	408.1913	408	**24**	3,642	–0.9173	265.8303	266	**62**	14,314	1.6544	411.6186	412
25	3,610	–0.8758	267.9065	268	**63**	11,221	1.7301	413.9808	414	**25**	3,842	–0.8500	269.9106	270	**63**	13,933	1.7578	417.3086	417
26	3,843	–0.8093	271.7257	272	**64**	11,010	1.8393	420.3526	420	**26**	4,056	–0.7840	273.5467	274	**64**	13,347	1.8679	423.5966	424
27	4,043	–0.7440	275.2642	275	**65**	10,599	1.9567	426.7665	427	**27**	4,108	–0.7190	277.1455	277	**65**	12,351	1.9862	430.3223	430
28	4,323	–0.6796	278.7879	279	**66**	9,975	2.0838	433.6956	434	**28**	4,317	–0.6550	280.7330	281	**66**	11,131	2.1145	437.6128	438
29	4,617	–0.6161	282.2941	282	**67**	9,259	2.2232	441.7461	442	**29**	4,568	–0.5918	284.3078	284	**67**	9,907	2.2549	445.7690	446
30	4,884	–0.5533	285.7849	286	**68**	8,468	2.3781	450.3721	450	**30**	4,785	–0.5293	287.8698	288	**68**	8,380	2.4110	454.7419	455
31	5,209	–0.4911	289.2602	289	**69**	7,301	2.5533	460.1237	460	**31**	4,913	–0.4675	291.4198	291	**69**	6,672	2.5876	464.8592	465
32	5,514	–0.4295	292.7197	293	**70**	5,989	2.7565	471.5482	472	**32**	5,297	–0.4062	294.9576	295	**70**	4,997	2.7922	476.6628	477
33	5,847	–0.3684	296.1636	296	**71**	4,797	3.0005	485.2637	485	**33**	5,364	–0.3454	298.4655	298	**71**	3,375	3.0376	490.8251	491
34	6,122	–0.3076	299.5918	300	**72**	3,418	3.3086	502.8876	503	**34**	5,685	–0.2849	301.8105	302	**72**	1,999	3.3473	508.7341	509
35	6,377	–0.2471	303.0036	303	**73**	2,146	3.7342	526.8497	527	**35**	6,118	–0.2246	304.9254	305	**73**	891	3.7746	534.0785	534
36	6,721	–0.1868	306.4008	306	**74**	944	4.4473	566.6174	567	**36**	6,294	–0.1646	308.4124	308	**74**	298	4.4895	574.5470	575
37	6,944	–0.1266	309.7816	310	**75**	267	N/A	633.1989	600	**37**	6,625	–0.1047	311.8860	312	**75**	47	N/A	639.4489	600

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.17 New Conversions for ELA, Grades Ten and Eleven

Note: Performance-level cut scores are highlighted.

Grade 10										Grade 11									
Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	0.4011	150	**38**	6,133	–0.2508	303.6082	304	**0**	–	N/A	0.0003	150	**38**	6,931	–0.2053	299.9003	300
1	–	–4.8229	59.1980	150	**39**	6,321	–0.1919	306.7757	307	**1**	–	–4.7419	26.1451	150	**39**	7,151	–0.1471	303.3597	303
2	–	–4.1087	98.2585	150	**40**	6,704	–0.1329	309.8850	310	**2**	–	–4.0286	67.3768	150	**40**	7,584	–0.0888	306.8169	307
3	–	–3.6819	123.6237	150	**41**	6,992	–0.0737	312.6189	313	**3**	–	–3.6027	94.5437	150	**41**	7,902	–0.0303	310.2723	310
4	–	–3.3727	140.8053	150	**42**	7,256	–0.0142	315.7449	316	**4**	11	–3.2944	113.3738	150	**42**	7,978	0.0284	313.9564	314
5	–	–3.1279	153.6683	154	**43**	7,853	0.0455	318.9040	319	**5**	–	–3.0506	128.1874	150	**43**	8,448	0.0875	317.6926	318
6	–	–2.9237	164.1573	164	**44**	7,911	0.1057	322.0615	322	**6**	11	–2.8474	140.9036	150	**44**	8,751	0.1470	321.2383	321
7	–	–2.7476	173.4071	173	**45**	8,486	0.1664	325.2160	325	**7**	19	–2.6723	151.5025	152	**45**	9,198	0.2071	324.6938	325
8	22	–2.5919	181.6713	182	**46**	8,744	0.2277	328.3681	328	**8**	17	–2.5177	160.7326	161	**46**	9,525	0.2678	328.2555	328
9	35	–2.4519	189.0570	189	**47**	9,086	0.2897	331.5478	332	**9**	42	–2.3787	169.1635	169	**47**	9,866	0.3291	332.0031	332
10	84	–2.3241	195.6483	196	**48**	9,536	0.3525	334.8998	335	**10**	94	–2.2520	176.7451	177	**48**	10,132	0.3913	335.8564	336
11	152	–2.2062	201.8008	202	**49**	9,872	0.4162	338.3298	338	**11**	162	–2.1351	183.7956	184	**49**	10,465	0.4545	339.6433	340
12	273	–2.0965	207.5214	208	**50**	10,127	0.4810	341.6099	342	**12**	273	–2.0264	190.4403	190	**50**	10,552	0.5188	343.4641	343
13	495	–1.9935	212.9461	213	**51**	10,588	0.5469	345.0460	345	**13**	499	–1.9245	196.8265	197	**51**	10,824	0.5842	347.3435	347
14	713	–1.8963	218.0811	218	**52**	10,846	0.6143	348.5212	349	**14**	801	–1.8284	202.2067	202	**52**	10,933	0.6510	351.1781	351
15	1,062	–1.8039	222.8159	223	**53**	11,256	0.6831	352.2124	352	**15**	1,154	–1.7371	207.7715	208	**53**	11,110	0.7194	355.3697	355
16	1,468	–1.7159	227.2621	227	**54**	11,592	0.7536	355.6641	356	**16**	1,609	–1.6501	213.3234	213	**54**	11,514	0.7895	359.5718	360
17	2,009	–1.6315	231.6542	232	**55**	12,030	0.8261	359.3774	359	**17**	2,133	–1.5668	217.9670	218	**55**	11,615	0.8616	363.9942	364
18	2,300	–1.5504	236.0433	236	**56**	12,229	0.9008	363.4507	363	**18**	2,599	–1.4867	223.0038	223	**56**	11,723	0.9358	368.5365	369
19	2,694	–1.4721	240.3435	240	**57**	12,558	0.9779	367.2820	367	**19**	3,102	–1.4094	227.7492	228	**57**	11,875	1.0126	373.1811	373
20	2,940	–1.3963	244.1303	244	**58**	13,110	1.0578	371.3717	371	**20**	3,516	–1.3347	232.1433	232	**58**	11,830	1.0921	377.7574	378
21	3,067	–1.3228	247.9220	248	**59**	13,097	1.1408	375.7387	376	**21**	3,860	–1.2622	236.4497	236	**59**	11,894	1.1749	382.5859	383
22	3,240	–1.2513	251.7195	252	**60**	13,234	1.2275	380.1914	380	**22**	4,103	–1.1916	240.7440	241	**60**	11,905	1.2614	387.9730	388
23	3,515	–1.1815	255.3425	255	**61**	13,350	1.3185	385.1252	385	**23**	4,292	–1.1228	245.0252	245	**61**	11,919	1.3520	393.3612	393
24	3,474	–1.1133	258.9011	259	**62**	13,611	1.4143	390.1319	390	**24**	4,402	–1.0556	249.0090	249	**62**	11,618	1.4476	399.0584	399
25	3,506	–1.0465	262.2832	262	**63**	13,557	1.5158	395.4415	395	**25**	4,445	–0.9898	252.9107	253	**63**	11,126	1.5489	405.2635	405
26	3,647	–0.9810	265.6098	266	**64**	13,365	1.6240	401.0567	401	**26**	4,468	–0.9252	256.7910	257	**64**	10,848	1.6570	411.8360	412
27	3,619	–0.9166	269.0299	269	**65**	12,899	1.7403	406.8439	407	**27**	4,737	–0.8617	260.4541	260	**65**	10,184	1.7732	418.5599	419
28	3,881	–0.8531	272.3780	272	**66**	12,527	1.8664	413.5622	414	**28**	4,686	–0.7992	264.3111	264	**66**	9,735	1.8993	426.1115	426
29	3,959	–0.7906	275.5556	276	**67**	11,868	2.0048	420.6855	421	**29**	4,813	–0.7376	267.9810	268	**67**	8,912	2.0377	434.6388	435
30	4,100	–0.7288	278.7335	279	**68**	10,819	2.1588	428.8147	429	**30**	5,057	–0.6767	271.6400	272	**68**	7,944	2.1917	443.8698	444
31	4,433	–0.6677	281.9114	282	**69**	9,558	2.3331	438.0657	438	**31**	5,089	–0.6164	275.5693	276	**69**	6,632	2.3662	454.3998	454
32	4,530	–0.6071	285.0891	285	**70**	8,058	2.5355	448.6200	449	**32**	5,377	–0.5567	279.0617	279	**70**	5,289	2.5688	466.7130	467
33	4,868	–0.5470	288.2653	288	**71**	6,092	2.7784	461.2805	461	**33**	5,639	–0.4975	282.5475	283	**71**	3,760	2.8119	481.1934	481
34	5,021	–0.4873	291.4406	291	**72**	4,266	3.0859	477.6892	478	**34**	5,801	–0.4386	286.0273	286	**72**	2,305	3.1198	500.3815	500
35	5,250	–0.4279	294.5478	295	**73**	2,509	3.5108	500.7719	501	**35**	6,109	–0.3801	289.5020	290	**73**	1,118	3.5451	527.1951	527
36	5,421	–0.3688	297.3554	297	**74**	1,083	4.2232	539.4449	539	**36**	6,443	–0.3217	292.9720	293	**74**	389	4.2580	572.5563	573
37	5,827	–0.3098	300.4388	300	**75**	255	N/A	608.7990	600	**37**	6,684	–0.2635	296.4379	296	**75**	68	N/A	661.7838	600

Table 8.D.18 New Conversions for History–Social Science, Grade Eight and World History

Grade 8

Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	0.0007	150	**38**	7,765	–0.0533	311.2027	311
1	–	–4.5767	35.6216	150	**39**	7,791	0.0048	314.8292	315
2	–	–3.8644	67.6135	150	**40**	8,161	0.0629	318.4707	318
3	–	–3.4394	94.7944	150	**41**	8,348	0.1213	322.1280	322
4	–	–3.1319	116.3866	150	**42**	8,540	0.1799	325.8003	326
5	–	–2.8888	132.0941	150	**43**	8,658	0.2388	329.4872	329
6	–	–2.6863	145.0675	150	**44**	8,885	0.2982	333.1884	333
7	–	–2.5119	156.3550	156	**45**	9,273	0.3581	336.9035	337
8	13	–2.3579	166.1751	166	**46**	9,301	0.4186	340.9201	341
9	42	–2.2194	174.7682	175	**47**	9,717	0.4798	344.9506	345
10	84	–2.0932	182.7534	183	**48**	9,990	0.5418	348.7586	349
11	150	–1.9769	190.1741	190	**49**	10,149	0.6048	352.6161	353
12	275	–1.8686	197.1075	197	**50**	10,085	0.6688	356.8427	357
13	497	–1.7671	203.5532	204	**51**	10,422	0.7340	360.7305	361
14	859	–1.6713	209.5964	210	**52**	10,520	0.8006	364.8981	365
15	1,317	–1.5805	215.3532	215	**53**	10,715	0.8687	369.2550	369
16	1,736	–1.4938	220.8225	221	**54**	10,854	0.9386	373.6303	374
17	2,289	–1.4108	225.9718	226	**55**	10,827	1.0103	378.0165	378
18	2,941	–1.3310	231.0380	231	**56**	10,763	1.0843	382.5398	383
19	3,573	–1.2540	236.0259	236	**57**	11,020	1.1607	387.4055	387
20	4,004	–1.1795	240.7981	241	**58**	10,934	1.2399	392.4208	392
21	4,573	–1.1073	245.2528	245	**59**	11,262	1.3223	397.7965	398
22	4,856	–1.0370	249.4997	249	**60**	11,043	1.4083	403.3534	403
23	5,216	–0.9684	253.7753	254	**61**	10,961	1.4985	408.9240	409
24	5,374	–0.9014	258.0518	258	**62**	10,883	1.5936	414.7119	415
25	5,451	–0.8358	262.1382	262	**63**	10,722	1.6944	421.0124	421
26	5,699	–0.7714	266.0122	266	**64**	10,490	1.8019	427.8804	428
27	5,717	–0.7081	269.9096	270	**65**	10,226	1.9175	435.2022	435
28	5,891	–0.6457	273.8311	274	**66**	9,647	2.0430	442.9811	443
29	6,047	–0.5842	277.7736	278	**67**	9,220	2.1806	451.8872	452
30	6,150	–0.5235	281.7385	282	**68**	8,538	2.3338	461.4913	461
31	6,210	–0.4634	285.5589	286	**69**	7,783	2.5074	472.4275	472
32	6,448	–0.4039	289.2540	289	**70**	6,670	2.7090	485.2569	485
33	6,456	–0.3448	293.1053	293	**71**	5,472	2.9513	500.6517	501
34	6,680	–0.2861	296.8599	297	**72**	4,147	3.2579	520.3537	520
35	7,016	–0.2276	300.4202	300	**73**	2,785	3.6819	549.4113	549
36	6,984	–0.1694	303.9977	304	**74**	1,423	4.3934	595.4273	595
37	7,485	–0.1113	307.5918	308	**75**	481	N/A	661.2691	600

World History

Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	78	N/A	0.0003	150	**38**	13,016	0.4051	338.1640	338
1	174	–4.4162	37.0489	150	**39**	13,022	0.4829	343.0998	343
2	187	–3.7006	71.2883	150	**40**	13,405	0.5624	348.0834	348
3	193	–3.2722	101.9175	150	**41**	13,423	0.6437	353.1151	353
4	152	–2.9612	121.3992	150	**42**	13,418	0.7273	358.8279	359
5	134	–2.7144	137.4598	150	**43**	13,725	0.8134	364.0466	364
6	130	–2.5082	150.9794	151	**44**	13,587	0.9025	369.9586	370
7	224	–2.3298	162.3608	162	**45**	13,334	0.9950	375.9229	376
8	339	–2.1717	172.5534	173	**46**	13,687	1.0915	381.9387	382
9	652	–2.0289	181.9061	182	**47**	13,460	1.1926	388.5249	389
10	1,040	–1.8983	190.3559	190	**48**	13,163	1.2994	395.4069	395
11	1,525	–1.7773	197.8763	198	**49**	12,888	1.4127	402.4782	402
12	2,326	–1.6643	205.0144	205	**50**	12,697	1.5339	410.5159	411
13	2,936	–1.5578	211.8465	212	**51**	12,344	1.6648	419.1210	419
14	3,796	–1.4568	218.3710	218	**52**	11,593	1.8078	427.7870	428
15	4,583	–1.3605	224.5663	225	**53**	11,038	1.9662	438.0163	438
16	5,219	–1.2682	230.4921	230	**54**	10,156	2.1450	449.6688	450
17	5,793	–1.1792	236.4980	236	**55**	9,134	2.3517	462.9214	463
18	6,379	–1.0933	242.0428	242	**56**	8,013	2.5989	478.9226	479
19	6,484	–1.0098	247.1868	247	**57**	6,590	2.9103	498.8926	499
20	6,747	–0.9286	252.2967	252	**58**	5,091	3.3392	527.2392	527
21	7,037	–0.8492	257.4722	257	**59**	3,282	4.0554	575.3813	575
22	7,072	–0.7715	262.4478	262	**60**	1,417	N/A	666.7195	600
23	7,109	–0.6952	267.3802	267					
24	7,519	–0.6200	272.4076	272					
25	7,785	–0.5458	276.7740	277					
26	8,149	–0.4724	281.6664	282					
27	8,284	–0.3996	286.5301	287					
28	8,802	–0.3273	290.9130	291					
29	9,345	–0.2552	295.4137	295					
30	9,726	–0.1833	300.4718	300					
31	10,230	–0.1115	305.0074	305					
32	10,778	–0.0394	309.5937	310					
33	11,127	0.0330	314.2305	314					
34	11,822	0.1058	318.9177	319					
35	12,105	0.1792	323.6549	324					
36	12,400	0.2535	328.4420	328					
37	12,645	0.3287	333.2785	333					

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.19 New Conversion for History–Social Science, Grade Eleven

Grade 11									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	0.0003	150	**31**	8,978	–0.1990	309.1648	309
1	–	–4.6103	34.9726	150	**32**	9,470	–0.1248	313.8363	314
2	–	–3.8884	69.0323	150	**33**	9,866	–0.0503	318.5474	319
3	–	–3.4540	99.9896	150	**34**	10,282	0.0246	323.2973	323
4	13	–3.1374	120.8304	150	**35**	10,837	0.1001	328.0851	328
5	19	–2.8853	136.7318	150	**36**	11,249	0.1764	332.9098	333
6	48	–2.6740	150.3667	150	**37**	11,751	0.2537	337.7704	338
7	113	–2.4909	162.3407	162	**38**	12,252	0.3321	343.0750	343
8	263	–2.3282	172.9405	173	**39**	12,718	0.4118	348.2342	348
9	520	–2.1812	182.2276	182	**40**	13,396	0.4932	353.1973	353
10	928	–2.0464	190.8435	191	**41**	13,710	0.5765	358.8064	359
11	1,558	–1.9215	198.7647	199	**42**	14,297	0.6620	363.9076	364
12	2,265	–1.8047	206.2487	206	**43**	14,510	0.7500	369.6818	370
13	3,114	–1.6945	213.7275	214	**44**	14,791	0.8409	375.4873	375
14	4,145	–1.5901	220.3174	220	**45**	15,129	0.9352	381.6327	382
15	4,865	–1.4904	226.4743	226	**46**	15,018	1.0335	387.8255	388
16	5,601	–1.3948	232.6729	233	**47**	14,881	1.1365	394.2138	394
17	6,106	–1.3027	238.5757	239	**48**	14,418	1.2450	401.4619	401
18	6,486	–1.2137	244.3521	244	**49**	14,214	1.3601	408.8845	409
19	6,715	–1.1273	249.9413	250	**50**	13,358	1.4830	416.4938	416
20	6,833	–1.0432	255.2639	255	**51**	12,620	1.6157	424.9785	425
21	6,847	–0.9611	260.4834	260	**52**	11,351	1.7604	434.3413	434
22	6,873	–0.8807	265.4526	265	**53**	10,122	1.9204	444.5823	445
23	6,955	–0.8017	270.8549	271	**54**	8,706	2.1009	456.3112	456
24	7,157	–0.7240	275.7202	276	**55**	7,267	2.3091	469.3647	469
25	7,189	–0.6473	280.1574	280	**56**	5,536	2.5579	485.7450	486
26	7,382	–0.5714	285.2058	285	**57**	3,938	2.8708	505.9389	506
27	7,673	–0.4963	290.2515	290	**58**	2,479	3.3012	534.2729	534
28	7,825	–0.4216	294.7564	295	**59**	1,301	4.0189	581.4317	581
29	8,121	–0.3473	299.3704	299	**60**	433	N/A	667.4795	600
30	8,724	–0.2731	304.5338	305					

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.20 New Conversions for Mathematics, Grades Two and Three

Grade 2										Grade 3									
Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	0.0000	150	**33**	4,723	–0.8592	277.0867	277	**0**	–	N/A	0.0000	150	**33**	4,329	–0.7193	279.5475	280
1	–	–5.3758	2.6679	150	**34**	5,124	–0.7867	281.5731	282	**1**	–	–5.3417	5.1105	150	**34**	4,769	–0.6422	283.9978	284
2	–	–4.6564	39.9516	150	**35**	5,393	–0.7139	286.3230	286	**2**	–	–4.6214	45.7997	150	**35**	5,210	–0.5648	288.7558	289
3	–	–4.2244	67.2223	150	**36**	5,603	–0.6407	290.7923	291	**3**	–	–4.1881	72.2973	150	**36**	5,500	–0.4870	293.1978	293
4	–	–3.9100	87.0122	150	**37**	5,929	–0.5669	295.1705	295	**4**	–	–3.8723	91.4341	150	**37**	6,040	–0.4086	297.9760	298
5	–	–3.6600	102.8537	150	**38**	6,479	–0.4925	299.6997	300	**5**	–	–3.6206	106.8411	150	**38**	6,267	–0.3297	302.8743	303
6	–	–3.4506	115.8253	150	**39**	6,899	–0.4173	304.4868	304	**6**	–	–3.4093	119.3794	150	**39**	6,721	–0.2499	307.3435	307
7	14	–3.2692	127.2518	150	**40**	7,423	–0.3412	309.1100	309	**7**	–	–3.2257	130.5696	150	**40**	7,151	–0.1692	312.1235	312
8	24	–3.1081	137.0711	150	**41**	7,836	–0.2639	314.0720	314	**8**	–	–3.0624	140.1112	150	**41**	7,663	–0.0874	317.0370	317
9	51	–2.9626	146.2025	150	**42**	8,207	–0.1853	319.1144	319	**9**	21	–2.9144	148.9307	150	**42**	8,165	–0.0044	322.0348	322
10	98	–2.8292	154.4470	154	**43**	8,681	–0.1052	324.1609	324	**10**	40	–2.7784	157.1908	157	**43**	8,592	0.0801	327.3091	327
11	168	–2.7055	161.9246	162	**44**	9,318	–0.0235	329.2109	329	**11**	70	–2.6520	164.4494	164	**44**	9,001	0.1662	332.4710	332
12	295	–2.5899	169.3059	169	**45**	10,092	0.0602	334.2730	334	**12**	120	–2.5335	171.4704	171	**45**	9,418	0.2541	337.7065	338
13	495	–2.4808	176.1788	176	**46**	10,607	0.1461	339.4518	339	**13**	212	–2.4214	178.4849	178	**46**	10,190	0.3442	342.8765	343
14	685	–2.3774	182.4364	182	**47**	11,050	0.2345	345.1357	345	**14**	288	–2.3148	184.6948	185	**47**	10,418	0.4368	348.3725	348
15	981	–2.2786	188.5463	189	**48**	12,037	0.3257	350.8229	351	**15**	442	–2.2128	190.6055	191	**48**	10,775	0.5321	354.1716	354
16	1,179	–2.1840	194.6488	195	**49**	12,484	0.4202	356.6925	357	**16**	557	–2.1147	196.4947	196	**49**	11,421	0.6306	359.9423	360
17	1,355	–2.0928	200.5350	201	**50**	13,697	0.5184	362.9762	363	**17**	726	–2.0201	202.4008	202	**50**	11,851	0.7328	366.0375	366
18	1,686	–2.0046	205.8982	206	**51**	14,329	0.6210	369.2719	369	**18**	937	–1.9283	207.9506	208	**51**	12,219	0.8392	372.5670	373
19	1,847	–1.9191	211.0064	211	**52**	15,121	0.7285	375.8314	376	**19**	1,036	–1.8390	212.9501	213	**52**	12,679	0.9506	379.2168	379
20	2,052	–1.8358	216.2886	216	**53**	16,170	0.8419	382.9347	383	**20**	1,172	–1.7519	218.0980	218	**53**	13,212	1.0677	386.1900	386
21	2,226	–1.7545	221.2059	221	**54**	17,330	0.9622	390.6349	391	**21**	1,417	–1.6667	223.0945	223	**54**	13,914	1.1918	393.7569	394
22	2,314	–1.6749	226.0862	226	**55**	18,055	1.0908	398.6478	399	**22**	1,539	–1.5831	228.2631	228	**55**	14,452	1.3242	401.7388	402
23	2,433	–1.5968	230.9695	231	**56**	19,310	1.2296	407.1985	407	**23**	1,780	–1.5009	233.2920	233	**56**	15,085	1.4667	410.1764	410
24	2,716	–1.5200	235.8592	236	**57**	20,219	1.3808	416.6727	417	**24**	1,980	–1.4199	238.1271	238	**57**	16,000	1.6218	419.3647	419
25	2,757	–1.4442	240.7546	241	**58**	21,189	1.5478	427.0498	427	**25**	2,203	–1.3400	242.5934	243	**58**	16,764	1.7928	429.5952	430
26	3,014	–1.3694	245.5893	246	**59**	21,808	1.7357	438.9510	439	**26**	2,470	–1.2609	247.2123	247	**59**	17,658	1.9847	441.1635	441
27	3,006	–1.2954	249.9833	250	**60**	22,098	1.9519	452.8194	453	**27**	2,705	–1.1824	252.0456	252	**60**	19,163	2.2054	454.6976	455
28	3,432	–1.2219	254.7738	255	**61**	21,800	2.2093	469.6213	470	**28**	2,954	–1.1046	256.5264	257	**61**	20,457	2.4674	470.8650	471
29	3,634	–1.1490	259.1376	259	**62**	20,064	2.5315	490.6622	491	**29**	3,175	–1.0271	261.1940	261	**62**	21,755	2.7947	491.1496	491
30	3,946	–1.0763	263.4573	263	**63**	16,691	2.9718	520.5430	521	**30**	3,469	–0.9500	265.6575	266	**63**	23,292	3.2408	519.7420	520
31	4,007	–1.0039	267.9028	268	**64**	10,966	3.6999	565.4564	565	**31**	3,800	–0.8731	270.3573	270	**64**	23,242	3.9756	564.1149	564
32	4,457	–0.9316	272.6511	273	**65**	4,460	N/A	632.1190	600	**32**	4,116	–0.7962	274.8168	275	**65**	18,485	N/A	633.7990	600

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.21 New Conversions for Mathematics, Grades Four and Five

Grade 4										Grade 5									
Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	2.3408	150	**33**	3,620	–0.6535	291.0590	291	**0**	–	N/A	0.0000	150	**33**	7,228	–0.2113	306.2431	306
1	–	–5.1114	63.1062	150	**34**	3,718	–0.5824	294.7244	295	**1**	–	–4.7142	9.5256	150	**34**	7,395	–0.1385	311.0162	311
2	–	–4.3953	99.1602	150	**35**	3,966	–0.5111	298.3944	298	**2**	–	–3.9968	47.6887	150	**35**	7,869	–0.0655	315.7993	316
3	–	–3.9664	121.3772	150	**36**	4,062	–0.4393	302.0682	302	**3**	–	–3.5667	78.6079	150	**36**	8,070	0.0080	320.6087	321
4	–	–3.6550	137.7559	150	**37**	4,169	–0.3670	305.7452	306	**4**	–	–3.2539	100.5500	150	**37**	7,978	0.0821	325.4583	325
5	–	–3.4076	150.5685	151	**38**	4,596	–0.2940	309.4244	309	**5**	–	–3.0053	117.7688	150	**38**	8,421	0.1568	330.5990	331
6	–	–3.2008	160.8745	161	**39**	4,979	–0.2202	313.1053	313	**6**	–	–2.7971	132.0446	150	**39**	8,714	0.2323	335.8599	336
7	–	–3.0217	170.0166	170	**40**	5,000	–0.1455	316.9398	317	**7**	–	–2.6168	144.3574	150	**40**	9,040	0.3087	340.7671	341
8	13	–2.8630	178.1948	178	**41**	5,392	–0.0696	320.9461	321	**8**	16	–2.4568	155.2423	155	**41**	9,032	0.3862	345.7422	346
9	17	–2.7196	185.7957	186	**42**	5,811	0.0075	324.6618	325	**9**	30	–2.3121	164.9890	165	**42**	9,360	0.4650	351.0872	351
10	55	–2.5882	192.5088	193	**43**	6,143	0.0862	328.5300	329	**10**	69	–2.1795	173.8690	174	**43**	9,580	0.5453	356.6956	357
11	103	–2.4665	198.6435	199	**44**	6,571	0.1665	332.7111	333	**11**	129	–2.0565	182.1788	182	**44**	10,011	0.6273	362.0272	362
12	175	–2.3527	204.2982	204	**45**	6,907	0.2488	336.9130	337	**12**	270	–1.9415	189.9292	190	**45**	9,992	0.7111	367.5113	368
13	254	–2.2455	209.8528	210	**46**	7,638	0.3333	341.1107	341	**13**	432	–1.8330	197.1255	197	**46**	10,336	0.7971	373.2424	373
14	426	–2.1438	215.0265	215	**47**	8,139	0.4204	345.5378	346	**14**	624	–1.7300	203.8687	204	**47**	10,363	0.8856	379.1330	379
15	557	–2.0468	220.0928	220	**48**	8,770	0.5104	350.2405	350	**15**	916	–1.6316	210.6269	211	**48**	10,609	0.9768	385.4562	385
16	788	–1.9537	224.7801	225	**49**	9,267	0.6037	354.9428	355	**16**	1,307	–1.5372	217.3696	217	**49**	10,938	1.0712	391.9401	392
17	922	–1.8641	229.3643	229	**50**	10,259	0.7007	359.6413	360	**17**	1,653	–1.4463	222.9949	223	**50**	11,004	1.1694	398.4294	398
18	1,079	–1.7775	233.9466	234	**51**	11,070	0.8022	364.8468	365	**18**	2,106	–1.3583	229.1428	229	**51**	11,529	1.2717	405.1767	405
19	1,362	–1.6935	238.1515	238	**52**	12,054	0.9088	370.2842	370	**19**	2,460	–1.2729	234.8583	235	**52**	11,480	1.3790	412.3339	412
20	1,571	–1.6117	242.2490	242	**53**	13,189	1.0213	375.7435	376	**20**	2,965	–1.1898	240.5022	241	**53**	11,675	1.4920	419.8668	420
21	1,712	–1.5319	246.3542	246	**54**	14,530	1.1410	381.9532	382	**21**	3,329	–1.1085	245.7258	246	**54**	11,903	1.6119	427.7608	428
22	1,887	–1.4537	250.4483	250	**55**	15,560	1.2692	388.6192	389	**22**	3,708	–1.0289	251.2142	251	**55**	12,327	1.7399	436.0623	436
23	1,969	–1.3771	254.1894	254	**56**	17,169	1.4077	395.5351	396	**23**	4,019	–0.9508	256.5397	257	**56**	12,532	1.8780	445.5485	446
24	2,208	–1.3017	258.1795	258	**57**	18,867	1.5590	403.1731	403	**24**	4,414	–0.8739	261.6852	262	**57**	12,750	2.0283	455.5959	456
25	2,325	–1.2273	261.9064	262	**58**	20,383	1.7266	411.7346	412	**25**	4,773	–0.7981	266.8352	267	**58**	12,979	2.1945	466.6430	467
26	2,445	–1.1539	265.5659	266	**59**	21,795	1.9154	421.2151	421	**26**	5,247	–0.7231	271.7067	272	**59**	13,017	2.3812	479.1682	479
27	2,673	–1.0813	269.5713	270	**60**	23,581	2.1334	432.2302	432	**27**	5,363	–0.6489	276.5918	277	**60**	13,261	2.5962	493.7049	494
28	2,822	–1.0092	273.3088	273	**61**	25,374	2.3932	445.6272	446	**28**	5,850	–0.5753	281.5233	282	**61**	13,236	2.8520	511.0025	511
29	3,014	–0.9377	276.9501	277	**62**	26,377	2.7189	462.5377	463	**29**	5,998	–0.5021	286.4385	286	**62**	13,305	3.1726	532.5583	533
30	3,169	–0.8664	280.5382	281	**63**	25,875	3.1642	486.3432	486	**30**	6,358	–0.4292	291.4574	291	**63**	12,994	3.6111	562.5052	563
31	3,360	–0.7954	283.8246	284	**64**	22,955	3.8986	522.4659	522	**31**	6,710	–0.3566	296.1608	296	**64**	11,384	4.3374	611.2219	600
32	3,478	–0.7245	287.3991	287	**65**	14,580	N/A	575.5792	600	**32**	7,006	–0.2840	301.1071	301	**65**	7,823	N/A	691.2489	600

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.22 New Conversions for Mathematics, Grades Six and Seven

Grade 6										Grade 7									
Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	0.0007	150	**33**	8,241	–0.2643	310.0121	310	**0**	–	N/A	0.0007	150	**33**	9,144	–0.0096	318.5128	319
1	–	–4.7359	54.4887	150	**34**	8,530	–0.1948	314.0358	314	**1**	–	–4.4057	53.4574	150	**34**	9,190	0.0580	322.4975	322
2	–	–4.0159	94.4653	150	**35**	8,837	–0.1252	318.0625	318	**2**	–	–3.6904	95.7688	150	**35**	9,343	0.1259	326.6935	327
3	–	–3.5834	119.5436	150	**36**	9,028	–0.0552	322.0923	322	**3**	–	–3.2623	122.0065	150	**36**	9,349	0.1940	330.9348	331
4	–	–3.2687	137.4959	150	**37**	9,139	0.0153	326.1243	326	**4**	–	–2.9517	140.8466	150	**37**	9,712	0.2625	335.1705	335
5	–	–3.0186	151.8642	152	**38**	9,469	0.0863	330.1607	330	**5**	–	–2.7053	155.9151	156	**38**	9,641	0.3316	339.1106	339
6	–	–2.8092	163.9439	164	**39**	9,725	0.1580	334.1992	334	**6**	–	–2.4994	168.4041	168	**39**	9,849	0.4013	343.0493	343
7	16	–2.6280	174.3309	174	**40**	9,764	0.2306	338.2405	338	**7**	22	–2.3215	178.9396	179	**40**	9,811	0.4718	347.5216	348
8	39	–2.4673	183.5322	184	**41**	10,053	0.3042	342.3473	342	**8**	53	–2.1639	188.5397	189	**41**	9,728	0.5432	352.0312	352
9	86	–2.3222	192.0643	192	**42**	10,098	0.3790	346.6518	347	**9**	100	–2.0217	197.3762	197	**42**	9,908	0.6159	356.2490	356
10	173	–2.1895	199.6692	200	**43**	10,169	0.4552	351.0187	351	**10**	241	–1.8917	205.3114	205	**43**	9,938	0.6898	360.7072	361
11	337	–2.0666	206.5933	207	**44**	10,300	0.5330	355.4072	355	**11**	427	–1.7713	212.5162	213	**44**	9,934	0.7652	365.2320	365
12	557	–1.9519	213.3396	213	**45**	10,284	0.6126	360.0405	360	**12**	726	–1.6590	219.1205	219	**45**	10,111	0.8424	369.6633	370
13	890	–1.8439	219.3441	219	**46**	10,653	0.6942	364.7542	365	**13**	1,129	–1.5533	225.3034	225	**46**	10,188	0.9216	374.4391	374
14	1,258	–1.7416	225.3740	225	**47**	10,705	0.7782	369.6663	370	**14**	1,649	–1.4532	231.3605	231	**47**	9,932	1.0031	379.4173	379
15	1,685	–1.6442	230.8445	231	**48**	10,837	0.8649	374.6087	375	**15**	2,200	–1.3579	237.2396	237	**48**	9,971	1.0872	384.5434	385
16	2,298	–1.5509	236.3136	236	**49**	10,729	0.9548	379.6196	380	**16**	2,862	–1.2666	242.8249	243	**49**	9,941	1.1743	389.5120	390
17	2,820	–1.4612	241.2680	241	**50**	10,658	1.0482	384.9326	385	**17**	3,545	–1.1789	248.1037	248	**50**	9,808	1.2649	395.0331	395
18	3,310	–1.3746	246.1634	246	**51**	10,873	1.1457	390.5414	391	**18**	4,102	–1.0942	253.0818	253	**51**	9,546	1.3596	400.9351	401
19	3,811	–1.2908	250.9257	251	**52**	10,772	1.2481	396.4375	396	**19**	4,670	–1.0122	257.9511	258	**52**	9,457	1.4590	406.8488	407
20	4,237	–1.2093	255.7916	256	**53**	10,810	1.3561	402.6490	403	**20**	5,185	–0.9325	262.8240	263	**53**	9,387	1.5639	413.0611	413
21	4,819	–1.1299	260.5823	261	**54**	10,714	1.4709	409.1265	409	**21**	5,847	–0.8548	267.7000	268	**54**	9,158	1.6755	419.9573	420
22	5,165	–1.0523	264.8463	265	**55**	10,876	1.5937	416.0236	416	**22**	5,999	–0.7789	272.3650	272	**55**	9,053	1.7950	426.7162	427
23	5,532	–0.9763	269.1041	269	**56**	11,039	1.7263	423.5934	424	**23**	6,392	–0.7046	276.7263	277	**56**	8,331	1.9242	434.5884	435
24	5,944	–0.9017	273.4020	273	**57**	10,910	1.8712	432.1025	432	**24**	6,745	–0.6317	280.9975	281	**57**	7,943	2.0656	443.3681	443
25	6,206	–0.8282	277.6473	278	**58**	10,912	2.0316	441.4049	441	**25**	7,267	–0.5598	285.2701	285	**58**	7,545	2.2223	452.4545	452
26	6,420	–0.7557	281.9368	282	**59**	10,743	2.2125	451.7448	452	**26**	7,495	–0.4890	289.5416	290	**59**	7,049	2.3994	463.2334	463
27	6,850	–0.6841	285.9374	286	**60**	10,864	2.4214	463.4205	463	**27**	7,558	–0.4191	293.8124	294	**60**	6,313	2.6043	475.7109	476
28	7,149	–0.6132	289.9415	290	**61**	10,329	2.6709	477.7613	478	**28**	7,826	–0.3499	298.0822	298	**61**	5,477	2.8497	490.1742	490
29	7,423	–0.5428	293.9490	294	**62**	10,361	2.9848	495.7150	496	**29**	8,007	–0.2812	302.3505	302	**62**	4,627	3.1595	509.3016	509
30	7,479	–0.4729	297.9599	298	**63**	8,990	3.4163	520.6487	521	**30**	8,160	–0.2129	306.3494	306	**63**	3,744	3.5866	534.6762	535
31	7,868	–0.4032	301.9741	302	**64**	7,506	4.1352	561.6739	562	**31**	8,665	–0.1450	310.3410	310	**64**	2,597	4.3010	577.5050	578
32	8,109	–0.3338	305.9915	306	**65**	4,352	N/A	630.3291	600	**32**	8,736	–0.0773	314.5389	315	**65**	1,368	N/A	648.9990	600

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.23 New Conversions for General Mathematics and Algebra I

General Mathematics

Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	0.0003	150	**33**	4,971	0.2311	318.2009	318
1	–	–4.1395	53.1065	150	**34**	4,967	0.2976	321.9765	322
2	–	–3.4243	96.3249	150	**35**	4,743	0.3642	326.1807	326
3	–	–2.9964	122.1988	150	**36**	4,767	0.4312	330.3802	330
4	–	–2.6860	140.8479	150	**37**	4,645	0.4985	334.5749	335
5	–	–2.4400	155.8991	156	**38**	4,496	0.5663	338.5983	339
6	18	–2.2345	168.5411	169	**39**	4,438	0.6348	342.3498	342
7	44	–2.0570	178.8016	179	**40**	4,347	0.7041	346.6913	347
8	112	–1.8999	188.4631	188	**41**	4,291	0.7743	351.3051	351
9	248	–1.7583	197.5002	198	**42**	4,000	0.8457	355.4752	355
10	452	–1.6288	205.3488	205	**43**	3,949	0.9183	359.7886	360
11	790	–1.5092	212.5905	213	**44**	3,815	0.9925	364.4031	364
12	1,272	–1.3976	219.2230	219	**45**	3,676	1.0684	368.6972	369
13	1,864	–1.2926	225.2940	225	**46**	3,472	1.1463	373.4431	373
14	2,538	–1.1933	231.3673	231	**47**	3,301	1.2265	378.3070	378
15	3,256	–1.0987	237.3782	237	**48**	3,100	1.3093	383.5222	384
16	3,974	–1.0083	242.8465	243	**49**	2,859	1.3951	388.3629	388
17	4,540	–0.9214	248.2358	248	**50**	2,796	1.4844	393.7830	394
18	4,984	–0.8376	253.0969	253	**51**	2,591	1.5778	399.6926	400
19	5,172	–0.7565	257.9574	258	**52**	2,281	1.6758	405.5996	406
20	5,433	–0.6778	262.8169	263	**53**	2,093	1.7794	411.6458	412
21	5,462	–0.6011	267.6750	268	**54**	1,898	1.8896	418.6700	419
22	5,627	–0.5262	272.4149	272	**55**	1,651	2.0078	425.2670	425
23	5,478	–0.4529	276.6622	277	**56**	1,529	2.1356	433.0326	433
24	5,411	–0.3809	280.9079	281	**57**	1,311	2.2756	441.8980	442
25	5,303	–0.3102	285.1501	285	**58**	1,036	2.4309	450.8452	451
26	5,296	–0.2405	289.3896	289	**59**	876	2.6066	461.5559	462
27	5,388	–0.1716	293.6262	294	**60**	650	2.8100	474.0383	474
28	5,391	–0.1035	297.8594	298	**61**	498	3.0541	488.3432	488
29	5,218	–0.0359	302.0891	302	**62**	312	3.3623	507.4113	507
30	5,298	0.0312	306.1556	306	**63**	190	3.7878	532.5004	533
31	5,155	0.0980	309.9368	310	**64**	99	4.5008	575.6263	576
32	4,995	0.1646	314.1544	314	**65**	25	N/A	648.9995	600

Algebra I

Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	–68.2504	150	**33**	16,420	–0.0246	327.6000	328
1	–	–4.4275	19.0196	150	**34**	16,008	0.0430	332.3516	332
2	–	–3.7113	69.7271	150	**35**	15,489	0.1108	337.1095	337
3	–	–3.2824	99.9170	150	**36**	14,966	0.1789	341.8701	342
4	14	–2.9710	121.6761	150	**37**	14,948	0.2474	346.6358	347
5	19	–2.7240	139.1724	150	**38**	14,217	0.3165	351.4075	351
6	41	–2.5175	153.8161	154	**39**	14,081	0.3862	356.1861	356
7	121	–2.3391	166.3660	166	**40**	13,812	0.4567	361.3030	361
8	253	–2.1810	177.4425	177	**41**	13,303	0.5282	366.4680	366
9	561	–2.0384	187.1899	187	**42**	12,959	0.6009	371.2739	371
10	1,176	–1.9080	196.1994	196	**43**	12,641	0.6749	376.3765	376
11	1,980	–1.7873	204.6103	205	**44**	12,314	0.7504	381.8930	382
12	3,494	–1.6747	212.7369	213	**45**	11,894	0.8276	387.1578	387
13	5,371	–1.5688	219.8276	220	**46**	11,239	0.9069	392.5273	393
14	7,833	–1.4685	227.2323	227	**47**	10,837	0.9885	398.5328	399
15	10,388	–1.3730	233.5770	234	**48**	10,555	1.0727	404.3623	404
16	13,484	–1.2816	240.3869	240	**49**	10,057	1.1600	410.4132	410
17	16,029	–1.1938	246.5031	247	**50**	9,652	1.2507	416.5293	417
18	18,213	–1.1090	252.0045	252	**51**	9,233	1.3456	423.3298	423
19	20,415	–1.0269	257.5550	258	**52**	8,891	1.4452	429.9622	430
20	21,489	–0.9472	263.6755	264	**53**	8,233	1.5503	437.3428	437
21	21,861	–0.8695	269.1186	269	**54**	7,789	1.6621	445.4828	445
22	22,374	–0.7936	273.9058	274	**55**	7,170	1.7819	454.0935	454
23	21,903	–0.7193	279.3593	279	**56**	6,915	1.9113	463.0668	463
24	21,611	–0.6464	284.1358	284	**57**	6,378	2.0530	472.8378	473
25	21,046	–0.5746	289.5463	290	**58**	5,803	2.2100	483.7884	484
26	20,210	–0.5038	294.3541	294	**59**	5,318	2.3874	496.3289	496
27	19,411	–0.4339	299.1069	299	**60**	4,947	2.5927	510.9304	511
28	18,774	–0.3647	303.8573	304	**61**	4,459	2.8384	527.9609	528
29	18,166	–0.2960	308.6059	309	**62**	3,943	3.1486	550.1389	550
30	17,781	–0.2278	313.3537	313	**63**	3,531	3.5761	580.6077	581
31	17,224	–0.1599	318.1015	318	**64**	3,014	4.2909	631.0746	600
32	16,768	–0.0922	322.8501	323	**65**	2,195	N/A	721.0744	600

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.24 New Conversions for Geometry and Algebra II

Geometry

Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	–44.9995	150	**33**	10,320	–0.7505	303.4641	303
1	–	–5.1864	35.9329	150	**34**	9,872	–0.6816	307.6349	308
2	–	–4.4690	79.9817	150	**35**	9,624	–0.6124	311.9945	312
3	–	–4.0390	106.1573	150	**36**	9,386	–0.5430	315.9571	316
4	–	–3.7265	125.1732	150	**37**	9,379	–0.4731	320.0221	320
5	–	–3.4784	140.0626	150	**38**	8,918	–0.4026	324.4825	324
6	20	–3.2709	152.8275	153	**39**	8,750	–0.3314	328.4818	328
7	33	–3.0914	163.5994	164	**40**	8,628	–0.2593	333.0151	333
8	81	–2.9323	173.2555	173	**41**	8,252	–0.1861	336.9877	337
9	210	–2.7887	181.6178	182	**42**	8,117	–0.1118	341.5034	342
10	393	–2.6573	189.7282	190	**43**	7,986	–0.0361	346.0571	346
11	741	–2.5357	197.1904	197	**44**	7,537	0.0412	350.6199	351
12	1,257	–2.4222	203.9634	204	**45**	7,620	0.1204	355.1936	355
13	2,006	–2.3153	210.0645	210	**46**	7,155	0.2016	360.2020	360
14	3,007	–2.2141	216.1217	216	**47**	7,091	0.2852	365.3762	365
15	4,325	–2.1176	222.1273	222	**48**	6,919	0.3717	370.5719	371
16	5,394	–2.0253	227.5133	228	**49**	6,764	0.4612	375.7864	376
17	6,864	–1.9365	232.8621	233	**50**	6,580	0.5544	381.3598	381
18	8,036	–1.8508	237.5991	238	**51**	6,434	0.6517	387.2076	387
19	9,305	–1.7678	242.9026	243	**52**	6,179	0.7540	393.0867	393
20	9,935	–1.6871	247.6066	248	**53**	6,039	0.8619	399.3004	399
21	10,812	–1.6084	252.2801	252	**54**	5,771	0.9767	406.1421	406
22	11,416	–1.5316	256.9354	257	**55**	5,812	1.0996	413.6273	414
23	11,642	–1.4563	261.5739	262	**56**	5,501	1.2325	421.4807	421
24	11,690	–1.3823	265.6976	266	**57**	5,279	1.3777	430.0104	430
25	11,736	–1.3095	270.2055	270	**58**	5,159	1.5387	439.8662	440
26	11,677	–1.2377	274.3508	274	**59**	4,890	1.7202	450.7455	451
27	11,732	–1.1667	278.7845	279	**60**	4,497	1.9300	463.1185	463
28	11,484	–1.0964	282.9628	283	**61**	4,166	2.1808	478.4033	478
29	11,142	–1.0266	286.9558	287	**62**	3,634	2.4962	497.6641	498
30	10,961	–0.9573	291.2759	291	**63**	2,956	2.9295	523.6961	524
31	10,732	–0.8882	295.5207	296	**64**	2,165	3.6505	567.9747	568
32	10,282	–0.8193	299.4947	299	**65**	1,018	N/A	645.5995	600

Algebra II

Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	–54.8295	150	**33**	8,503	–0.3761	311.6405	312
1	–	–4.9267	12.8034	150	**34**	8,605	–0.3049	316.4129	316
2	–	–4.2043	58.1148	150	**35**	8,512	–0.2337	321.1881	321
3	–	–3.7693	88.3166	150	**36**	8,062	–0.1621	325.9653	326
4	–	–3.4519	110.0223	150	**37**	8,195	–0.0902	330.7436	331
5	–	–3.1990	127.0662	150	**38**	7,883	–0.0178	335.5210	336
6	21	–2.9869	140.8554	150	**39**	7,600	0.0552	340.3006	340
7	38	–2.8028	153.1907	153	**40**	7,249	0.1291	345.0780	345
8	96	–2.6393	164.0371	164	**41**	7,173	0.2038	349.8537	350
9	214	–2.4914	173.8436	174	**42**	6,923	0.2797	354.6270	355
10	395	–2.3558	182.5247	183	**43**	6,515	0.3568	359.6793	360
11	689	–2.2301	190.6895	191	**44**	6,196	0.4354	364.8209	365
12	1,089	–2.1125	198.3264	198	**45**	6,032	0.5158	369.9157	370
13	1,666	–2.0017	205.9402	206	**46**	5,750	0.5981	375.3553	375
14	2,419	–1.8966	212.5928	213	**47**	5,380	0.6827	380.7899	381
15	3,049	–1.7965	219.0260	219	**48**	5,064	0.7699	386.6132	387
16	3,854	–1.7005	225.4987	225	**49**	4,879	0.8601	392.2999	392
17	4,531	–1.6082	231.5312	232	**50**	4,413	0.9538	398.5860	399
18	5,247	–1.5190	237.4205	237	**51**	4,313	1.0515	404.8969	405
19	5,855	–1.4326	242.8644	243	**52**	3,978	1.1539	411.4491	411
20	6,360	–1.3486	248.6252	249	**53**	3,629	1.2618	418.6875	419
21	6,853	–1.2667	254.1117	254	**54**	3,382	1.3763	426.1034	426
22	7,283	–1.1868	258.9458	259	**55**	3,190	1.4987	434.0328	434
23	7,522	–1.1084	264.1227	264	**56**	2,960	1.6308	442.6426	443
24	7,977	–1.0314	269.4831	269	**57**	2,843	1.7750	451.9313	452
25	8,055	–0.9557	274.3309	274	**58**	2,525	1.9345	462.4614	462
26	8,493	–0.8811	279.0468	279	**59**	2,239	2.1145	474.3610	474
27	8,472	–0.8073	283.7733	284	**60**	2,042	2.3222	487.6187	488
28	8,636	–0.7343	288.5095	289	**61**	1,749	2.5704	504.0538	504
29	8,700	–0.6620	293.2542	293	**62**	1,533	2.8828	524.5213	525
30	8,839	–0.5901	298.0063	298	**63**	1,290	3.3126	552.8736	553
31	8,767	–0.5186	302.7650	303	**64**	943	4.0296	600.3850	600
32	8,864	–0.4473	307.5182	308	**65**	547	N/A	681.5695	600

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.25 New Conversions for Summative High School Mathematics and Integrated Mathematics 1

Summative High School Mathematics									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	–87.7995	150	**33**	2,189	–0.7980	277.8098	278
1	–	–5.1845	4.3673	150	**34**	2,372	–0.7298	281.8869	282
2	–	–4.4700	50.7337	150	**35**	2,471	–0.6614	286.3825	286
3	–	–4.0428	78.0847	150	**36**	2,653	–0.5926	290.3537	290
4	–	–3.7329	97.1353	150	**37**	2,709	–0.5234	294.8839	295
5	–	–3.4873	112.5692	150	**38**	2,875	–0.4536	298.9130	299
6	–	–3.2823	124.9513	150	**39**	2,966	–0.3831	303.3387	303
7	–	–3.1050	135.8715	150	**40**	3,147	–0.3116	307.8784	308
8	–	–2.9481	145.8055	150	**41**	3,422	–0.2392	312.4243	312
9	18	–2.8066	154.2728	154	**42**	3,448	–0.1655	316.9758	317
10	27	–2.6772	162.3228	162	**43**	3,582	–0.0904	321.5343	322
11	47	–2.5575	169.6211	170	**44**	3,741	–0.0138	326.0998	326
12	98	–2.4457	176.7466	177	**45**	4,029	0.0647	330.8315	331
13	149	–2.3406	183.1797	183	**46**	4,064	0.1452	335.9946	336
14	208	–2.2409	189.4547	189	**47**	4,400	0.2282	341.1725	341
15	294	–2.1460	195.1130	195	**48**	4,614	0.3139	346.3690	346
16	362	–2.0552	200.7128	201	**49**	4,639	0.4026	351.5840	352
17	488	–1.9678	206.1708	206	**50**	5,037	0.4950	357.3802	357
18	588	–1.8835	211.1375	211	**51**	5,098	0.5916	363.2245	363
19	670	–1.8017	216.5247	217	**52**	5,356	0.6929	369.5896	370
20	765	–1.7223	221.3350	221	**53**	5,431	0.8000	376.0855	376
21	879	–1.6448	226.0875	226	**54**	5,787	0.9137	383.0566	383
22	1,019	–1.5691	230.2398	230	**55**	5,890	1.0355	390.6465	391
23	1,104	–1.4949	234.9542	235	**56**	5,967	1.1672	398.8779	399
24	1,110	–1.4219	239.6462	240	**57**	6,100	1.3112	407.7672	408
25	1,284	–1.3502	243.7971	244	**58**	6,095	1.4707	417.3423	417
26	1,413	–1.2793	248.3403	248	**59**	5,971	1.6506	428.3893	428
27	1,514	–1.2092	252.5319	253	**60**	5,973	1.8586	441.4593	441
28	1,651	–1.1398	256.9584	257	**61**	5,632	2.1074	456.6740	457
29	1,763	–1.0709	261.2071	261	**62**	5,008	2.4205	475.8756	476
30	1,842	–1.0024	265.2164	265	**63**	4,142	2.8510	502.7093	503
31	1,944	–0.9342	269.4666	269	**64**	2,972	3.5693	548.1341	548
32	2,120	–0.8661	273.8265	274	**65**	1,534	N/A	630.7795	600

Integrated Mathematics 1									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	–77.6988	150	**33**	344	0.1517	323.8291	324
1	–	–4.2893	0.5072	150	**34**	308	0.2199	328.7833	329
2	–	–3.5705	51.7436	150	**35**	302	0.2882	333.7239	334
3	–	–3.1392	85.2437	150	**36**	248	0.3567	338.7976	339
4	–	–2.8256	108.6654	150	**37**	235	0.4257	344.1002	344
5	–	–2.5764	127.0829	150	**38**	200	0.4951	349.1615	349
6	–	–2.3680	142.4611	150	**39**	185	0.5653	354.0457	354
7	–	–2.1877	155.2723	155	**40**	178	0.6362	359.0304	359
8	12	–2.0279	166.5706	167	**41**	184	0.7081	364.4377	364
9	21	–1.8837	176.7026	177	**42**	123	0.7811	369.8934	370
10	20	–1.7518	186.0221	186	**43**	125	0.8554	374.9358	375
11	65	–1.6297	194.8995	195	**44**	105	0.9313	380.9093	381
12	125	–1.5158	203.1217	203	**45**	107	1.0089	386.4698	386
13	176	–1.4086	210.8029	211	**46**	80	1.0884	391.9396	392
14	271	–1.3071	218.3979	218	**47**	78	1.1703	397.9768	398
15	324	–1.2104	225.1289	225	**48**	69	1.2548	404.0892	404
16	428	–1.1179	231.9501	232	**49**	42	1.3424	410.2492	410
17	519	–1.0290	238.0741	238	**50**	38	1.4334	416.8586	417
18	567	–0.9433	244.2892	244	**51**	39	1.5286	423.9514	424
19	638	–0.8602	250.5410	251	**52**	40	1.6284	431.0621	431
20	658	–0.7796	256.1850	256	**53**	29	1.7338	438.5253	439
21	714	–0.7011	261.8156	262	**54**	23	1.8459	446.5526	447
22	617	–0.6244	267.5944	268	**55**	17	1.9659	455.3227	455
23	645	–0.5493	272.8927	273	**56**	17	2.0956	464.6269	465
24	653	–0.4755	278.4816	278	**57**	19	2.2376	474.9422	475
25	593	–0.4030	283.7433	284	**58**	14	2.3950	486.4169	486
26	549	–0.3316	288.7940	289	**59**	12	2.5727	499.0514	499
27	535	–0.2610	293.8340	294	**60**	4	2.7783	513.6911	514
28	482	–0.1912	298.8633	299	**61**	6	3.0246	531.5649	532
29	483	–0.1219	303.8813	304	**62**	14	3.3351	554.6881	555
30	412	–0.0531	308.8872	309	**63**	3	3.7629	587.3053	587
31	412	0.0153	313.8812	314	**64**	6	4.4783	637.5980	600
32	386	0.0836	318.8615	319	**65**	1	N/A	714.6990	600

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.26 New Conversions for Integrated Mathematics 2 and Integrated Mathematics 3

Integrated Mathematics 2									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	–60.2788	150	**33**	166	–0.2133	334.5301	335
1	–	–4.6112	32.9439	150	**34**	179	–0.1451	339.1114	339
2	–	–3.8957	84.9278	150	**35**	150	–0.0768	343.6691	344
3	–	–3.4674	116.0523	150	**36**	142	–0.0082	348.2066	348
4	–	–3.1567	137.6215	150	**37**	120	0.0609	352.7244	353
5	–	–2.9103	154.5980	155	**38**	112	0.1306	357.2220	357
6	–	–2.7044	168.7550	169	**39**	117	0.2010	361.7470	362
7	–	–2.5264	180.8388	181	**40**	88	0.2722	366.5198	367
8	–	–2.3688	191.4398	191	**41**	106	0.3445	371.3141	371
9	–	–2.2267	201.0637	201	**42**	80	0.4180	376.0107	376
10	11	–2.0967	209.5489	210	**43**	81	0.4928	381.0482	381
11	25	–1.9765	217.2883	217	**44**	71	0.5692	386.0655	386
12	31	–1.8642	224.8941	225	**45**	54	0.6475	391.2340	391
13	43	–1.7586	232.0433	232	**46**	57	0.7278	396.8172	397
14	70	–1.6586	238.7994	239	**47**	42	0.8105	402.4015	402
15	82	–1.5633	245.0744	245	**48**	52	0.8958	408.0965	408
16	112	–1.4721	250.9447	251	**49**	24	0.9843	414.0993	414
17	125	–1.3845	256.7674	257	**50**	39	1.0764	420.2423	420
18	131	–1.2998	262.5443	263	**51**	30	1.1726	426.3651	426
19	149	–1.2179	268.2383	268	**52**	23	1.2736	433.2607	433
20	163	–1.1382	273.3229	273	**53**	12	1.3803	440.5420	441
21	171	–1.0606	278.2643	278	**54**	12	1.4936	448.0642	448
22	156	–0.9847	283.1694	283	**55**	12	1.6150	456.0867	456
23	199	–0.9103	288.0424	288	**56**	12	1.7463	464.7713	465
24	207	–0.8373	292.8834	293	**57**	–	1.8897	474.5724	475
25	207	–0.7654	297.6943	298	**58**	–	2.0488	485.3910	485
26	181	–0.6945	302.4769	302	**59**	–	2.2282	497.4719	497
27	171	–0.6244	307.2307	307	**60**	–	2.4357	511.7753	512
28	197	–0.5550	311.9566	312	**61**	–	2.6837	528.9112	529
29	185	–0.4861	316.4781	316	**62**	–	2.9963	550.3956	550
30	154	–0.4176	320.7945	321	**63**	–	3.4263	581.9852	582
31	195	–0.3493	325.3008	325	**64**	–	4.1438	631.4596	600
32	181	–0.2813	329.9268	330	**65**	–	N/A	699.9591	600

Integrated Mathematics 3									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	–100.7238	150	**33**	23	–0.0370	335.3806	335
1	–	–4.5394	–12.2894	150	**34**	15	0.0334	340.6046	341
2	–	–3.8184	42.6576	150	**35**	22	0.1039	345.9168	346
3	–	–3.3849	77.5360	150	**36**	23	0.1748	351.0569	351
4	–	–3.0693	102.5245	150	**37**	17	0.2460	356.4269	356
5	–	–2.8183	121.9933	150	**38**	17	0.3177	361.9916	362
6	–	–2.6081	138.2537	150	**39**	–	0.3902	367.5251	368
7	–	–2.4260	152.4883	152	**40**	16	0.4634	373.0282	373
8	–	–2.2644	164.9366	165	**41**	–	0.5376	378.6094	379
9	–	–2.1185	176.2431	176	**42**	20	0.6130	384.5188	385
10	–	–1.9849	186.5605	187	**43**	16	0.6897	390.2324	390
11	–	–1.8611	195.8361	196	**44**	17	0.7679	396.1672	396
12	–	–1.7454	204.8739	205	**45**	15	0.8479	402.3842	402
13	–	–1.6365	213.4844	213	**46**	16	0.9298	408.8341	409
14	11	–1.5332	221.2120	221	**47**	15	1.0141	415.2043	415
15	21	–1.4348	228.9247	229	**48**	–	1.1010	421.7603	422
16	20	–1.3405	235.8868	236	**49**	–	1.1909	428.7534	429
17	17	–1.2499	242.9947	243	**50**	11	1.2844	435.8568	436
18	24	–1.1623	249.6719	250	**51**	-	1.3819	443.1780	443
19	28	–1.0774	256.2834	256	**52**	15	1.4841	451.1640	451
20	23	–0.9949	262.4225	262	**53**	–	1.5919	459.3721	459
21	20	–0.9145	268.2734	268	**54**	–	1.7064	468.2226	468
22	17	–0.8358	274.1219	274	**55**	–	1.8287	477.6599	478
23	24	–0.7588	279.9663	280	**56**	–	1.9608	487.9264	488
24	17	–0.6831	285.8061	286	**57**	–	2.1050	499.0022	499
25	18	–0.6086	291.6361	292	**58**	–	2.2647	511.2535	511
26	19	–0.5351	297.4443	297	**59**	–	2.4447	525.2183	525
27	17	–0.4625	303.0307	303	**60**	–	2.6525	541.3468	541
28	18	–0.3905	308.2603	308	**61**	–	2.9009	561.0336	561
29	20	–0.3192	313.7369	314	**62**	–	3.2134	586.5114	587
30	25	–0.2483	319.0136	319	**63**	–	3.6434	622.9594	600
31	23	–0.1777	324.3822	324	**64**	–	4.3607	676.5522	600
32	20	–0.1073	329.7370	330	**65**	–	N/A	753.3237	600

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.27 New Conversions for Science, Grades Five and Eight

Grade 5									
Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	47.3185	150	**31**	7,758	–0.5293	305.1416	305
1	–	–4.8555	68.9562	150	**32**	8,393	–0.4565	309.3388	309
2	–	–4.1395	93.6941	150	**33**	8,583	–0.3835	313.5470	314
3	–	–3.7108	121.6438	150	**34**	9,005	–0.3101	317.7849	318
4	–	–3.3993	138.6714	150	**35**	9,440	–0.2360	322.0570	322
5	–	–3.1521	153.3132	153	**36**	10,011	–0.1612	326.3704	326
6	13	–2.9453	165.6910	166	**37**	10,271	–0.0855	330.7410	331
7	16	–2.7663	175.9182	176	**38**	10,868	–0.0086	335.1728	335
8	41	–2.6076	185.0519	185	**39**	11,171	0.0696	339.6865	340
9	79	–2.4642	193.4230	193	**40**	11,620	0.1495	344.2931	344
10	160	–2.3329	201.1310	201	**41**	11,895	0.2311	349.0027	349
11	271	–2.2112	208.0591	208	**42**	12,214	0.3150	353.8350	354
12	474	–2.0974	214.6151	215	**43**	12,447	0.4013	358.8178	359
13	733	–1.9901	220.8314	221	**44**	13,051	0.4906	363.9699	364
14	1,029	–1.8884	226.7467	227	**45**	13,528	0.5832	369.3160	369
15	1,352	–1.7912	232.3420	232	**46**	13,884	0.6798	374.8885	375
16	1,791	–1.6981	237.6974	238	**47**	14,227	0.7810	380.7260	381
17	2,234	–1.6083	242.8747	243	**48**	14,712	0.8877	386.8628	387
18	2,635	–1.5215	247.8921	248	**49**	14,828	1.0008	393.4061	393
19	3,052	–1.4372	252.7673	253	**50**	14,895	1.1218	400.3993	400
20	3,400	–1.3551	257.5154	258	**51**	15,418	1.2525	407.9368	408
21	3,894	–1.2749	262.1323	262	**52**	15,397	1.3952	416.1331	416
22	4,127	–1.1964	266.6583	267	**53**	15,139	1.5532	425.3054	425
23	4,623	–1.1192	271.1062	271	**54**	14,777	1.7314	435.6143	436
24	4,996	–1.0432	275.4914	275	**55**	14,115	1.9375	447.4270	447
25	5,424	–0.9682	279.8195	280	**56**	13,240	2.1840	461.8210	462
26	5,768	–0.8940	284.1017	284	**57**	11,347	2.4947	479.8467	480
27	6,323	–0.8204	288.3497	288	**58**	8,955	2.9227	504.6263	505
28	6,711	–0.7473	292.5666	293	**59**	5,668	3.6377	548.8865	549
29	6,976	–0.6745	296.7664	297	**60**	2,278	N/A	624.0193	600
30	7,255	–0.6019	300.9561	301					

Grade 8									
Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score	Raw Scr.	Freq. Distrib.	Theta	Scale Score	Rprtd Score
0	–	N/A	–96.6361	150	**31**	7,344	–0.2895	298.4685	298
1	–	–4.6385	–52.8290	150	**32**	7,948	–0.2156	304.6693	305
2	–	–3.9221	–10.7151	150	**33**	8,331	–0.1413	310.9019	311
3	–	–3.4927	29.0282	150	**34**	9,015	–0.0665	317.1745	317
4	–	–3.1808	54.4060	150	**35**	9,545	0.0089	323.5057	324
5	–	–2.9330	75.9838	150	**36**	10,142	0.0852	329.8988	330
6	11	–2.7257	94.1220	150	**37**	10,801	0.1624	336.3785	336
7	35	–2.5461	108.7698	150	**38**	11,144	0.2408	342.9567	343
8	72	–2.3868	122.2145	150	**39**	11,700	0.3206	349.6517	350
9	167	–2.2429	134.5018	150	**40**	12,407	0.4021	356.4806	356
10	305	–2.1110	145.5836	150	**41**	12,783	0.4855	363.4850	363
11	513	–1.9887	155.7784	156	**42**	13,428	0.5711	370.6667	371
12	756	–1.8743	165.4119	165	**43**	13,530	0.6592	378.0615	378
13	1,109	–1.7664	174.5361	175	**44**	13,910	0.7504	385.7092	386
14	1,484	–1.6640	183.1527	183	**45**	14,443	0.8449	393.6386	394
15	1,838	–1.5662	191.3115	191	**46**	14,711	0.9435	401.9041	402
16	2,216	–1.4723	199.1824	199	**47**	14,862	1.0467	410.5638	411
17	2,439	–1.3819	206.7919	207	**48**	15,222	1.1555	419.7065	420
18	2,634	–1.2943	214.1664	214	**49**	15,239	1.2709	429.3916	429
19	3,021	–1.2093	221.3139	221	**50**	15,317	1.3942	439.7158	440
20	3,241	–1.1264	228.2515	228	**51**	15,199	1.5272	450.8841	451
21	3,506	–1.0454	235.0388	235	**52**	15,269	1.6723	463.0973	463
22	3,698	–0.9659	241.7015	242	**53**	14,594	1.8328	476.5398	477
23	4,033	–0.8879	248.2565	248	**54**	14,287	2.0136	491.7414	492
24	4,367	–0.8109	254.7174	255	**55**	13,681	2.2224	509.3465	509
25	4,731	–0.7350	261.0988	261	**56**	13,034	2.4716	530.0800	530
26	5,026	–0.6598	267.4126	267	**57**	11,638	2.7851	556.8743	557
27	5,489	–0.5852	273.6696	274	**58**	10,005	3.2162	592.7389	593
28	5,845	–0.5110	279.8916	280	**59**	7,399	3.9345	657.5519	600
29	6,360	–0.4371	286.0903	286	**60**	3,998	N/A	742.1487	600
30	6,747	–0.3633	292.2764	292					

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.28 New Conversion for Life Science (Grade 10)

Life Science (Grade 10)									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	44.7476	150	**31**	8,854	–0.1929	312.7936	313
1	17	–4.5880	73.8311	150	**32**	9,138	–0.1183	316.9496	317
2	19	–3.8688	104.6678	150	**33**	9,404	–0.0435	321.1174	321
3	19	–3.4369	130.8223	150	**34**	9,776	0.0317	325.3170	325
4	18	–3.1225	149.1048	150	**35**	10,202	0.1075	329.5450	330
5	15	–2.8723	163.3498	163	**36**	10,195	0.1841	333.8136	334
6	61	–2.6626	174.8774	175	**37**	10,787	0.2616	338.1366	338
7	95	–2.4809	185.0088	185	**38**	11,179	0.3403	342.5275	343
8	201	–2.3195	194.0519	194	**39**	11,192	0.4203	346.9889	347
9	355	–2.1735	202.2416	202	**40**	11,633	0.5019	351.5437	352
10	613	–2.0396	209.7525	210	**41**	11,884	0.5854	356.1993	356
11	1,013	–1.9154	216.7175	217	**42**	12,048	0.6710	360.9768	361
12	1,496	–1.7992	223.2188	223	**43**	12,380	0.7592	365.8928	366
13	2,139	–1.6896	229.3119	229	**44**	12,703	0.8502	370.9703	371
14	2,866	–1.5855	235.1037	235	**45**	13,024	0.9446	376.2381	376
15	3,551	–1.4861	240.6444	241	**46**	13,034	1.0430	381.7224	382
16	4,236	–1.3908	245.9657	246	**47**	13,255	1.1460	387.4607	387
17	4,637	–1.2989	251.0942	251	**48**	13,621	1.2545	393.5006	394
18	5,109	–1.2099	256.0551	256	**49**	13,436	1.3694	399.9199	400
19	5,348	–1.1236	260.8726	261	**50**	13,475	1.4923	406.7888	407
20	5,792	–1.0395	265.5691	266	**51**	13,055	1.6247	414.1967	414
21	6,240	–0.9573	270.1579	270	**52**	13,160	1.7692	422.2742	422
22	6,432	–0.8768	274.6501	275	**53**	12,869	1.9290	431.2005	431
23	6,864	–0.7976	279.0656	279	**54**	12,418	2.1091	441.2497	441
24	7,130	–0.7197	283.4123	283	**55**	11,617	2.3170	452.8040	453
25	7,264	–0.6428	287.7022	288	**56**	10,776	2.5653	466.6864	467
26	7,448	–0.5667	291.9442	292	**57**	9,477	2.8778	484.4524	484
27	7,710	–0.4913	296.1516	296	**58**	7,550	3.3076	509.1175	509
28	7,995	–0.4163	300.3290	300	**59**	5,408	4.0246	550.8376	551
29	8,565	–0.3417	304.4910	304	**60**	2,570	N/A	602.3473	600
30	8,639	–0.2673	308.6425	309					

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.29 New Conversions for Biology (paper-and-pencil version and braille version)

Biology (paper-and-pencil)									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	0.0007	150	**31**	12,318	–0.2285	322.8312	323
1	–	–4.5867	97.5994	150	**32**	12,777	–0.1555	326.4043	326
2	–	–3.8679	139.3673	150	**33**	13,204	–0.0822	329.9916	330
3	–	–3.4365	162.0368	162	**34**	13,612	–0.0086	333.5924	334
4	–	–3.1227	178.2701	178	**35**	13,738	0.0657	337.2069	337
5	25	–2.8732	191.1296	191	**36**	14,184	0.1407	341.0249	341
6	37	–2.6644	201.6068	202	**37**	14,634	0.2167	344.9742	345
7	130	–2.4835	210.4081	210	**38**	14,713	0.2938	348.6262	349
8	303	–2.3231	218.4627	218	**39**	14,665	0.3723	352.5453	353
9	616	–2.1782	225.7183	226	**40**	15,018	0.4523	356.4655	356
10	1,087	–2.0454	232.5798	233	**41**	15,169	0.5343	360.4589	360
11	1,777	–1.9224	238.6701	239	**42**	15,229	0.6183	364.6834	365
12	2,734	–1.8074	244.3134	244	**43**	15,377	0.7049	368.9192	369
13	3,913	–1.6990	249.8873	250	**44**	15,495	0.7944	373.5614	374
14	5,028	–1.5962	254.9114	255	**45**	15,245	0.8873	377.9223	378
15	6,271	–1.4981	259.6103	260	**46**	15,321	0.9842	382.6493	383
16	7,185	–1.4041	264.3357	264	**47**	15,069	1.0857	387.9538	388
17	7,986	–1.3136	268.8787	269	**48**	15,133	1.1926	393.3067	393
18	8,437	–1.2261	273.1791	273	**49**	14,563	1.3061	398.7379	399
19	8,818	–1.1411	277.5017	278	**50**	13,936	1.4274	404.7508	405
20	9,314	–1.0585	281.6978	282	**51**	13,889	1.5584	411.3476	411
21	9,390	–0.9777	285.5812	286	**52**	13,153	1.7014	418.5291	419
22	9,687	–0.8987	289.4838	289	**53**	12,536	1.8598	426.5144	427
23	9,841	–0.8210	293.4061	293	**54**	11,854	2.0384	435.4085	435
24	10,051	–0.7446	297.2417	297	**55**	10,632	2.2449	445.7837	446
25	10,383	–0.6692	300.8082	301	**56**	9,657	2.4917	458.1444	458
26	10,612	–0.5946	304.6889	305	**57**	8,357	2.8027	473.7620	474
27	10,756	–0.5207	308.1865	308	**58**	6,782	3.2312	495.5552	496
28	11,375	–0.4473	311.7998	312	**59**	4,776	3.9469	531.6642	532
29	11,537	–0.3742	315.7286	316	**60**	2,189	N/A	595.4996	600
30	12,081	–0.3013	319.2725	319					

Biology (braille)									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	0.0007	150	**31**	–	–0.1911	324.6577	325
1	–	–4.5735	98.8601	150	**32**	–	–0.1167	328.3048	328
2	–	–3.8542	140.1861	150	**33**	–	–0.0419	331.9664	332
3	–	–3.4223	162.7843	163	**34**	–	0.0335	335.6420	336
4	–	–3.1080	179.0257	179	**35**	–	0.1096	339.3312	339
5	–	–2.8580	191.8811	192	**36**	–	0.1865	343.5335	344
6	–	–2.6486	202.3411	202	**37**	–	0.2646	347.2484	347
7	–	–2.4672	211.1927	211	**38**	–	0.3440	351.0432	351
8	–	–2.3062	219.2735	219	**39**	–	0.4249	355.2133	355
9	–	–2.1606	226.6054	227	**40**	–	0.5077	359.1025	359
10	–	–2.0272	233.5534	234	**41**	–	0.5926	363.4004	363
11	–	–1.9036	239.6210	240	**42**	–	0.6800	367.7098	368
12	–	–1.7880	245.2859	245	**43**	–	0.7702	372.2837	372
13	–	–1.6789	250.9567	251	**44**	–	0.8638	376.8603	377
14	–	–1.5755	255.8853	256	**45**	–	0.9614	381.5376	382
15	–	–1.4767	260.6687	261	**46**	–	1.0635	386.8107	387
16	–	–1.3820	265.4803	265	**47**	–	1.1711	392.2558	392
17	–	–1.2907	269.9880	270	**48**	–	1.2853	397.7111	398
18	–	–1.2024	274.3689	274	**49**	–	1.4072	403.7084	404
19	–	–1.1167	278.7739	279	**50**	–	1.5388	410.3363	410
20	–	–1.0332	282.9029	283	**51**	–	1.6824	417.5661	418
21	–	–0.9516	286.8616	287	**52**	–	1.8413	425.5571	426
22	–	–0.8716	290.8408	291	**53**	–	2.0205	434.5416	435
23	–	–0.7930	294.8408	295	**54**	–	2.2275	444.8970	445
24	–	–0.7156	298.5660	299	**55**	–	2.4749	457.3392	457
25	–	–0.6392	302.4012	302	**56**	–	2.7863	472.9884	473
26	–	–0.5636	306.1532	306	**57**	–	3.2154	494.8445	495
27	–	–0.4885	309.7220	310	**58**	–	3.9315	531.0822	531
28	–	–0.4139	313.6369	314	**59**	–	N/A	595.4996	600
29	–	–0.3396	317.4085	317					
30	–	–0.2654	321.0255	321					

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.30 New Conversion for Chemistry

Chemistry									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	51.9904	150	**31**	7,613	–0.2968	312.3328	312
1	–	–4.6770	97.5798	150	**32**	7,689	–0.2241	315.8104	316
2	–	–3.9547	130.9249	150	**33**	8,075	–0.1512	319.3075	319
3	–	–3.5203	154.0295	154	**34**	8,201	–0.0778	322.8242	323
4	–	–3.2038	169.9761	170	**35**	8,351	–0.0039	326.3604	326
5	–	–2.9521	182.8890	183	**36**	8,451	0.0708	330.0703	330
6	12	–2.7413	192.8192	193	**37**	8,458	0.1465	333.9824	334
7	30	–2.5587	201.8104	202	**38**	8,530	0.2233	337.5782	338
8	52	–2.3968	209.8727	210	**39**	8,650	0.3014	341.4187	341
9	115	–2.2506	216.9564	217	**40**	8,797	0.3811	345.3193	345
10	252	–2.1167	223.3877	223	**41**	8,709	0.4628	349.2636	349
11	385	–1.9928	229.7478	230	**42**	8,816	0.5466	353.4658	353
12	683	–1.8770	235.4118	235	**43**	8,544	0.6329	357.6916	358
13	937	–1.7679	240.6974	241	**44**	8,435	0.7221	361.9410	362
14	1,417	–1.6645	245.6178	246	**45**	8,265	0.8148	366.6598	367
15	1,825	–1.5660	250.5398	251	**46**	8,163	0.9114	371.0067	371
16	2,337	–1.4716	255.1719	255	**47**	7,935	1.0127	376.3552	376
17	2,768	–1.3808	259.4213	259	**48**	7,724	1.1195	381.3494	381
18	3,198	–1.2931	263.5350	264	**49**	7,134	1.2328	386.9712	387
19	3,553	–1.2080	267.6764	268	**50**	6,683	1.3541	393.0155	393
20	3,939	–1.1252	271.8440	272	**51**	6,661	1.4851	399.3741	399
21	4,317	–1.0444	275.8618	276	**52**	6,141	1.6281	406.3867	406
22	4,874	–0.9654	279.6133	280	**53**	5,660	1.7866	414.0618	414
23	5,200	–0.8878	283.3877	283	**54**	5,153	1.9654	422.8999	423
24	5,471	–0.8114	287.1846	287	**55**	4,652	2.1721	432.7865	433
25	5,707	–0.7362	290.8946	291	**56**	4,239	2.4193	445.1544	445
26	6,078	–0.6618	294.3552	294	**57**	3,500	2.7306	460.4585	460
27	6,299	–0.5880	298.1264	298	**58**	2,822	3.1597	482.0104	482
28	6,716	–0.5148	301.5264	302	**59**	1,902	3.8759	518.4151	518
29	6,958	–0.4420	305.0324	305	**60**	855	N/A	584.6196	600
30	7,292	–0.3694	308.8746	309					

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.31 New Conversions for Earth Science (paper-and-pencil version and braille version)

Earth Science (paper–and–pencil)									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	51.0104	150	**31**	5,199	0.0856	317.7532	318
1	–	–4.1675	107.8396	150	**32**	5,257	0.1561	321.2448	321
2	–	–3.4540	142.1162	150	**33**	5,340	0.2269	324.7415	325
3	–	–3.0276	163.4913	163	**34**	5,452	0.2981	328.2436	328
4	–	–2.7186	178.8046	179	**35**	5,632	0.3699	331.7508	332
5	–	–2.4738	191.0422	191	**36**	5,562	0.4425	335.2626	335
6	18	–2.2695	201.3295	201	**37**	5,630	0.5161	338.7783	339
7	65	–2.0930	209.8577	210	**38**	5,580	0.5908	342.5399	343
8	154	–1.9368	217.5206	218	**39**	5,656	0.6669	346.3111	346
9	272	–1.7959	224.4732	224	**40**	5,527	0.7447	350.1061	350
10	569	–1.6671	230.8016	231	**41**	5,639	0.8243	354.1376	354
11	800	–1.5479	236.6939	237	**42**	5,694	0.9060	358.1709	358
12	1,261	–1.4366	242.3729	242	**43**	5,565	0.9904	362.2053	362
13	1,707	–1.3318	247.6468	248	**44**	5,551	1.0776	366.5665	367
14	2,285	–1.2325	252.4068	252	**45**	5,285	1.1682	371.1053	371
15	2,852	–1.1379	257.1810	257	**46**	5,098	1.2628	375.6439	376
16	3,221	–1.0472	261.7963	262	**47**	4,914	1.3621	380.5494	381
17	3,614	–0.9599	265.9555	266	**48**	4,748	1.4668	385.5871	386
18	3,697	–0.8756	269.9640	270	**49**	4,413	1.5781	391.0172	391
19	4,008	–0.7938	274.1640	274	**50**	4,119	1.6972	396.9583	397
20	4,135	–0.7141	278.0402	278	**51**	3,766	1.8260	403.4076	403
21	4,325	–0.6364	281.9275	282	**52**	3,314	1.9668	410.3608	410
22	4,307	–0.5602	285.6900	286	**53**	2,852	2.1231	417.8208	418
23	4,466	–0.4855	289.2450	289	**54**	2,448	2.2996	426.6842	427
24	4,476	–0.4119	293.0297	293	**55**	1,903	2.5039	436.5942	437
25	4,677	–0.3393	296.4677	296	**56**	1,372	2.7486	448.9075	449
26	4,676	–0.2674	300.0522	300	**57**	843	3.0576	463.7205	464
27	4,899	–0.1962	303.8593	304	**58**	490	3.4840	484.8690	485
28	5,046	–0.1254	307.3221	307	**59**	211	4.1975	519.7645	520
29	5,059	–0.0550	310.7924	311	**60**	52	N/A	579.7196	600
30	5,134	0.0153	314.2699	314					

Earth Science (braille)									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	51.0104	150	**31**	–	0.1230	319.6038	320
1	–	–4.1519	108.7145	150	**32**	–	0.1948	323.1602	323
2	–	–3.4379	143.1395	150	**33**	–	0.2671	326.7224	327
3	–	–3.0112	164.4260	164	**34**	–	0.3399	330.2899	330
4	–	–2.7018	179.7084	180	**35**	–	0.4135	333.8623	334
5	–	–2.4565	191.9590	192	**36**	–	0.4879	337.4388	337
6	–	–2.2517	202.2597	202	**37**	–	0.5635	341.0787	341
7	–	–2.0748	210.7422	211	**38**	–	0.6405	345.0934	345
8	–	–1.9180	218.4785	218	**39**	–	0.7190	348.7841	349
9	–	–1.7766	225.4225	225	**40**	–	0.7993	352.8853	353
10	–	–1.6473	231.7880	232	**41**	–	0.8818	356.9883	357
11	–	–1.5276	237.7025	238	**42**	–	0.9668	361.0923	361
12	–	–1.4157	243.4809	243	**43**	–	1.0547	365.3925	365
13	–	–1.3103	248.6540	249	**44**	–	1.1460	370.0093	370
14	–	–1.2105	253.4988	253	**45**	–	1.2412	374.6236	375
15	–	–1.1152	258.3589	258	**46**	–	1.3411	379.5033	380
16	–	–1.0239	262.9346	263	**47**	–	1.4464	384.6263	385
17	–	–0.9359	267.0375	267	**48**	–	1.5582	390.0535	390
18	–	–0.8509	271.2609	271	**49**	–	1.6779	396.0080	396
19	–	–0.7684	275.3883	275	**50**	–	1.8072	402.4867	402
20	–	–0.6880	279.3366	279	**51**	–	1.9485	409.4851	409
21	–	–0.6094	283.2966	283	**52**	–	2.1053	417.0049	417
22	–	–0.5325	286.9526	287	**53**	–	2.2822	425.8508	426
23	–	–0.4569	290.7606	291	**54**	–	2.4870	435.8282	436
24	–	–0.3824	294.4207	294	**55**	–	2.7322	448.1479	448
25	–	–0.3088	297.9238	298	**56**	–	3.0416	463.0419	463
26	–	–0.2360	301.7908	302	**57**	–	3.4684	484.2262	484
27	–	–0.1637	305.4461	305	**58**	–	4.1823	519.2384	519
28	–	–0.0918	308.9745	309	**59**	–	N/A	579.7196	600
29	–	–0.0202	312.5106	313					
30	–	0.0513	316.0538	316					

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.32 New Conversion for Physics

Physics									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	51.4129	150	**31**	1,889	–0.1143	322.5341	323
1	–	–4.4296	111.1009	150	**32**	1,938	–0.0426	325.9677	326
2	–	–3.7126	146.2701	150	**33**	2,038	0.0295	329.5551	330
3	–	–3.2830	167.2824	167	**34**	2,087	0.1019	333.3177	333
4	–	–2.9710	182.4454	182	**35**	2,249	0.1750	336.7462	337
5	–	–2.7232	194.6758	195	**36**	2,331	0.2489	340.3348	340
6	–	–2.5160	204.9470	205	**37**	2,381	0.3237	344.0844	344
7	13	–2.3368	213.7274	214	**38**	2,453	0.3996	347.6712	348
8	31	–2.1779	221.1245	221	**39**	2,496	0.4769	351.5783	352
9	70	–2.0345	228.4385	228	**40**	2,529	0.5559	355.4845	355
10	130	–1.9033	234.8034	235	**41**	2,580	0.6367	359.3858	359
11	197	–1.7817	240.6697	241	**42**	2,663	0.7196	363.4499	363
12	305	–1.6682	246.0964	246	**43**	2,615	0.8051	367.8298	368
13	492	–1.5612	251.4571	251	**44**	2,626	0.8936	372.2045	372
14	628	–1.4599	256.3897	256	**45**	2,674	0.9854	376.5735	377
15	777	–1.3632	261.2444	261	**46**	2,647	1.0812	381.0958	381
16	900	–1.2706	265.6822	266	**47**	2,756	1.1817	386.0912	386
17	968	–1.1814	270.1194	270	**48**	2,545	1.2876	391.4069	391
18	1,063	–1.0952	274.4613	274	**49**	2,509	1.4001	396.8582	397
19	1,131	–1.0116	278.4031	278	**50**	2,465	1.5205	402.7738	403
20	1,160	–0.9303	282.3439	282	**51**	2,326	1.6506	409.1491	409
21	1,286	–0.8509	286.2836	286	**52**	2,190	1.7927	416.1035	416
22	1,318	–0.7731	290.2227	290	**53**	2,007	1.9501	423.9735	424
23	1,320	–0.6968	294.0412	294	**54**	1,851	2.1280	432.7586	433
24	1,475	–0.6217	297.6079	298	**55**	1,617	2.3336	442.7093	443
25	1,396	–0.5475	301.4154	301	**56**	1,417	2.5797	454.9976	455
26	1,440	–0.4742	304.8571	305	**57**	1,156	2.8900	470.2767	470
27	1,603	–0.4016	308.4330	308	**58**	829	3.3177	491.2674	491
28	1,659	–0.3294	312.2243	312	**59**	474	4.0327	526.0379	526
29	1,665	–0.2576	315.6623	316	**60**	180	N/A	582.7871	600
30	1,768	–0.1859	319.0989	319					

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.33 New Conversions for Integrated/Coordinated Science 1 (paper-and-pencil version and braille version)

Integrated/Coordinated Science 1 (paper-and-pencil)									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	0.0000	150	**31**	1,276	–0.2151	313.8438	314
1	–	–4.5508	106.2771	150	**32**	1,251	–0.1429	317.3008	317
2	–	–3.8323	140.6727	150	**33**	1,323	–0.0704	320.7709	321
3	–	–3.4015	161.2965	161	**34**	1,262	0.0025	324.2615	324
4	–	–3.0884	176.2864	176	**35**	1,343	0.0760	327.7804	328
5	–	–2.8397	188.1933	188	**36**	1,361	0.1503	331.3361	331
6	–	–2.6317	198.1537	198	**37**	1,247	0.2255	334.9371	335
7	13	–2.4516	206.7747	207	**38**	1,303	0.3018	338.5931	339
8	36	–2.2919	214.4187	214	**39**	1,310	0.3796	342.3143	342
9	77	–2.1478	221.3201	221	**40**	1,256	0.4589	346.1123	346
10	134	–2.0158	227.6392	228	**41**	1,183	0.5401	350.0000	350
11	223	–1.8935	233.4906	233	**42**	1,128	0.6235	353.9918	354
12	336	–1.7793	238.9594	239	**43**	1,045	0.7094	358.1045	358
13	427	–1.6717	244.1103	244	**44**	963	0.7982	362.3573	362
14	558	–1.5697	248.9941	249	**45**	977	0.8905	366.7730	367
15	588	–1.4724	253.6513	254	**46**	879	0.9867	371.3788	371
16	664	–1.3792	258.1147	258	**47**	689	1.0875	376.2075	376
17	766	–1.2894	262.4115	262	**48**	582	1.1820	380.7278	381
18	830	–1.2027	266.5647	267	**49**	508	1.2807	385.4537	385
19	908	–1.1185	270.5935	271	**50**	418	1.3848	390.4387	390
20	927	–1.0470	274.0185	274	**51**	355	1.5270	397.2448	397
21	929	–0.9758	277.4271	277	**52**	262	1.6837	404.7478	405
22	973	–0.8871	281.6708	282	**53**	198	1.8587	413.1254	413
23	1,041	–0.8015	285.7710	286	**54**	156	2.0370	421.6610	422
24	1,025	–0.7259	289.3925	289	**55**	75	2.2431	431.5313	432
25	1,068	–0.6512	292.9654	293	**56**	56	2.4899	443.3428	443
26	1,030	–0.5774	296.4985	296	**57**	33	2.8009	458.2324	458
27	1,129	–0.5043	300.0000	300	**58**	29	3.2295	478.7506	479
28	1,116	–0.4316	303.4779	303	**59**	7	3.9456	513.0353	513
29	1,138	–0.3593	306.9396	307	**60**	0	N/A	1281.6271	600
30	1,213	–0.2872	310.3925	310					

Integrated/Coordinated Science 1 (braille)									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	0.0000	150	**31**	–	–0.1813	314.9179	315
1	–	–4.5406	93.8523	150	**32**	–	–0.1077	318.6532	319
2	–	–3.8216	130.3135	150	**33**	–	–0.0336	322.4072	322
3	–	–3.2207	160.7832	161	**34**	–	0.0409	326.1885	326
4	–	–2.9228	175.8937	176	**35**	–	0.1162	330.0060	330
5	–	–2.6860	187.9020	188	**36**	–	0.1924	333.8693	334
6	–	–2.4878	197.9519	198	**37**	–	0.2697	337.7885	338
7	–	–2.3162	206.6543	207	**38**	–	0.3483	341.7750	342
8	–	–2.1640	214.3741	214	**39**	–	0.4285	345.8409	346
9	–	–2.0265	221.3470	221	**40**	–	0.5105	350.0000	350
10	–	–1.9005	227.7345	228	**41**	–	0.5946	354.2679	354
11	–	–1.7838	233.6521	234	**42**	–	0.6745	358.3168	358
12	–	–1.6747	239.1853	239	**43**	–	0.7554	362.4219	362
13	–	–1.5719	244.3994	244	**44**	–	0.8465	367.0405	367
14	–	–1.4744	249.3456	249	**45**	–	0.9318	371.3680	371
15	–	–1.3813	254.0646	254	**46**	–	1.0197	375.8228	376
16	–	–1.2921	258.5896	259	**47**	–	1.1107	380.4386	380
17	–	–1.2061	262.9482	263	**48**	–	1.2057	385.2574	385
18	–	–1.1112	267.7628	268	**49**	–	1.3058	390.3331	390
19	–	–1.0204	272.3675	272	**50**	–	1.4431	397.2934	397
20	–	–0.9333	276.7826	277	**51**	–	1.5944	404.9675	405
21	–	–0.8777	279.6051	280	**52**	–	1.7450	412.6052	413
22	–	–0.8203	282.5118	283	**53**	–	1.9149	421.2204	421
23	–	–0.7612	285.5098	286	**54**	–	2.1112	431.1782	431
24	–	–0.6932	288.9610	289	**55**	–	2.3461	443.0891	443
25	–	–0.6183	292.7574	293	**56**	–	2.6421	458.0968	458
26	–	–0.5497	296.2357	296	**57**	–	3.0497	478.7683	479
27	–	–0.4755	300.0000	300	**58**	–	3.7305	513.2927	513
28	–	–0.4017	303.7422	304	**59**	–	N/A	1338.3502	600
29	–	–0.3282	307.4705	307					
30	–	–0.2548	311.1930	311					

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.34 New Conversions for Integrated/Coordinated Science 2 (paper-and-pencil version and braille version)

Integrated/Coordinated Science 2 (paper–and–pencil)									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	0.0000	150	**31**	115	–0.1363	321.1521	321
1	–	–4.4264	109.1543	150	**32**	113	–0.0654	324.6539	325
2	–	–3.7100	144.5548	150	**33**	99	0.0057	328.1690	328
3	–	–3.2812	165.7443	166	**34**	91	0.0773	331.7051	332
4	–	–2.9700	181.1222	181	**35**	99	0.1494	335.2702	335
5	–	–2.7232	193.3213	193	**36**	79	0.2223	338.8729	339
6	–	–2.5169	203.5145	204	**37**	98	0.2962	342.5221	343
7	–	–2.3385	212.3278	212	**38**	67	0.3712	346.2276	346
8	–	–2.1805	220.1354	220	**39**	77	0.4475	350.0000	350
9	–	–2.0380	227.1786	227	**40**	61	0.5254	353.8511	354
10	12	–1.9076	233.6228	234	**41**	51	0.6052	357.7942	358
11	19	–1.7869	239.5860	240	**42**	58	0.6872	361.8440	362
12	21	–1.6742	245.1557	245	**43**	47	0.7716	366.0179	366
13	37	–1.5681	250.3988	250	**44**	56	0.8504	369.9111	370
14	41	–1.4676	255.3673	255	**45**	59	0.9308	373.8818	374
15	59	–1.3717	260.1028	260	**46**	48	1.0132	377.9521	378
16	73	–1.2799	264.6392	265	**47**	57	1.0981	382.1486	382
17	77	–1.1916	269.0045	269	**48**	37	1.1862	386.5038	387
18	111	–1.1062	273.2221	273	**49**	42	1.2784	391.0586	391
19	100	–1.0132	277.8177	278	**50**	34	1.4052	397.3272	397
20	101	–0.9429	281.2913	281	**51**	17	1.5437	404.1712	404
21	114	–0.8643	285.1751	285	**52**	33	1.6965	411.7195	412
22	103	–0.7874	288.9765	289	**53**	20	1.8671	420.1518	420
23	98	–0.7119	292.7076	293	**54**	23	2.0610	429.7299	430
24	113	–0.6376	296.3788	296	**55**	13	2.2862	440.8579	441
25	146	–0.5643	300.0000	300	**56**	9	2.5310	452.9587	453
26	141	–0.4919	303.5803	304	**57**	4	2.8402	468.2341	468
27	135	–0.4201	307.1281	307	**58**	4	3.2668	489.3168	489
28	163	–0.3488	310.6516	311	**59**	2	3.9809	524.6062	525
29	111	–0.2778	314.1584	314	**60**	0	N/A	1316.1949	600
30	118	–0.2070	317.6561	318					

Integrated/Coordinated Science 2 (braille)									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	0.0000	150	**31**	–	–0.0990	322.7767	323
1	–	–4.4094	96.9990	150	**32**	–	–0.0267	326.5616	327
2	–	–3.6928	134.5382	150	**33**	–	0.0459	330.3658	330
3	–	–3.1005	165.5625	166	**34**	–	0.1190	334.1979	334
4	–	–2.8045	181.0644	181	**35**	–	0.1929	338.0673	338
5	–	–2.5696	193.3662	193	**36**	–	0.2677	341.9835	342
6	–	–2.3733	203.6492	204	**37**	–	0.3435	345.9573	346
7	–	–2.2035	212.5437	213	**38**	–	0.4207	350.0000	350
8	–	–2.0530	220.4265	220	**39**	–	0.4945	353.8627	354
9	–	–1.9172	227.5406	228	**40**	–	0.5684	357.7366	358
10	–	–1.7929	234.0526	234	**41**	–	0.6428	361.6344	362
11	–	–1.6778	240.0814	240	**42**	–	0.7180	365.5704	366
12	–	–1.5868	244.8493	245	**43**	–	0.7942	369.5606	370
13	–	–1.4844	250.2111	250	**44**	–	0.8717	373.6240	374
14	–	–1.3873	255.2946	255	**45**	–	0.9511	377.7828	378
15	–	–1.2948	260.1424	260	**46**	–	1.0329	382.0639	382
16	–	–1.2061	264.7889	265	**47**	–	1.1176	386.5002	387
17	–	–1.1323	268.6512	269	**48**	–	1.2060	391.1329	391
18	–	–1.0489	273.0212	273	**49**	–	1.3138	396.7793	397
19	–	–0.9580	277.7841	278	**50**	–	1.4462	403.7121	404
20	–	–0.8891	281.3897	281	**51**	–	1.5922	411.3596	411
21	–	–0.8205	284.9829	285	**52**	–	1.7553	419.9036	420
22	–	–0.7520	288.5748	289	**53**	–	1.9406	429.6090	430
23	–	–0.6764	292.5334	293	**54**	–	2.1558	440.8842	441
24	–	–0.6081	296.1131	296	**55**	–	2.3889	453.0929	453
25	–	–0.5338	300.0000	300	**56**	–	2.6830	468.4978	468
26	–	–0.4604	303.8462	304	**57**	–	3.0562	488.0469	488
27	–	–0.3876	307.6609	308	**58**	–	3.7676	525.3075	525
28	–	–0.3152	311.4528	311	**59**	–	N/A	1375.5529	600
29	–	–0.2431	315.2306	315					
30	–	–0.1711	319.0024	319					

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Table 8.D.35 New Conversions for Integrated/Coordinated Science 3 and Integrated/Coordinated Science 4

Integrated/Coordinated Science 3									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	0.0000	150	**31**	22	–0.0795	323.0609	323
1	–	–4.3624	126.2815	150	**32**	18	–0.0084	326.3263	326
2	–	–3.6466	159.1703	159	**33**	14	0.0630	329.6054	330
3	–	–3.2184	178.8463	179	**34**	16	0.1348	332.9055	333
4	–	–2.9077	193.1191	193	**35**	15	0.2072	336.2341	336
5	–	–2.6614	204.4367	204	**36**	12	0.2805	339.5991	340
6	–	–2.4556	213.8900	214	**37**	–	0.3547	343.0089	343
7	–	–2.2778	222.0612	222	**38**	17	0.4301	346.4725	346
8	–	–2.1203	229.2981	229	**39**	18	0.5068	350.0000	350
9	–	–1.9782	235.8254	236	**40**	13	0.5853	353.6023	354
10	–	–1.8482	241.7969	242	**41**	12	0.6656	357.2916	357
11	–	–1.7280	247.3223	247	**42**	13	0.7481	361.0821	361
12	24	–1.6156	252.4832	252	**43**	–	0.8414	365.3723	365
13	16	–1.5099	257.3415	257	**44**	–	0.9395	369.8789	370
14	22	–1.4238	261.2983	261	**45**	12	1.0429	374.6284	375
15	39	–1.3404	265.1275	265	**46**	11	1.1522	379.6526	380
16	41	–1.2593	268.8552	269	**47**	–	1.2684	384.9901	385
17	39	–1.1799	272.5030	273	**48**	–	1.3924	390.6883	391
18	50	–1.1018	276.0889	276	**49**	–	1.4971	395.4965	395
19	36	–1.0055	280.5170	281	**50**	–	1.6077	400.5803	401
20	37	–0.9130	284.7648	285	**51**	–	1.7260	406.0126	406
21	45	–0.8241	288.8496	289	**52**	–	1.8539	411.8921	412
22	34	–0.7384	292.7862	293	**53**	–	1.9947	418.3573	418
23	30	–0.6557	296.5882	297	**54**	–	2.1526	425.6117	426
24	30	–0.5814	300.0000	300	**55**	–	2.3581	435.0551	435
25	40	–0.5081	303.3667	303	**56**	–	2.6042	446.3622	446
26	30	–0.4357	306.6967	307	**57**	–	2.9146	460.6239	461
27	24	–0.3638	309.9979	310	**58**	–	3.3426	480.2881	480
28	17	–0.2924	313.2778	313	**59**	–	4.0582	513.1646	513
29	23	–0.2213	316.5436	317	**60**	–	N/A	1245.6088	600
30	17	–0.1504	319.8023	320		–			

Integrated/Coordinated Science 4									
Raw Scr.	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Freq. Distrib.**	**Theta**	**Scale Score**	**Rprtd Score**
0	–	N/A	0.0000	150	**31**	–	–0.2921	311.1039	311
1	–	–4.6457	92.0209	150	**32**	–	–0.2184	314.8128	315
2	–	–3.9278	128.1493	150	**33**	–	–0.1443	318.5382	319
3	–	–3.4974	149.8077	150	**34**	–	–0.0698	322.2883	322
4	–	–3.1845	165.5497	166	**35**	–	0.0054	326.0713	326
5	–	–2.9360	178.0562	178	**36**	–	0.0814	329.8960	330
6	–	–2.7280	188.5218	189	**37**	–	0.1584	333.7717	334
7	–	–2.5480	197.5841	198	**38**	–	0.2366	337.7083	338
8	–	–2.3882	205.6239	206	**39**	–	0.3163	341.7169	342
9	–	–2.2438	212.8873	213	**40**	–	0.3976	345.8096	346
10	–	–2.1116	219.5424	220	**41**	–	0.4809	350.0000	350
11	–	–1.9890	225.7097	226	**42**	–	0.5664	354.3033	354
12	–	–1.8744	231.4782	231	**43**	–	0.6545	358.7373	359
13	–	–1.7664	236.9158	237	**44**	–	0.7456	363.3221	363
14	–	–1.6638	242.0758	242	**45**	–	0.8402	368.0818	368
15	–	–1.5659	247.0005	247	**46**	–	0.9388	373.0449	373
16	–	–1.4721	251.7244	252	**47**	–	1.0422	378.2458	378
17	–	–1.3816	256.2761	256	**48**	–	1.1511	383.7271	384
18	–	–1.2941	260.6793	261	**49**	–	1.2793	390.1792	390
19	–	–1.2092	264.9545	265	**50**	–	1.4180	397.1571	397
20	–	–1.1264	269.1193	269	**51**	–	1.5387	403.2314	403
21	–	–1.0560	272.6627	273	**52**	–	1.6689	409.7824	410
22	–	–0.9856	276.2044	276	**53**	–	1.8298	417.8791	418
23	–	–0.8973	280.6483	281	**54**	–	2.0110	427.0010	427
24	–	–0.8117	284.9553	285	**55**	–	2.2202	437.5290	438
25	–	–0.7360	288.7667	289	**56**	–	2.4701	450.1005	450
26	–	–0.6610	292.5389	293	**57**	–	2.7842	465.9101	466
27	–	–0.5867	296.2805	296	**58**	–	3.2160	487.6388	488
28	–	–0.5127	300.0000	300	**59**	–	3.9354	523.8402	524
29	–	–0.4391	303.7052	304	**60**	–	N/A	1332.2397	600
30	–	–0.3656	307.4040	307					

Note: Performance-level cut scores are highlighted. To protect student privacy, the frequency distribution is not shown if based on 10 or fewer student records.

Chapter 9: Quality Control Procedures

Rigorous quality control procedures were implemented throughout the test development, administration, scoring, and reporting processes. As part of this effort, ETS maintains an Office of Testing Integrity (OTI) that resides in the ETS legal department. The OTI provides quality assurance services for all testing programs administered by ETS. In addition, the Office of Professional Standards Compliance at ETS publishes and maintains the *ETS Standards for Quality and Fairness,* which supports the OTI's goals and activities. The purposes of the *ETS Standards for Quality and Fairness* are to help ETS design, develop, and deliver technically sound, fair, and useful products and services; and to help the public and auditors evaluate those products and services.

In addition, each department at ETS that is involved in the testing cycle designs and implements an independent set of procedures to ensure the quality of its products. In the next sections, these procedures are described.

Quality Control of Item Development

The item development process for the CSTs prior to 2013 administration is described in detail in Chapter 3, starting on page 181; there was no new item development in 2013 because of pre-equating. The next sections highlight elements of the process devoted specifically to the quality control of the items that were previously developed and reused during the 2013 CST administration.

Item Specifications

ETS maintains item specifications for each CST and has developed an item utilization plan to guide the development of the items for each content area. Item writing emphasis is determined in consultation with the CDE. Adherence to the specifications ensures the maintenance of quality and consistency in the item development process.

Item Writers

The items for each CST were written by item writers with a thorough understanding of the California content standards. The item writers were carefully screened and selected by senior ETS content staff and approved by the CDE. Only those with strong content and teaching backgrounds were invited to participate in an extensive training program for item writers.

Internal Contractor Reviews

Once items were written, ETS assessment specialists made sure that each item underwent an intensive internal review process. Every step of this process is designed to produce items that exceed industry standards for quality. It included three rounds of content reviews, two rounds of editorial reviews, an internal fairness review, and a high-level review and approval by a content-area director. A carefully designed and monitored workflow and detailed checklists help to ensure that all items met the specifications for the process.

Content Review

ETS assessment specialists made sure that the test items and related materials complied with ETS's written guidelines for clarity, style, accuracy, and appropriateness and with approved item specifications.

The artwork and graphics for the items were created during the internal content review period so assessment specialists could evaluate the correctness and appropriateness of the

art early in the item development process. ETS selected visuals that were relevant to the item content and that were easily understood so students did not struggle to determine the purpose or meaning of the questions.

Editorial Review

Another step in the ETS internal review process involves a team of specially trained editors who checked questions for clarity, correctness of language, grade-level appropriateness of language, adherence to style guidelines, and conformity to acceptable item-writing practices. The editorial review also included rounds of copyediting and proofreading. ETS strives for error-free items beginning with the initial rounds of review.

Fairness Review

One of the final steps in the ETS internal review process is to have all items and stimuli reviewed for fairness. Only ETS staff members who had participated in the ETS Fairness Training, a rigorous internal training course, conducted this bias and sensitivity review. These staff members had been trained to identify and eliminate test questions that contain content that could be construed as offensive to, or biased against, members of specific ethnic, racial, or gender groups.

Assessment Director Review

As a final quality control step, the content area's assessment director or another senior-level content reviewer reads each item before it is presented to the CDE.

Assessment Review Panel Review

The ARPs are panels that advise the CDE and ETS on areas related to item development for the CSTs. The ARPs were responsible for reviewing all newly developed items for alignment to the California content standards. The ARPs also reviewed the items for accuracy of content, clarity of phrasing, and quality. See page 186 in Chapter 3 for additional information on the function of ARPs within the item-review process.

Statewide Pupil Assessment Review Panel Review

The SPAR panel was responsible for reviewing and approving the achievement tests that were to be used statewide for the testing of students in California public schools in grades two through eleven. The SPAR panel representatives ensured that the test items conformed to the requirements of *EC* Section 60602. The constructed-response writing tasks were also presented to the SPAR panel for review. If the SPAR panel rejected specific items and/or constructed-response writing tasks, the items and/or tasks were replaced with other items and/or tasks. See page 187 in Chapter 3 for additional information on the function of the SPAR panel within the item-review process.

Data Review of Field-tested Items

ETS field-tested newly developed items to obtain statistical information about item performance. This information was used to evaluate items that were candidates for use in operational test forms. The items and item statistics were examined carefully at data review meetings, where content experts discussed items that had poor statistics and did not meet the psychometric criteria for item quality. The CDE defined the criteria for acceptable or unacceptable item statistics. These criteria ensure that the item (1) has an appropriate level of difficulty for the target population; (2) discriminates well between examinees who differ in ability; and (3) conforms well to the statistical model underlying the measurement of the intended constructs. The results of analyses for differential item functioning (DIF) were used to make judgments about the appropriateness of items for various subgroups.

The ETS content experts made recommendations about whether to accept or reject each item for inclusion in the California item bank. The CDE content experts reviewed the recommendations and made the final decision on each item.

The field-test items that appeared in the CSTs administered in 2013 were statistically reviewed in data review meetings the year they were originally administered. There was no data review of field-test items in 2013. See Table 8.4 on page 374 for the list of the original administrations of each test administered in 2013.

Quality Control of the Item Bank

After the data review, items were placed in the item bank along with their statistics and reviewers' evaluations of their quality. ETS then delivered the items to the CDE through the California electronic item bank. The item bank database is maintained by a staff of application systems programmers, led by the Item Bank Manager, at ETS. All processes are logged; all change requests—including item bank updates for item availability status—are tracked; and all output and California item bank deliveries are quality-controlled for accuracy.

Quality of the item bank and secure transfer of the California item bank to the CDE are very important. The ETS internal item bank database resides on a server within the ETS firewall; access to the SQL Server database is strictly controlled by means of system administration. The electronic item banking application includes a login/password system to authorize access to the database or designated portions of the database. In addition, only users authorized to access the specific database are able to use the item bank. Users are authorized by a designated administrator at the CDE and at ETS.

ETS has extensive experience in accurate and secure data transfer of many types, including CDs, secure remote hosting, secure Web access, and secure file transfer protocol (SFTP), which is the current method used to deliver the California electronic item bank to the CDE. In addition, all files posted on the SFTP site by the item bank staff are encrypted with a password.

The measures taken for ensuring the accuracy, confidentiality, and security of electronic files are as follows:

- Electronic forms of test content, documentation, and item banks are backed up electronically, with the backup media kept off site, to prevent loss from system breakdown or a natural disaster.
- The offsite backup files are kept in secure storage, with access limited to authorized personnel only.
- Advanced network security measures are used to prevent unauthorized electronic access to the item bank.

Quality Control of Test Form Development

The ETS Assessment Development group is committed to providing the highest quality product to the students of California and has in place a number of quality control (QC) checks to ensure that outcome. During the item development process, there were multiple senior reviews of items and passages, including one by the assessment director. Test forms certification was a formal quality control process established as a final checkpoint prior to printing. In it, content, editorial, and senior development staff reviewed test forms for accuracy and clueing issues.

ETS also included quality checks throughout preparation of the form planners. A form planner specifications document was developed by the test development team lead with input from ETS's item bank and statistics groups; this document was then reviewed by all team members who built forms at a training session specific to form planners before the form-building process started. After trained content team members signed off on a form planner, a representative from the internal QC group reviewed each file for accuracy against the specifications document. Assessment directors reviewed and signed off on form planners prior to processing.

As processes are refined and enhanced, ETS will implement further QC checks as appropriate.

Quality Control of Test Materials

Collecting Test Materials

Once the tests are administered, school districts return scorable and nonscorable materials within five working days after the last selected testing day of each test administration period. For the writing administration, school districts return the CST writing booklets within two working days after the makeup day for each administration. The freight return kits provided to the districts contain color-coded labels identifying scorable and nonscorable materials and labels with bar-coded information identifying the school and district. The school districts apply the appropriate labels and number the cartons prior to returning the materials to the processing center by means of their assigned carrier. The use of the color-coded labels streamlines the return process.

All scorable materials are delivered to the Pearson scanning and scoring facilities in Iowa City, Iowa. The nonscorable materials, including test booklets, are returned to the Security Processing Department in Pearson's Cedar Rapids, Iowa, facility. ETS and Pearson closely monitor the return of materials. The STAR Technical Assistance Center (TAC) at ETS monitors returns and notifies school districts that do not return their materials in a timely manner. STAR TAC contacts the district STAR coordinators and works with them to facilitate the return of the test materials.

Processing Test Materials

Upon receipt of the test materials, Pearson uses precise inventory and test processing systems, in addition to quality assurance procedures, to maintain an up-to-date accounting of all the testing materials within its facilities. The materials are removed carefully from the shipping cartons and examined for a number of conditions, including physical damage, shipping errors, and omissions. A visual inspection to compare the number of students recorded on the School and Grade Identification (SGID) sheets with the number of answer documents in the stack is also conducted.

Pearson's image scanning process captures security information electronically and compares scorable material quantities reported on the SGIDs to actual documents scanned. School districts are contacted by phone if there are any missing shipments or the quantity of materials returned appears to be less than expected.

Quality Control of Scanning

Before any STAR documents are scanned, Pearson conducts a complete check of the scanning system. ETS and Pearson create test decks for every test and form. Each test deck consists of approximately 25 answer documents marked to cover response ranges, demographic data, blanks, double marks, and other responses. Fictitious students are

created to verify that each marking possibility is processed correctly by the scanning program. The output file generated as a result of this activity is thoroughly checked against each answer document after each stage to verify that the scanner is capturing marks correctly. When the program output is confirmed to match the expected results, a scan program release form is signed and the scan program is placed in the production environment under configuration management.

The intensity levels of each scanner are constantly monitored for quality control purposes. Intensity diagnostics sheets are run before and during each batch to verify that the scanner is working properly. In the event that a scanner fails to properly pick up items on the diagnostic sheets, the scanner is recalibrated to work properly before being allowed to continue processing student documents.

Documents received in poor condition (torn, folded, or water-stained) that could not be fed through the high-speed scanners are either scanned using a flat-bed scanner or keyed into the system manually.

Post-scanning Edits

After scanning, there are three opportunities for demographic data to be edited:

- After scanning, by Pearson online editors
- After Pearson online editing, by district STAR coordinators (demographic edit)
- After paper reporting, by district STAR coordinators

Demographic edits completed by the Pearson editors and by the district STAR coordinators online are included in the data used for the paper reporting and for the technical reports.

Quality Control of Image Editing

Prior to submitting any STAR operational documents through the image editing process, Pearson creates a mock set of documents to test all of the errors listed in the edit specifications. The set of test documents is used to verify that each image of the document is saved so that an editor will be able to review the documents through an interactive interface. The edits are confirmed to show the appropriate error, the correct image to edit the item, and the appropriate problem and resolution text that instructs the editor on the actions that should be taken.

Once the set of mock test documents is created, the image edit system completes the following procedures:

1. Scan the set of test documents.
2. Verify that the images from the documents are saved correctly.
3. Verify that the appropriate problem and resolution text displays for each type of error.
4. Submit the post-edit program to assure that all errors have been corrected.

Pearson checks the post file against expected results to ensure the appropriate corrections are made. The post file will have all keyed corrections and any defaults from the edit specifications.

Quality Control of Answer Document Processing and Scoring

Accountability of Answer Documents

In addition to the quality control checks carried out in scanning and image editing, the following manual quality checks are conducted to verify that the answer documents are correctly attributed to the students, schools, districts, and subgroups:

- Grade counts are compared to the District Master File Sheets.
- Document counts are compared to the School Master File Sheets.
- Document counts are compared to the SGIDs.

Any discrepancies identified in the steps outlined above are followed up by Pearson staff with the school districts for resolution.

Processing of Answer Documents

Prior to processing operational answer documents and executing subsequent data processing programs, ETS conducts an end-to-end test. As part of this test, ETS prepares approximately 700 test cases covering all tests and many scenarios designed to exercise particular business rule logic. ETS marks answer documents for those 700 test cases. They are then scanned, scored, and aggregated. The results at various inspection points are checked by psychometricians and Data Quality Services staff. Additionally, a post-scan test file of approximately 50,000 records across the STAR Program is scored and aggregated to test a broader range of scoring and aggregation scenarios. These procedures assure that students and school districts receive the correct scores when the actual scoring process is carried out. In 2013, end-to-end testing also included the inspection of results in quick-turnaround reporting.

Scoring and Reporting Specifications

ETS develops standardized scoring procedures and specifications so testing materials are processed and scored accurately. These documents include:

- General Reporting Specifications
- Form Planner Specifications
- Aggregation Rules
- “What If” List
- Edit Specifications
- Reporting Cluster Names and Item Numbers
- CST and CMA Matching Criteria
- Matching Criteria for Multiple-choice and Writing Answer Documents

Each of these documents is explained in detail in Chapter 7, starting on page 255. The scoring specifications are reviewed and revised by the CDE, ETS, and Pearson each year. After a version that all parties endorse is finalized, the CDE issues a formal approval of the scoring and reporting specifications.

Matching Information on CST Answer Documents

Answer documents are designed to produce a single complete record for each student. This record includes demographic data and scanned responses for each student; once computed, the scored responses and the total test scores for a student are also merged into the same record. All scores must comply with the ETS scoring specifications.

All STAR answer documents contain uniquely numbered lithocodes that are both scannable and eye-readable. The lithocodes allow all pages of the document to be linked throughout processing, even after the documents have been slit into single sheets for scanning. For those students using more than one answer document, lithocodes link their demographics and responses within a document while matching criteria are used to create a single record for all of the student's documents. The documents are matched within a grade using the matching criteria approved by the CDE.

Matching Multiple-choice and Writing Scores for ELA in Grades Four and Seven

The multiple-choice and writing sections of the ELA tests in grades four and seven are administered in separate sittings. The answer documents from each section are subsequently matched using the matching criteria approved by the CDE, and scores from each section are reported on the same Student Report. However, the writing scores are not included in the calculation of CST ELA scale scores in grades four and seven for the 2013 administration.

Student results that cannot be matched based on the approved criteria are reported separately. In addition, school districts receive an unmatched report with their reporting package listing students in grades four and seven for whom there is either a multiple-choice score but no writing score or a writing score but no multiple-choice score.

Storing Answer Documents

After the answer documents have been scanned, edited, and scored, and have cleared the clean-post process, they are palletized and placed in the secure storage facilities at Pearson. The materials are stored until October 31 of each year, after which ETS requests permission to destroy the materials. After receiving CDE approval, the materials are destroyed in a secure manner.

Quality Control of Psychometric Processes

Score Key Verification Procedures

ETS and Pearson take various necessary measures to ascertain that the scoring keys are applied to the student responses as expected and the student scores are computed accurately. Scoring keys, provided in the form planners, are produced by ETS and verified thoroughly by performing multiple quality control checks. The form planners contain the information about an assembled test form; other information in the form planner includes the test name, administration year, subscore identification, and standards and statistics associated with each item. The quality control checks that are performed before keys are finalized are listed on page 257 in Chapter 7.

Quality Control of Item Analyses and the Equating Process

When the forms were first administered, the psychometric analyses conducted at ETS underwent comprehensive quality checks by a team of psychometricians and data analysts. Detailed checklists were consulted by members of the team for each of the statistical procedures performed on each CST following its original administration. Quality assurance checks also included a comparison of the current year's statistics to statistics from previous years. The results of preliminary classical item analyses that provided a check on scoring keys were also reviewed by a senior psychometrician. The items that were flagged for questionable statistical attributes were sent to test development staff for their review; their comments were reviewed by the psychometricians before items were approved to be included in the equating process.

The results of the equating process are reviewed by a psychometric manager in addition to the aforementioned team of psychometricians and data analysts. If the senior psychometrician and the manager reach a consensus that an equating result does not conform to the norm, special binders are prepared for review by senior psychometric advisors at ETS, along with several pieces of informative analyses to facilitate the process.

When the forms were equated following their original administration, a few additional checks were performed for the calibration, scaling, and scoring table creation processes, as described below:

Calibrations

During the calibration that was conducted for the original administration of each form and that is described in more detail in Chapter 2 starting on page 16, checks were made to ascertain that the correct options for the analyses were selected. Checks were also made on the number of items, number of examinees with valid scores, IRT Rasch item difficulty estimates, standard errors for the Rasch item difficulty estimates, and the match of selected statistics to the results on the same statistics obtained during preliminary item analyses. Psychometricians also performed detailed reviews of plots and statistics to investigate if the model fit the data.

Scaling

During the scaling that was conducted for the original administration of each form, checks were made to ensure the following:

- The correct items were used for linking;
- The scaling evaluation process, including stability analysis and subsequent removal of items from the linking set (if any), was implemented according to specification (see details in the “Evaluation of Scaling” section in Chapter 8 of the original year’s technical report); and
- The resulting scaling constants were correctly applied to transform the new item difficulty estimates onto the item bank scale.

Scoring Tables

Once the equating activities were complete and raw-score-to-scale score conversion tables were generated after the original administration of each content-area test, the psychometricians carried out quality control checks on each scoring table. Scoring tables were checked to verify the following:

- All raw scores are included in the tables;
- Scale scores increase as raw scores increase;
- The minimum reported scale score is 150 and the maximum reported scale score is 600; and
- The cut points for the performance levels are correctly identified.

As a check on the reasonableness of the performance levels, when the tests were originally administered, psychometricians compared results from the current year with results from the past year at the cut points and the percentage of students in each performance level within the equating samples. After all quality control steps were completed and any differences were resolved, a senior psychometrician inspected the scoring tables as the final step in quality control before ETS delivered them to Pearson.

During the current administration, the data derived from prior item analyses are used to pre-equate the 2013 results. Key checks and classical item analyses are also conducted on the current data. For tests with no item replacements, the scoring tables are reused and they are checked against the scoring tables in the re-use year technical report to ensure exact match. For tests with item replacements, the new scoring tables are checked against scoring tables in the re-use year conversion for reasonableness. In addition, prior to reporting in 2013, every regular and special-version multiple-choice test was certified by ETS prior to being included in quick-turnaround reporting. To certify a test, psychometricians gathered a certain number of test cases and verified the accurate application of scoring keys and conversion tables.

Score Verification Process

Pearson utilizes the raw-to-scale scoring tables to assign scale scores for each student. ETS verifies Pearson's scale scores by independently generating the scale scores for students in a small number of school districts and comparing these scores with those generated by Pearson. The selection of districts is based on the availability of data for all schools included in those districts, known as "pilot districts."

Year-to-Year Comparison Analyses

Year-to-year comparison analyses are conducted each year for quality control of the scoring procedure in general and as reasonableness checks for the CST results.

- The first set of year-to-year comparison analyses looks at the tendencies and trends for the schools and school districts for which ETS has received complete or near-complete results by mid-June.
- The second set of year-to-year comparison analyses uses over 90 percent of the entire testing population to look at the tendencies and trends for the state as a whole as well as a few large districts.

The results of the year-to-year comparison analyses are provided to the CDE, and their reasonableness is jointly discussed. Any anomalies in the results are investigated further, and scores are released only after explanations that satisfy both the CDE and ETS are obtained.

Offloads to Test Development

During the original administration of the CST forms that are reused in 2013, the statistics based on classical item analyses and the IRT analyses were obtained at two different times in the testing cycle. The first time, the statistics were obtained on the equating samples to ensure the quality of equating and then on larger sample sizes to ensure the stability of the statistics that were to be used for future test assembly. The resulting statistics for all items were provided to test development staff in specially designed Excel spreadsheets called "statistical offloads." The offloads are thoroughly checked by the psychometric staff before their release for test development review. During the 2013 administration, only statistics based on classical item analyses of the operational items and obtained on larger samples are included in the statistical offloads.

Quality Control of Reporting

For the quality control of various STAR student and summary reports, four general areas are evaluated, including the following:

1. Comparing report formats to input sources from the CDE-approved samples

2. Validating and verifying the report data by querying the appropriate student data
3. Evaluating the production print execution performance by comparing the number of report copies, sequence of report order, and offset characteristics to the CDE's requirements
4. Proofreading reports by the CDE, ETS, and Pearson prior to any school district mailings

All reports are required to include a single, accurate CDS code, a charter school number (if applicable), a school district name, and a school name. All elements conform to the CDE's official CDS code and naming records. From the start of processing through scoring and reporting, the CDS Master File is used to verify and confirm accurate codes and names. The CDS Master File is provided by the CDE to ETS throughout the year as updates are available.

For students who use more than one answer document, the matching process, as described on page 565, provides for the creation of individual student records from which reports are created.

After the reports are validated against the CDE's requirements, a set of reports for pilot districts is provided to the CDE and ETS for review and approval. Pearson sends paper reports on the actual report forms, foldered as they are expected to look in production. The CDE and ETS review and sign off on the report package after a thorough review.

Upon the CDE's approval of the reports generated from the pilot districts, Pearson proceeds with the first production batch test. The first production batch is selected to validate a subset of school districts that contains examples of key reporting characteristics representative of the state as a whole. The first production batch test incorporates CDE-selected school districts and provides the last check prior to generating all reports and mailing them to the districts.

Quick-turnaround Reporting

To reduce the time between testing and acquisition of results, students' scale scores and performance levels for CST multiple-choice tests were made available to districts within approximately two weeks of processing the school district's scorable testing materials. A new Web application, called the Quick-turnaround Reporting module, was added to the STAR Management System; this module permits districts to securely download a file containing these results.

Before a district could download a student data file, ETS statisticians approved a QC file of test results data and ETS IT successfully processed the QC file. Once the data were deemed reliable and Pearson processed a scorable test booklet or answer document for every student who took a CST in that test administration for the school district, the district was notified that these results were available.

Excluding Student Scores from Summary Reports

ETS provides specifications to the CDE that document when to exclude student scores from summary reports. These specifications include the logic for handling answer documents that, for example, indicate the student tested but marked no answers, was absent, was not tested due to parent/guardian request, or did not complete the test due to illness. The methods for handling other anomalies (for example, for a grade eight mathematics test where the specific mathematics test is unknown) are also covered in the specifications.

Reference

Educational Testing Service. (2002). *ETS standards for quality and fairness*. Princeton, NJ: Author.

Chapter 10: Historical Comparisons

Base-year Comparisons

Historical comparisons of the CST results are routinely performed to identify the trends in examinee performance and test characteristics over time. Such comparisons were performed over a period of the three most recent years of administration—2011, 2012, and 2013—and the base year.

The indicators of examinee performance include the mean and standard deviation of scale scores, observed score ranges, and the percentage of examinees classified into proficient and advanced performance levels. Test characteristics are compared by looking at the mean proportion correct, overall reliability and SEM, as well as the mean IRT *b*-value for each CST.

The base year of each CST refers to the year in which the base score scale was established. Operational forms administered in the years following the base year are linked to the base year score scale using procedures described in Chapter 2.

The base years for the CSTs are presented in Table 10.1.

Table 10.1 Base Years for CSTs

Content Area	CST	Base Year
English–Language Arts	2	2003
	3	2003
	4	2003
	5	2003
	6	2003
	7	2003
	8	2003
	9	2003
	10	2003
	11	2003
History–Social Science	8	2003
	World History *	2002
	11	2002
Mathematics	2	2003
	3	2003
	4	2003
	5	2003
	6	2003
	7	2003
	General Mathematics	2002
	Algebra I	2002
	Geometry	2002
	Algebra II	2002
	Summative High School Mathematics	2002
	Integrated Mathematics 1	2003
	Integrated Mathematics 2	2003
	Integrated Mathematics 3	2003

Content Area	CST	Base Year
Science	**5**	2004
	8	2006
	10 Life Science	2006
	Biology	2002
	Chemistry	2002
	Earth Sciences	2002
	Physics	2002

* This test was administered as Grade 10 History–Social Science in 2002.

The base years differ over CSTs. Reasons for these differences and other relevant information are as follows:

- Prior to 2003, the CST scale scores had a range extending below 150 and above 600. To facilitate the comparisons of results obtained in the base year of 2002 to the scores obtained in recent years, the 2002 score scale was redefined so that it ranges from 150 to 600. In cases where the scale did not extend to 600, the perfect scores were adjusted to correspond to a scale score of 600.
- Prior to 2003, the CSTs for ELA were comprised of 90 items including 15 items from the Stanford Achievement Test – 9th Edition (Stanford 9) and the STAR tests were administered in conjunction with the Stanford 9. In 2003, the Stanford 9 items were dropped and new test blueprints were established; therefore, 2003 has become the base year for these tests.
- Prior to 2003, a history–social science test was administered to students in grade nine that covered relevant content standards for grades four through eight. In 2002, several content revisions occurred for this CST and new blueprints were established. Since 2003, this test has been administered to students in grade eight; it covers relevant standards for grades six through eight. Therefore, the base year for this CST is 2003.
- In 2002, content revisions occurred for several mathematics CSTs to improve their measurement accuracy. For the affected tests, 2003 became their base year. These CSTs include the grade-level mathematics CSTs administered at grades two through seven and the end-of-course integrated CSTs administered to students in grades eight through eleven.
- The grade-level science CSTs were introduced in grade five in 2004 and in grades eight and ten in 2006. Thus, 2004 is the base year for the grade five science CST, and 2006 is the base year for the science CSTs in grades eight and ten.
- ETS employs special equating procedures for the CSTs for Integrated/Coordinated Science; therefore, base-year score scales and *b*-values are not provided for those CSTs. Student performance results for 2003 are provided for these tests because 2003 was the first year in which the special equating procedures were used.

Examinee Performance

Table 10.A.1 on page 573 contains the number of examinees assessed and the means and standard deviations of examinees' scale scores in the base year and in 2011, 2012, and 2013 for each CST. As noted in previous chapters, the CST reporting scales range from 150 to 600 for all content areas.

CST scale scores are used to classify student results into one of five performance levels: far below basic, below basic, basic, proficient, and advanced. The percentages of students qualifying for the proficient and advanced levels are presented in Table 10.A.2 on page 574;

please note that this information may differ slightly from information found on the CDE's STAR reporting Web page at http://star.cde.ca.gov due to differing dates on which data were accessed. The goal is for all students to achieve at or above the proficient level by 2014. This goal for all students is consistent with school growth targets for state accountability and the federal requirements under the Elementary and Secondary Education Act.

Table 10.A.3 through Table 10.A.17 show for each CST the distribution of scale scores observed in the base year and in 2011, 2012, and 2013. Frequency counts are provided for each scale score interval of 30. A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range. For all CSTs, a minimum score of 300 is required for a student to reach the basic level of performance, and a minimum score of 350 is required for a student to reach the proficient level of performance.

Test Characteristics

The item and test analysis results of the CSTs over the past several years indicate that the CSTs meet the technical criteria established in professional standards for high-stakes tests. In addition, every year efforts are made to improve the technical quality of each CST. For example, in recent years prior to 2013, efforts have been made to field test more easy items for some CSTs where previous field testing resulted in an overabundance of very difficult items.

Table 10.B.1 and Table 10.B.2 in Appendix 10.B, which starts on page 584, present, respectively, the average proportion-correct values and the mean equated IRT *b*-values for the items in each CST based on the equating samples. The mean proportion correct is affected by both the difficulty of the items and the abilities of the students administered the items. The mean equated IRT *b*-values reflect only average item difficulty. Please note that comparisons of mean *b*-values should be made only within a given test; they should not be compared across grade levels or content areas.

The IRT *b*-values are not presented for the CSTs for Integrated/Coordinated Science; these CSTs are composed of items from four "parent" science CSTs for Biology, Chemistry, Earth Science, and Physics. Special procedures are used to equate these CSTs by using independently scaled IRT *b*-values from the parent CSTs.

The average point-biserial correlations for the 38 CSTs are presented in Table 10.B.3. The reliabilities and standard errors of measurement (SEM) expressed in raw score units appear in Table 10.B.4. Like the average proportion correct, point-biserial correlations and reliabilities are affected by both item characteristics and student characteristics.

Appendix 10.A—Historical Comparisons Tables, Examinee Performance

Table 10.A.1 Number of Examinees Tested, Scale Score Means, and Standard Deviations of CSTs Across Base Year, 2011, 2012, and 2013

Content Area	CST *	Number of Examinees (valid scores)				Scale Score Mean and Standard Deviation							
						Base		2011		2012		2013	
		Base	2011	2012	2013	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
English–Language Arts	2	475,958	458,752	462,557	458,825	332	56	360	67	361	67	357	66
	3	481,246	434,795	440,407	436,198	324	61	345	62	347	64	346	64
	4	475,575	429,809	428,201	426,373	339	50	372	60	375	59	374	61
	5	473,745	434,092	428,868	420,681	332	47	362	58	366	57	365	56
	6	479,861	431,155	433,830	425,310	332	52	358	56	364	57	363	54
	7	477,359	435,408	430,441	432,810	330	52	360	61	367	61	364	62
	8	456,264	440,118	434,601	429,438	324	50	362	63	365	62	361	59
	9	470,879	476,121	461,474	455,314	333	55	358	62	361	62	364	57
	10	416,277	465,026	453,721	445,018	324	52	346	58	348	59	352	57
	11	357,365	444,788	438,268	433,623	321	61	342	65	345	63	345	62
History–Social Science	8	455,348	461,566	458,422	454,521	321	46	353	71	357	70	357	70
	World History	396,419	473,651	467,412	462,509	315	56	342	75	346	76	347	74
	11	340,923	446,459	446,136	443,241	328	60	345	73	347	70	349	70
Mathematics	2	478,715	459,483	463,446	460,077	357	77	382	85	383	87	380	83
	3	484,064	437,217	443,229	439,109	344	74	401	91	399	89	399	93
	4	483,007	433,835	432,630	430,766	344	67	392	78	395	81	395	78
	5	475,808	437,504	432,325	423,903	332	74	393	93	395	92	393	93
	6	481,069	432,693	436,076	427,761	331	62	365	78	367	76	367	76
	7	482,393	399,818	393,171	392,718	325	58	355	68	360	73	358	68
	General Mathematics	448,652	199,316	189,071	188,410	302	45	317	58	318	56	318	56
	Algebra I	422,233	736,345	708,443	681,237	312	58	327	73	330	75	334	75
	Geometry	240,503	407,012	406,408	405,328	317	62	320	68	323	70	321	69
	Algebra II	148,314	277,282	286,125	294,094	318	56	328	72	331	71	325	68
	Summ. H.S. Math	70,589	139,940	149,833	160,690	329	80	359	77	363	78	360	76
	Integrated Math 1	13,897	11,943	13,442	13,504	278	45	294	56	292	51	291	51
	Integrated Math 2	9,563	4,483	5,127	4,956	324	51	323	55	323	57	318	48
	Integrated Math 3	10,029	730	806	745	301	64	320	79	338	72	331	75
Science	5	483,931	435,933	430,759	422,520	318	44	367	70	367	66	367	67
	8	478,667	440,698	435,529	430,581	331	71	386	97	395	99	391	97
	10 Life Science	461,634	458,763	449,842	442,013	327	58	353	68	357	69	360	70
	Biology	298,475	551,808	555,736	552,645	333	48	352	62	355	61	354	60
	Chemistry	144,933	265,079	275,129	285,233	328	44	340	53	342	56	343	53
	Earth Science	80,096	215,259	206,454	198,865	314	43	331	50	335	50	333	48
	Physics	41,760	76,065	80,743	85,323	321	49	354	54	355	53	355	54
	Int/Coord Science 1	61,146	54,656	46,200	39,642	298	31	313	41	314	40	319	41
	Int/Coord Science 2	25,546	4,111	3,759	3,409	298	35	312	44	315	52	319	41
	Int/Coord Science 3	10,317	1,283	968	856	298	31	309	40	311	44	303	40
	Int/Coord Science 4	1,498	157	65	56	297	39	289	37	285	29	282	38

* Numbers indicate grade-level tests.

Table 10.A.2 Percentage of Proficient and Above and Percentage of Advanced Across Base Year, 2011, 2012, and 2013

		% Proficient and Above				% Advanced			
Content Area	**CST ***	**Base**	**2011**	**2012**	**2013**	**Base**	**2011**	**2012**	**2013**
English–Language Arts	**2**	37%	56%	59%	56%	12%	27%	29%	24%
	3	34%	46%	48%	46%	11%	18%	19%	19%
	4	40%	65%	67%	65%	16%	37%	39%	38%
	5	36%	60%	62%	60%	10%	31%	31%	28%
	6	36%	55%	60%	60%	13%	27%	30%	28%
	7	36%	58%	62%	59%	10%	24%	29%	26%
	8	31%	57%	60%	57%	9%	30%	33%	28%
	9	38%	55%	57%	62%	14%	28%	29%	29%
	10	34%	48%	51%	52%	11%	21%	24%	24%
	11	33%	45%	48%	48%	11%	21%	22%	21%
History–Social Science	**8**	27%	51%	52%	52%	6%	27%	29%	29%
	World History	24%	44%	46%	46%	8%	23%	22%	23%
	11	32%	48%	49%	50%	12%	21%	23%	24%
Mathematics	**2**	53%	66%	64%	65%	24%	36%	35%	35%
	3	45%	68%	70%	67%	19%	41%	42%	40%
	4	46%	71%	71%	72%	18%	45%	44%	46%
	5	35%	63%	65%	65%	10%	34%	33%	32%
	6	35%	53%	54%	55%	10%	24%	24%	25%
	7	30%	49%	52%	51%	7%	18%	21%	19%
	General Mathematics	17%	28%	28%	28%	1%	6%	6%	5%
	Algebra I	22%	33%	35%	36%	4%	10%	11%	12%
	Geometry	28%	30%	32%	29%	7%	9%	10%	10%
	Algebra II	27%	33%	34%	32%	6%	12%	12%	10%
	Summative H.S. Math	40%	54%	54%	54%	14%	20%	20%	19%
	Integrated Math 1	7%	15%	13%	12%	1%	2%	2%	2%
	Integrated Math 2	28%	29%	27%	23%	5%	5%	6%	3%
	Integrated Math 3	21%	32%	42%	38%	4%	10%	11%	11%
Science	**5**	24%	58%	59%	57%	3%	25%	25%	24%
	8	38%	64%	66%	67%	17%	42%	45%	42%
	10 Life Science	34%	50%	53%	54%	13%	26%	27%	28%
	Biology	35%	49%	52%	50%	10%	24%	26%	22%
	Chemistry	28%	38%	43%	40%	8%	14%	17%	15%
	Earth Science	21%	35%	38%	37%	4%	12%	12%	11%
	Physics	28%	52%	52%	53%	9%	22%	25%	22%
	Int/Coord Science 1	7%	20%	20%	24%	1%	3%	3%	4%
	Int/Coord Science 2	8%	19%	25%	22%	1%	6%	8%	6%
	Int/Coord Science 3	7%	16%	18%	15%	2%	5%	4%	3%
	Int/Coord Science 4	12%	6%	3%	7%	2%	1%	0%	0%

* Numbers indicate grade-level tests.

Table 10.A.3 Observed Score Distributions of CSTs Across Base Year, 2011, and 2012, 2013 for ELA (Grades Two through Four)

Observed Score Distributions	ELA Grade 2				ELA Grade 3				ELA Grade 4			
	Base	2011	2012	2013	Base	2011	2012	2013	Base	2011	2012	2013
570–600	240	2,588	2,289	2,209	308	1,010	1,020	1,553	66	1,551	1,857	893
540–569	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	139	2,274	2,631	2,547
510–539	887	6,274	5,515	5,266	1,311	3,041	3,019	3,868	377	3,656	4,033	4,525
480–509	1,813	9,623	8,951	8,201	2,685	5,492	5,593	6,368	1,842	11,127	11,870	6,446
450–479	7,314	26,360	24,381	22,378	4,312	7,588	18,471	8,559	6,601	24,892	25,255	28,078
420–449	19,751	31,465	45,008	42,100	21,378	33,198	25,371	35,696	22,955	41,786	52,548	59,613
390–419	49,410	79,364	75,514	59,891	43,618	54,643	58,789	43,502	43,316	75,770	78,008	70,688
360–389	71,250	79,848	77,585	83,146	62,872	69,925	72,292	73,414	84,007	85,180	78,163	78,189
330–359	94,531	68,355	75,954	83,259	84,558	86,401	84,487	88,633	98,630	71,797	73,883	72,723
300–329	83,370	60,788	58,952	61,653	85,966	67,985	70,423	74,333	102,071	57,429	54,926	50,997
270–299	81,964	46,585	42,198	42,505	74,260	55,285	43,566	49,900	79,811	37,377	32,484	37,152
240–269	53,950	36,034	35,935	36,936	59,332	32,005	37,042	30,411	33,745	15,788	11,785	13,566
210–239	10,723	11,042	9,868	10,859	36,770	15,218	17,223	17,722	1,887	1,146	736	911
180–209	681	412	377	404	3,579	2,861	3,014	2,069	86	27	18	27
150–179	74	14	30	18	297	143	97	170	42	9	4	18

A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range.

Table 10.A.4 Observed Score Distributions of CSTs Across Base Year, 2011, 2012, and 2013 for ELA (Grades Five through Seven)

Observed Score Distributions	ELA Grade 5				ELA Grade 6				ELA Grade 7			
	Base	2011	2012	2013	Base	2011	2012	2013	Base	2011	2012	2013
570–600	2	449	544	551	8	249	307	170	5	436	1,781	645
540–569	17	1,552	1,901	1,805	83	932	1,104	707	58	1,307	N/A	1,706
510–539	52	N/A	N/A	N/A	280	2,048	2,267	1,828	124	2,489	2,657	3,144
480–509	486	8,812	9,908	9,168	730	3,291	8,906	3,182	640	8,538	9,508	10,934
450–479	3,236	17,282	17,942	16,742	5,717	18,223	13,925	18,641	3,344	13,043	23,120	15,875
420–449	12,685	36,322	48,006	35,794	17,978	37,201	48,798	29,984	17,331	45,827	41,298	42,201
390–419	38,962	81,315	66,043	69,866	45,713	67,465	68,112	77,865	42,144	67,278	69,633	61,165
360–389	85,226	82,834	93,045	99,642	70,509	78,581	86,019	101,065	78,339	79,534	89,313	86,369
330–359	95,169	80,316	79,357	73,036	99,972	85,751	81,196	75,190	97,939	79,588	73,222	84,050
300–329	107,987	56,691	59,209	60,426	103,656	71,569	63,613	61,929	94,738	64,270	58,210	64,349
270–299	95,141	43,913	34,400	36,157	80,513	43,975	42,567	35,486	72,970	41,081	36,618	35,112
240–269	32,629	20,968	16,365	15,026	44,894	19,882	15,265	17,131	55,422	23,838	19,470	21,457
210–239	2,023	3,488	2,077	2,350	9,375	1,870	1,700	2,071	13,435	7,521	5,082	5,355
180–209	81	135	60	102	370	94	38	51	807	634	510	425
150–179	49	15	11	16	63	24	13	10	63	24	19	23

A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range.

Table 10.A.5 Observed Score Distributions of CSTs Across Base Year, 2011, 2012, and 2013 for ELA (Grades Eight and Nine)

Observed Score Distributions	ELA Grade 8				ELA Grade 9			
	Base	2011	2012	2013	Base	2011	2012	2013
570–600	2	1,143	263	267	12	907	1,520	345
540–569	29	N/A	938	944	N/A	N/A	N/A	N/A
510–539	101	2,062	2,203	2,146	244	4,523	5,712	891
480–509	670	9,061	9,296	8,215	1,303	4,263	4,852	5,374
450–479	3,569	25,192	25,176	21,758	3,851	20,112	21,028	20,049
420–449	12,529	46,329	45,582	40,843	25,959	41,146	40,389	46,736
390–419	29,574	61,023	72,763	57,494	44,345	75,115	73,248	85,884
360–389	63,374	76,627	75,048	80,204	83,004	84,237	84,645	89,171
330–359	101,910	80,529	77,053	89,578	81,584	88,585	88,271	78,159
300–329	90,505	61,838	58,593	65,445	85,135	68,507	63,812	62,335
270–299	85,870	42,078	39,521	38,280	73,465	48,426	42,368	41,250
240–269	50,819	28,239	22,717	19,182	61,789	31,796	29,955	20,217
210–239	15,975	5,682	5,116	4,755	9,313	8,031	5,202	4,611
180–209	1,263	280	305	295	736	413	420	256
150–179	74	35	27	32	139	60	52	36

A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range.

Table 10.A.6 Observed Score Distributions of CSTs Across Base Year, 2011, 2012, and 2013 for ELA (Grades Ten and Eleven)

Observed Score Distributions	ELA Grade 10				ELA Grade 11			
	Base	2011	2012	2013	Base	2011	2012	2013
570–600	4	238	266	255	7	664	446	457
540–569	30	898	1,050	N/A	30	N/A	N/A	N/A
510–539	101	N/A	N/A	1,083	127	1,486	1,058	1,118
480–509	233	2,188	6,296	2,509	956	6,913	2,311	6,065
450–479	2,771	9,445	13,028	10,358	2,949	12,380	16,264	11,921
420–449	12,778	36,884	29,319	40,303	13,930	26,949	28,669	26,591
390–419	31,520	62,488	60,931	65,959	36,133	57,424	61,531	55,695
360–389	67,587	87,993	86,088	77,578	46,449	73,254	76,952	82,356
330–359	75,621	84,644	92,724	94,933	64,409	75,330	75,266	73,882
300–329	78,075	77,466	67,585	72,227	56,885	73,264	70,006	73,468
270–299	73,872	49,163	51,275	41,463	49,299	46,939	44,339	46,199
240–269	63,352	40,781	33,548	29,702	48,982	41,220	36,653	35,946
210–239	9,598	11,854	10,699	8,047	32,029	25,266	21,464	16,819
180–209	637	924	838	566	4,785	3,417	3,085	2,889
150–179	98	60	74	35	395	282	224	217

A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range.

Table 10.A.7 Observed Score Distributions of CSTs Across Base Year, 2011, 2012, and 2013 for History–Social Science (Grade Eight, World History, and Grade Eleven)

Observed Score Distributions	History–Social Science Grade 8				World History				History–Social Science Grade 11			
	Base	2011	2012	2013	Base	2011	2012	2013	Base	2011	2012	2013
570–600	27	2,606	1,928	1,904	272	4,490	5,544	4,699	537	1,909	1,727	1,734
540–569	52	3,021	2,811	2,785	444	N/A	N/A	N/A	788	N/A	N/A	N/A
510–539	215	4,251	4,343	4,147	746	5,063	5,757	5,091	1,138	2,949	2,558	2,479
480–509	525	11,592	12,462	12,142	2,303	6,918	7,715	6,590	3,608	11,136	9,597	9,474
450–479	2,718	23,308	25,593	25,541	3,793	18,478	19,428	27,303	5,248	17,441	15,864	15,973
420–449	6,477	28,094	40,846	41,085	11,633	34,618	36,693	22,631	15,541	35,109	33,909	34,093
390–419	27,490	64,721	54,932	55,083	24,051	50,921	54,973	51,092	27,975	54,441	55,672	56,871
360–389	55,012	66,051	75,738	75,121	35,020	63,949	56,389	67,793	36,715	67,700	71,507	73,745
330–359	92,444	78,737	67,355	67,400	65,735	73,094	79,020	78,929	62,312	69,824	74,148	75,076
300–329	107,943	64,534	70,719	70,748	82,269	67,310	75,876	78,188	58,600	56,048	67,088	58,157
270–299	106,390	54,520	50,908	49,599	87,207	66,599	48,571	49,884	77,412	52,651	46,054	52,302
240–269	46,713	40,478	36,591	35,173	63,293	48,147	40,587	40,828	40,738	37,522	36,031	33,754
210–239	8,698	17,656	12,266	12,715	17,397	26,702	26,266	22,327	9,226	31,855	25,647	23,831
180–209	582	1,831	1,848	1,006	1,997	5,873	8,328	5,543	957	7,305	5,768	5,271
150–179	62	166	82	72	259	1,489	2,265	1,611	128	569	566	481

A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range.

Table 10.A.8 Observed Score Distributions of CSTs Across Base Year, 2011, 2012, and 2013 for Mathematics (Grades Two through Four)

Observed Score Distributions	Mathematics Grade 2				Mathematics Grade 3				Mathematics Grade 4			
	Base	2011	2012	2013	Base	2011	2012	2013	Base	2011	2012	2013
570–600	3,738	6,174	7,386	4,460	1,937	20,680	15,989	18,485	2,426	13,182	18,742	14,580
540–569	8,415	12,909	14,003	10,966	4,873	25,838	22,663	23,242	N/A	N/A	N/A	N/A
510–539	N/A	17,656	18,237	16,691	N/A	N/A	24,490	23,292	5,756	21,387	26,312	22,955
480–509	12,573	20,532	20,645	20,064	17,600	26,266	23,935	21,755	N/A	25,145	27,837	25,875
450–479	32,641	44,114	42,732	43,898	11,424	47,207	44,532	39,620	20,478	25,579	26,779	26,377
420–449	37,323	43,332	41,053	42,997	40,292	58,650	38,680	34,422	27,937	70,100	48,506	70,750
390–419	57,377	75,135	72,269	74,914	44,193	47,145	50,530	59,451	63,690	56,874	75,481	56,419
360–389	69,650	58,206	57,644	59,317	71,908	61,515	66,528	61,382	74,616	78,612	62,766	76,662
330–359	72,800	55,131	65,572	56,270	79,857	46,669	58,836	49,802	83,703	48,970	55,704	47,292
300–329	67,476	46,744	46,384	54,843	69,963	46,901	40,241	44,559	72,451	42,084	40,683	40,152
270–299	55,778	36,659	32,310	31,229	65,285	29,919	29,878	33,764	57,578	30,779	27,266	29,820
240–269	35,573	21,084	24,687	23,796	45,186	16,649	16,827	16,976	49,060	14,871	16,683	14,117
210–239	17,584	13,832	13,808	13,588	22,633	7,309	7,381	8,924	23,003	5,884	5,445	5,388
180–209	6,386	6,397	5,674	5,886	7,633	2,147	2,363	2,950	2,079	332	398	350
150–179	1,401	1,578	1,042	1,158	1,280	322	356	485	230	36	28	29

A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range.

Table 10.A.9 Observed Score Distributions of CSTs Across Base Year, 2011, 2012, and 2013 for Mathematics (Grades Five through Seven)

Observed Score Distributions	Mathematics Grade 5				Mathematics Grade 6				Mathematics Grade 7			
	Base	2011	2012	2013	Base	2011	2012	2013	Base	2011	2012	2013
570–600	1,866	18,455	18,788	19,207	773	3,877	3,914	4,352	1,103	3,729	5,348	3,965
540–569	2,139	13,101	13,595	12,994	1,775	6,648	6,689	7,506	N/A	N/A	N/A	N/A
510–539	3,103	27,236	29,163	26,541	2,578	8,358	8,277	8,990	1,238	3,355	10,824	3,744
480–509	8,844	27,225	14,543	13,261	3,428	19,557	19,185	10,361	3,926	9,769	6,701	10,104
450–479	18,019	26,388	41,249	38,746	14,502	21,013	20,519	31,936	9,495	20,107	24,202	20,907
420–449	30,072	49,173	50,254	48,437	19,027	43,008	44,030	32,861	13,843	33,047	36,569	34,485
390–419	34,532	45,318	45,169	44,951	38,914	43,305	45,147	54,045	32,688	47,508	38,094	48,139
360–389	49,002	60,620	49,964	51,311	55,083	63,374	67,941	63,866	62,871	60,095	65,967	60,074
330–359	67,533	44,497	52,004	54,147	76,422	68,637	72,885	69,578	76,441	69,130	63,010	67,998
300–329	78,553	54,068	50,688	45,546	101,270	60,202	60,633	59,752	101,910	63,788	57,084	61,245
270–299	81,066	37,296	35,110	35,526	94,165	49,336	47,558	47,471	102,494	52,578	48,224	49,282
240–269	64,433	21,966	23,565	23,208	57,901	34,601	30,564	29,694	63,364	29,159	28,966	26,211
210–239	29,106	10,153	6,581	8,442	13,926	9,557	7,838	6,688	11,551	7,065	7,583	6,131
180–209	5,912	1,824	1,499	1,455	1,207	1,174	848	635	1,355	450	537	394
150–179	1,628	184	153	131	98	46	48	26	114	38	62	39

A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range.

Table 10.A.10 Observed Score Distributions of CSTs Across Base Year, 2011, 2012, and 2013 for General Mathematics, Algebra I, and Geometry

Observed Score Distributions	General Mathematics				Algebra I				Geometry			
	Base	2011	2012	2013	Base	2011	2012	2013	Base	2011	2012	2013
570–600	30	146	115	124	730	6,302	7,266	8,740	502	831	1,153	1,018
540–569	N/A	N/A	N/A	N/A	476	3,574	3,890	3,943	N/A	1,640	2,173	2,165
510–539	34	197	207	190	1,362	8,749	4,688	9,406	642	2,457	3,076	2,956
480–509	190	1,046	882	810	2,035	11,352	17,481	11,121	2,167	3,086	3,562	3,634
450–479	1,040	1,879	1,657	2,562	6,303	20,787	21,858	20,463	3,431	12,026	13,350	13,553
420–449	2,681	6,811	6,369	4,491	10,471	33,827	34,964	34,146	7,148	15,683	16,242	15,939
390–419	11,868	10,717	10,276	11,659	21,071	51,895	52,520	52,340	17,911	25,595	26,101	23,801
360–389	33,352	26,823	25,391	24,172	33,295	74,868	74,745	76,923	24,998	45,772	46,214	40,943
330–359	66,928	28,334	32,002	30,984	57,900	91,218	88,274	89,709	35,697	51,529	51,693	48,140
300–329	104,553	40,951	34,916	35,347	93,657	111,766	104,978	105,133	44,558	74,242	74,709	66,249
270–299	113,647	36,849	35,575	37,894	84,289	143,713	133,254	126,555	45,494	71,721	70,596	89,746
240–269	86,916	30,857	28,891	29,565	77,155	135,897	127,590	111,491	38,232	64,403	61,112	64,800
210–239	25,178	13,060	11,295	9,720	30,552	36,131	32,040	27,086	17,584	34,572	32,710	29,632
180–209	2,009	1,568	1,414	812	2,631	5,547	4,346	3,717	1,972	3,252	3,491	2,601
150–179	226	78	81	80	306	719	549	464	167	203	226	151

A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range.

Table 10.A.11 Observed Score Distributions of CSTs Across Base Year, 2011, 2012, and 2013 for Algebra II and Summative High School Mathematics

Observed Score Distributions	Algebra II				Summative High School Mathematics			
	Base	2011	2012	2013	Base	2011	2012	2013
570–600	1	1,890	1,960	1,490	200	1,348	1,395	1,534
540–569	18	1,497	1,511	1,290	562	2,616	3,094	2,972
510–539	134	1,809	1,918	1,533	N/A	N/A	N/A	N/A
480–509	806	4,613	4,574	3,791	2,047	3,684	4,184	4,142
450–479	2,328	8,609	8,877	7,607	1,440	9,468	10,392	10,640
420–449	3,770	10,722	11,262	9,532	5,383	10,404	11,485	11,944
390–419	9,383	22,705	24,042	21,212	6,229	16,060	21,713	24,052
360–389	16,379	28,328	30,302	34,937	8,138	23,886	19,303	21,672
330–359	21,288	39,707	50,073	45,023	11,928	23,101	24,506	26,783
300–329	31,089	51,036	45,896	51,313	10,321	17,468	21,875	20,306
270–299	35,689	43,676	52,736	51,195	7,470	14,641	15,531	17,389
240–269	19,598	40,072	32,222	41,850	5,780	9,972	9,888	12,521
210–239	7,036	18,940	17,477	19,100	6,187	5,715	4,783	5,025
180–209	751	3,420	3,034	3,839	3,778	1,386	1,464	1,501
150–179	44	258	241	382	1,126	191	220	209

A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range.

Table 10.A.12 Observed Score Distributions of CSTs Across Base Year, 2011, 2012, and 2013 for Integrated Mathematics 1, 2, and 3

Observed Score Distributions	Integrated Mathematics 1				Integrated Mathematics 2				Integrated Mathematics 3			
	Base	2011	2012	2013	Base	2011	2012	2013	Base	2011	2012	2013
570–600	11	26	7	10	4	7	17	3	10	4	2	3
540–569	7	13	6	14	14	2	7	2	28	2	5	6
510–539	15	22	12	10	16	18	21	2	27	7	7	5
480–509	14	42	23	26	45	23	24	3	94	13	13	8
450–479	40	61	65	53	103	71	59	31	137	23	22	37
420–449	67	168	149	131	265	119	138	116	191	32	52	32
390–419	170	385	294	307	615	243	340	229	494	63	80	79
360–389	418	642	799	644	1,087	464	541	543	749	65	136	70
330–359	910	1,335	1,466	1,348	1,638	847	983	1,050	1,176	89	99	120
300–329	1,880	2,043	2,436	2,345	2,566	1,119	982	1,083	1,474	108	128	103
270–299	3,258	2,969	3,471	3,457	1,973	881	1,149	1,103	1,959	97	99	95
240–269	4,729	2,708	3,075	3,194	1,075	548	674	599	2,525	125	113	112
210–239	2,045	1,215	1,301	1,718	154	128	170	180	936	80	43	60
180–209	306	294	314	210	5	13	21	11	209	17	6	15
150–179	27	20	24	37	3	0	1	1	20	5	1	0

Table 10.A.13 Observed Score Distributions of CSTs Across Base Year, 2011, 2012, and 2013 for Science (Grades Five and Eight and Life Science [Grade Ten])

Observed Score Distributions	Grade 5				Grade 8				Grade 10 Life Science			
	Base	2011	2012	2013	Base	2011	2012	2013	Base	2011	2012	2013
570–600	3	3,049	1,774	2,278	1,428	16,914	22,032	21,402	238	1,249	1,454	2,570
540–569	30	7,024	4,991	5,668	2,429	10,454	12,514	11,638	648	3,287	3,716	5,408
510–539	105	N/A	N/A	N/A	4,190	24,832	29,333	13,034	1,121	5,458	5,990	N/A
480–509	590	10,307	8,458	20,302	5,863	28,406	15,868	27,968	4,068	7,609	8,010	17,027
450–479	1,414	27,043	25,460	13,240	13,160	29,735	49,726	45,062	6,808	20,664	21,099	22,393
420–449	7,041	46,483	49,343	44,031	26,047	45,829	49,896	45,778	15,540	39,355	38,420	38,447
390–419	21,141	62,327	67,092	60,538	36,389	58,615	45,423	44,016	38,323	57,538	55,525	53,587
360–389	49,769	70,666	73,394	69,402	61,392	53,185	52,213	53,651	59,085	69,077	79,972	76,444
330–359	93,778	70,443	69,546	80,486	76,067	45,460	42,860	56,194	74,451	81,836	69,836	77,072
300–329	141,637	62,001	65,237	60,445	85,106	45,496	40,763	34,839	91,629	64,723	73,234	62,371
270–299	106,602	42,853	37,686	40,821	67,991	27,297	29,021	31,785	85,472	51,693	41,751	49,088
240–269	55,651	26,446	20,195	19,342	57,597	25,344	17,485	21,855	71,350	38,070	35,293	28,673
210–239	5,829	6,577	6,750	5,379	32,609	15,006	16,577	12,402	11,828	16,076	13,827	8,127
180–209	298	675	790	551	7,222	10,163	6,957	7,977	942	1,927	1,565	651
150–179	43	39	43	37	1,177	3,962	4,861	2,980	131	201	150	155

A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range.

Table 10.A.14 Observed Score Distributions of CSTs Across Base Year, 2011, 2012, and 2013 for Biology and Chemistry

Observed Score Distributions	Biology				Chemistry			
	Base	2011	2012	2013	Base	2011	2012	2013
570–600	116	2,397	2,231	2,189	58	715	733	855
540–569	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
510–539	296	5,161	5,087	4,776	194	1,581	1,757	1,902
480–509	605	7,416	7,650	6,782	343	2,464	2,855	2,822
450–479	4,176	19,932	21,914	18,014	1,124	3,005	3,661	3,500
420–449	8,273	38,571	42,823	35,023	2,962	12,177	15,831	14,044
390–419	23,001	59,472	65,650	70,677	8,384	22,156	28,696	25,145
360–389	46,191	108,487	114,045	106,908	16,327	42,194	48,611	47,656
330–359	63,010	96,508	95,938	113,770	32,963	62,188	54,505	68,955
300–329	75,800	90,505	94,863	91,843	43,117	56,289	51,986	60,895
270–299	56,802	78,247	62,302	65,544	31,085	42,516	44,073	41,885
240–269	19,192	38,381	39,363	33,119	7,878	17,971	19,651	16,035
210–239	931	6,496	3,618	3,913	475	1,767	2,668	1,487
180–209	74	204	229	62	18	51	92	47
150–179	8	31	23	25	5	5	10	5

A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range.

Table 10.A.15 Observed Score Distributions of CSTs Across Base Year, 2011, 2012, and 2013 for Earth Science and Physics

Observed Score Distributions	Earth Science				Physics			
	Base	2011	2012	2013	Base	2011	2012	2013
570–600	0	70	75	52	14	157	145	180
540–569	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
510–539	13	285	333	211	56	403	334	474
480–509	44	684	N/A	490	87	691	552	829
450–479	82	1,249	2,300	843	378	2,084	2,066	2,573
420–449	723	7,338	8,736	5,723	1,064	4,945	5,138	5,475
390–419	3,236	16,766	19,415	18,465	2,796	10,620	11,640	12,035
360–389	9,151	32,361	35,450	31,164	4,605	14,163	17,793	15,981
330–359	14,570	46,260	40,587	44,921	7,444	18,610	16,807	21,144
300–329	17,607	48,056	45,450	46,065	9,342	12,051	13,018	13,358
270–299	21,654	38,051	33,120	34,093	9,552	8,940	9,709	9,721
240–269	12,070	20,321	18,616	14,940	6,003	3,146	3,287	3,299
210–239	909	3,681	2,283	1,860	400	246	244	244
180–209	32	119	74	28	18	6	7	7
150–179	5	18	15	10	1	3	3	3

A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range.

Table 10.A.16 Observed Score Distributions of CSTs Across 2011, 2012, and 2013 for Integrated/Coordinated Science 1 and 2

Observed Score Distributions	Integrated/Coordinated Science 1				Integrated/Coordinated Science 2			
	Base	2011	2012	2013	Base	2011	2012	2013
570–600	0	8	3	0	0	0	4	0
540–569	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
510–539	0	13	12	7	0	2	8	2
480–509	0	N/A	N/A	N/A	0	8	12	4
450–479	9	84	61	62	4	12	42	13
420–449	31	324	305	287	38	60	70	56
390–419	332	1,323	1,079	1,233	270	173	179	126
360–389	1,727	5,082	4,316	4,598	997	315	379	362
330–359	7,452	12,092	10,612	9,835	3,294	640	609	623
300–329	18,481	15,267	13,326	11,052	6,926	1,152	819	1,141
270–299	21,017	12,051	10,133	7,901	8,906	1,180	893	740
240–269	11,376	6,903	5,732	3,835	4,557	514	606	327
210–239	675	1,442	579	807	543	53	129	15
180–209	42	63	37	22	9	1	9	0
150–179	4	4	5	3	2	1	0	0

A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range.

Table 10.A.17 Observed Score Distributions of CSTs Across 2011, 2012, and 2013 for Integrated/Coordinated Science 3 and 4

Observed Score Distributions	Integrated/Coordinated Science 3				Integrated/Coordinated Science 4			
	Base	2011	2012	2013	Base	2011	2012	2013
570–600	0	0	1	0	0	0	0	0
540–569	N/A	N/A	N/A	N/A	0	N/A	N/A	N/A
510–539	0	0	0	0	N/A	0	0	0
480–509	4	1	3	1	0	N/A	0	0
450–479	10	1	6	1	2	0	0	0
420–449	23	11	10	7	5	1	0	0
390–419	133	53	19	20	28	0	0	0
360–389	298	76	84	53	66	4	0	0
330–359	879	208	172	110	204	19	5	9
300–329	2,959	349	253	205	340	29	14	11
270–299	4,683	383	246	301	484	49	21	11
240–269	1,233	193	160	150	320	49	22	19
210–239	90	8	13	8	43	6	3	6
180–209	3	0	0	0	5	0	0	0
150–179	2	0	1	0	1	0	0	0

A frequency count of "N/A" indicates that there are no obtainable scale scores within that scale-score range.

Appendix 10.B—Historical Comparisons Tables, Test Characteristics

Table 10.B.1 Mean Proportion Correct for Operational Test Items Across Base Year, 2011, 2012, and 2013

Content Area	CST *	Mean *p*-value			
		Base	2011	2012	2013
English–Language Arts	2	0.59	0.69	0.68	0.68
	3	0.61	0.68	0.68	0.69
	4	0.56	0.67	0.67	0.68
	5	0.53	0.69	0.69	0.71
	6	0.56	0.65	0.65	0.68
	7	0.56	0.67	0.68	0.68
	8	0.55	0.66	0.66	0.66
	9	0.55	0.64	0.65	0.66
	10	0.54	0.65	0.66	0.68
	11	0.54	0.64	0.65	0.65
History–Social Science	8	0.48	0.63	0.64	0.64
	World History	0.47	0.62	0.64	0.63
	11	0.51	0.62	0.62	0.63
Mathematics	2	0.74	0.77	0.76	0.76
	3	0.68	0.80	0.79	0.78
	4	0.68	0.79	0.80	0.80
	5	0.56	0.70	0.71	0.71
	6	0.56	0.66	0.66	0.67
	7	0.52	0.61	0.63	0.62
	General Mathematics	0.45	0.52	0.52	0.50
	Algebra I	0.45	0.50	0.51	0.51
	Geometry	0.55	0.55	0.56	0.55
	Algebra II	0.51	0.55	0.56	0.54
	Summ. High School Mathematics	0.66	0.73	0.73	0.73
	Integrated Mathematics 1	0.34	0.43	0.42	0.41
	Integrated Mathematics 2	0.43	0.46	0.45	0.45
	Integrated Mathematics 3	0.45	0.47	0.52	0.49
Science	5	0.47	0.70	0.71	0.70
	8	0.50	0.69	0.71	0.71
	10 Life Science	0.51	0.64	0.65	0.66
	Biology	0.53	0.63	0.64	0.62
	Chemistry	0.53	0.62	0.63	0.63
	Earth Science	0.49	0.58	0.60	0.57
	Physics	0.51	0.63	0.63	0.64
	Integrated/Coordinated Science 1	0.41	0.51	0.52	0.54
	Integrated/Coordinated Science 2	0.43	0.49	0.52	0.50
	Integrated/Coordinated Science 3	0.36	0.45	0.47	0.43
	Integrated/Coordinated Science 4	0.41	0.41	0.37	0.40

* Numbers indicate grade-level tests.

Table 10.B.2 Mean IRT *b*-values for Operational Test Items Across Base Year, 2011, 2012, and 2013

Content Area	CST *	Mean IRT *b*-value			
		Base	2011	2012	2013
English–Language Arts	2	–0.10	–0.17	–0.06	–0.15
	3	–0.35	–0.40	–0.36	–0.44
	4	0.09	0.08	0.15	0.08
	5	0.07	–0.28	–0.20	–0.29
	6	–0.04	–0.05	0.04	–0.09
	7	0.17	0.09	0.15	0.09
	8	–0.11	–0.08	–0.03	–0.09
	9	–0.02	–0.04	–0.03	–0.07
	10	–0.05	–0.27	–0.26	–0.29
	11	–0.09	–0.28	–0.28	–0.24
History–Social Science	8	0.18	–0.12	–0.09	–0.09
	World History	0.16	–0.21	–0.26	–0.18
	11	–0.01	–0.29	–0.27	–0.28
Mathematics	2	–1.00	–0.91	–0.88	–0.88
	3	–0.76	–0.76	–0.74	–0.73
	4	–0.70	–0.67	–0.70	–0.67
	5	–0.24	–0.20	–0.20	–0.23
	6	–0.26	–0.28	–0.27	–0.30
	7	–0.03	–0.05	–0.05	–0.05
	General Mathematics	0.18	0.11	0.13	0.19
	Algebra I	–0.04	–0.07	–0.08	–0.06
	Geometry	–0.81	–0.77	–0.77	–0.78
	Algebra II	–0.35	–0.43	–0.42	–0.42
	Summ. H. S. Mathematics	–0.92	–0.84	–0.79	–0.82
	Integrated Mathematics 1	0.28	0.07	0.07	0.11
	Integrated Mathematics 2	–0.06	–0.22	–0.17	–0.24
	Integrated Mathematics 3	–0.24	–0.11	–0.11	–0.07
Science	5	–0.19	–0.63	–0.62	–0.61
	8	0.10	–0.34	–0.39	–0.36
	10 Life Science	–0.04	–0.29	–0.26	–0.27
	Biology	–0.18	–0.40	–0.40	–0.31
	Chemistry	–0.17	–0.38	–0.41	–0.38
	Earth Science	0.06	–0.05	–0.10	0.01
	Physics	–0.21	–0.18	–0.16	–0.18
	Integrated/Coordinated Science 1	N/A	N/A	N/A	N/A
	Integrated/Coordinated Science 2	N/A	N/A	N/A	N/A
	Integrated/Coordinated Science 3	N/A	N/A	N/A	N/A
	Integrated/Coordinated Science 4	N/A	N/A	N/A	N/A

* Numbers indicate grade-level tests.

Table 10.B.3 Mean Point-Biserial Correlation for Operational Test Items Across Base Year, 2011, 2012, and 2013

Content Area	CST *	Mean Point-Biserial Correlation			
		Base	2011	2012	2013
English–Language Arts	2	0.43	0.48	0.48	0.47
	3	0.44	0.43	0.44	0.43
	4	0.41	0.45	0.44	0.45
	5	0.38	0.43	0.42	0.42
	6	0.40	0.42	0.42	0.41
	7	0.38	0.41	0.41	0.41
	8	0.37	0.43	0.43	0.40
	9	0.40	0.42	0.42	0.41
	10	0.41	0.44	0.43	0.42
	11	0.41	0.43	0.42	0.42
History–Social Science	8	0.32	0.43	0.43	0.43
	World History	0.37	0.44	0.44	0.43
	11	0.39	0.45	0.43	0.43
Mathematics	2	0.42	0.45	0.45	0.45
	3	0.43	0.45	0.44	0.45
	4	0.47	0.46	0.47	0.47
	5	0.41	0.46	0.46	0.46
	6	0.41	0.46	0.45	0.45
	7	0.39	0.42	0.44	0.42
	General Mathematics	0.32	0.39	0.39	0.38
	Algebra I	0.34	0.41	0.42	0.42
	Geometry	0.39	0.43	0.43	0.43
	Algebra II	0.35	0.41	0.41	0.40
	Summative H.S. Mathematics	0.46	0.43	0.43	0.43
	Integrated Mathematics 1	0.26	0.32	0.30	0.30
	Integrated Mathematics 2	0.32	0.34	0.35	0.31
	Integrated Mathematics 3	0.35	0.41	0.38	0.39
Science	5	0.33	0.43	0.42	0.42
	8	0.35	0.43	0.44	0.43
	10 Life Science	0.41	0.45	0.45	0.45
	Biology	0.39	0.45	0.45	0.44
	Chemistry	0.36	0.40	0.42	0.40
	Earth Science	0.38	0.41	0.41	0.40
	Physics	0.41	0.42	0.42	0.42
	Integrated/Coordinated Science 1	0.28	0.36	0.36	0.36
	Integrated/Coordinated Science 2	0.31	0.37	0.41	0.36
	Integrated/Coordinated Science 3	0.27	0.36	0.37	0.35
	Integrated/Coordinated Science 4	0.32	0.32	0.26	0.32

* Numbers indicate grade-level tests.

Table 10.B.4 Score Reliabilities (Cronbach's Alpha) and SEM of CSTs Across Base Year, 2011, 2012, and 2013

Content Area	CST *	Reliability				SEM			
		Base	2011	2012	2013	Base	2011	2012	2013
English–Language Arts	2	0.93	0.95	0.95	0.94	3.5	3.2	3.3	3.3
	3	0.93	0.93	0.93	0.93	3.5	3.3	3.3	3.3
	4	0.93	0.94	0.94	0.95	3.9	3.6	3.6	3.5
	5	0.92	0.94	0.94	0.93	3.9	3.5	3.5	3.5
	6	0.93	0.93	0.93	0.93	3.7	3.6	3.6	3.6
	7	0.92	0.93	0.93	0.93	3.9	3.6	3.5	3.5
	8	0.91	0.94	0.94	0.93	4.0	3.6	3.6	3.6
	9	0.93	0.94	0.94	0.93	3.8	3.7	3.7	3.6
	10	0.93	0.94	0.94	0.94	4.0	3.6	3.6	3.6
	11	0.93	0.94	0.94	0.93	3.9	3.7	3.7	3.7
History–Social Science	8	0.88	0.94	0.94	0.94	4.0	3.7	3.7	3.7
	World History	0.89	0.93	0.93	0.93	3.6	3.3	3.3	3.3
	11	0.90	0.93	0.92	0.92	3.5	3.3	3.3	3.3
Mathematics	2	0.92	0.94	0.94	0.93	3.2	2.9	3.0	3.0
	3	0.93	0.94	0.94	0.94	3.3	2.8	2.8	2.8
	4	0.94	0.94	0.94	0.94	3.3	2.8	2.8	2.8
	5	0.92	0.94	0.94	0.94	3.5	3.2	3.2	3.1
	6	0.92	0.94	0.94	0.94	3.6	3.3	3.3	3.3
	7	0.91	0.93	0.93	0.93	3.7	3.5	3.4	3.5
	General Mathematics	0.87	0.91	0.91	0.91	3.7	3.6	3.6	3.6
	Algebra I	0.88	0.92	0.93	0.93	3.7	3.6	3.6	3.6
	Geometry	0.91	0.93	0.93	0.93	3.6	3.5	3.5	3.5
	Algebra II	0.89	0.92	0.92	0.92	3.7	3.5	3.5	3.5
	Summ. H. S. Mathematics	0.94	0.93	0.93	0.93	3.3	3.2	3.2	3.2
	Integrated Mathematics 1	0.80	0.87	0.85	0.85	3.6	3.6	3.7	3.6
	Integrated Mathematics 2	0.87	0.88	0.89	0.86	3.6	3.7	3.7	3.7
	Integrated Mathematics 3	0.89	0.92	0.91	0.92	3.7	3.6	3.6	3.6
Science	5	0.86	0.92	0.92	0.92	3.6	3.2	3.2	3.2
	8	0.88	0.92	0.93	0.92	3.5	3.2	3.1	3.1
	10 Life Science	0.92	0.93	0.93	0.93	3.4	3.2	3.2	3.2
	Biology	0.91	0.93	0.93	0.93	3.5	3.3	3.3	3.3
	Chemistry	0.89	0.91	0.92	0.91	3.5	3.4	3.3	3.4
	Earth Science	0.90	0.92	0.92	0.91	3.6	3.5	3.4	3.5
	Physics	0.92	0.92	0.92	0.92	3.5	3.3	3.3	3.3
	Int/Coord Science 1	0.81	0.89	0.88	0.89	3.6	3.5	3.5	3.5
	Int/Coord Science 2	0.85	0.90	0.91	0.88	3.5	3.5	3.5	3.5
	Int/Coord Science 3	0.80	0.89	0.90	0.88	3.5	3.5	3.5	3.5
	Int/Coord Science 4	0.85	0.86	0.78	0.86	3.6	3.5	3.6	3.5

* Numbers indicate grade-level tests.