California Department of Education
Standards and Assessment Division

California Standards Tests (CSTs)
Technical Report
Spring 2007 Administration

February 2008

Educational Testing Service (ETS)

Contract no. 5417

Table of Contents

Chapter 1: Introduction 1
Background 1
Education Code 60602 Legislative Intent 1
California Standardized Tests (CSTs) 2
Significant Development in 2007 3
Algebra I Testing in 2007 3
World History Testing in 2007 3
Overview of the Technical Report 3
Appendix 1.A—2007 CST Item and Time Chart 5
Chapter 2: CST Development Procedures 6
Test Assembly Procedures 6
Test Specifications 6
Statistical Specifications 6
Content Specifications 7
Item Development 8
Item Review Process 9
Internal Reviews 9
Assessment Review Panels 10
SPAR Panel 11
Technical Characteristics of the Assembled Tests 12
Item Development for 2007 13
Reference 14
Appendix 2.A—Reporting Clusters 15
English–Language Arts 15
History–Social Science 17
Mathematics 18
Science 21
Appendix 2.B—Technical Characteristics Tables and Plots 25
Appendix 2.C—Cluster Targets 33
Chapter 3: CST Equating Procedures 66
Test Construction and Review 66
Post-Administration Operational Equating 66
Calibration 66
Scaling 67
Equating the Braille Versions of the CSTs 69
Equating Samples 70
Scaling the CSTs for Integrated Science 71
References 74
Appendix 3.A—New Form Conversion Tables 75
Chapter 4: Validity 96
Validity Evidence Based on Test Content 96
CST Assessment Review Panel 96
CST Item Writers 98
CST Development Procedures 98
Validity Evidence Based on Relations to Other Variables 102
CST for ELA versus CAT/6 Survey Reading/Language/Spelling 103
CST for Math versus CAT/6 Survey Math 103
CST for Science versus CAT/6 Survey Science 104
References 105
Appendix 4.A—Test Correlations Tables 106
Chapter 5: Score Reports 108
Descriptions of Scores 108
Raw Score 108
Scale Score 108
Proficiency Levels 108
Score Reporting 108
Score Report Applications 109
Score Report Contents 109
Score Distributions and Summary Statistics 110
Reference 113
Appendix 5.A—Types of Score Reports Tables 114
Appendix 5.B—Scale Score Distribution Tables 118
Chapter 6: Test Fairness 122

Demographic Distributions **122**
Test Variations, Accommodations and Modifications **123**
Category 1: Test Variations 124
Category 2: Accommodations 124
Category 3: Modifications 124
Accommodation Summaries **124**
DIF Analyses **125**
Test Security and Confidentiality **126**
ETS's Office of Testing Integrity (OTI) 126
Test Development 127
Item Review 127
Item Bank 127
Transfer of Forms and Items to CDE 128
Test Administration 128
Test Delivery 128
Processing and Scoring 129
Transfer of Scores via Secure Data Exchange 129
Statistical Analysis 130
Reporting and Posting Results 130
Student Confidentiality 130
Test Results 130
References **132**
Appendix 6.A—Demographic Summary Tables **133**
Appendix 6.B—2007 Test Variations, Accommodations, and Modifications **171**
Appendix 6.C—Accommodation Summary Tables **174**
Appendix 6.D — DIF Tables **365**
Chapter 7: Item Quality **394**
Item Analyses **396**
IRT Analyses **398**
Summaries of IRT b-values 398
IRT Model-Data Fit Analyses 398
Summary of Item-Level Analyses **399**
References **401**
Appendix 7.A—Item-by-Item p-value and Point-Biserial Tables **402**
Appendix 7.B—IRT Tables **416**
Chapter 8: Reliability **438**
Reliability **438**
Inter-correlations, Reliabilities, and SEMs for Reporting Clusters **440**
Subgroup Reliabilities and SEMs[1] **440**
Conditional Standard Errors of Measurement **441**
Decision Classification Analyses **442**
References **444**
Appendix 8.A—Reliabilities and SEM Tables **445**
Appendix 8.B—Reliability of Classification Tables **510**
Chapter 9: Constructed Response Items **525**
Grade 4 and 7 Writing Test Composition **525**
Scoring Rubric **525**
Development of Writing Tasks **526**
Rater Characteristics **526**
Scoring Supervisors and Directors **527**
Accuracy and Bias Monitoring **527**
Distributions and Means of Writing Scores—Overall and by Subgroup **528**
Composite Reliability for Grades 4 and 7 ..... **528**
Essay and Rater Agreement Summary **529**
References **531**
Appendix 9.A—Writing Scoring Rubrics **532**
Grade Four Scoring Rubric 532
Grade Seven Scoring Rubric 534
Appendix 9.B— Essay Results Tables **537**
Chapter 10: Historical Comparisons **542**
Examinee Performance **542**
Test Characteristics **542**
References **544**
Appendix 10.A—Historical Comparisons Tables **545**
Appendix 10.B—Historical Comparisons Tables **551**
Addendum 1—Two-Core ELA **555**

Positional Shift and Test Difficulty Study **555**
Analyses Conducted **556**
Estimating Sampling Variation: The Jackknife Procedure 557
Resampling 557
Screening of Districts for the Jackknife Procedure 557
Criterion for Evaluating Differences in Scoring Tables 558
Results **558**
Conclusion **559**
Reference **560**
Appendix to Addendum 1 ..... **561**
Assignment Procedure for the Two Cores 561
Addendum 2: Grade 3 Spiraling **562**
Addendum 3: Writing Prompt Directions **563**

Tables

Table 2.1 Target Statistical Specifications for CSTs 7
Table 2.B.1 Summary of 2007 CST Projected Technical Characteristics 25
Table 2.B.2 Summary of 2007 CST Projected Statistical Attributes 26
Table 2.C.1 Target Cluster IRT b-values for English–Language Arts (Grades 2 thru 7) 33
Table 2.C.2 Target Cluster IRT b-values for English–Language Arts (Grades 8 thru 11) 33
Table 2.C.3 Target Cluster IRT b-values for History–Social Science (Grade 8, World History, Grade 11) 34
Table 2.C.4 Target Cluster IRT b-values for Mathematics (Grades 2 thru 7) 34
Table 2.C.5 Target Cluster IRT b-values for Mathematics End-of-Course Tests 35
Table 2.C.6 Target Cluster IRT b-values for Integrated Mathematics Tests 35
Table 2.C.7 Target Cluster IRT b-values for Science (Grades 5, 8 and 10) 36
Table 2.C.8 Target Cluster IRT b-values for Science End-of Course Tests 36
Table 3.1 Evaluation of Common Items between New and Reference Test Forms 67
Table 3.2 Selection of Equating Samples 70
Table 3.3 Summary Statistics for the Reference Form and 2007 Equating Samples 70
Table 3.4 Proficiency Level Cut Points for Science End-of-Course CSTs 72
Table 3.5 Computation of Proficiency Level Cut Points on Integrated Science 1 72
Table 3.6 Scale Scores Defining the Various Proficiency Level Cut Points 73
Table 3.A.1 2007 New Conversions for English–Language Arts Grades 2 and 3 75
Table 3.A.2 2007 New Conversions for English–Language Arts Grade 4 (with and without essay) 76
Table 3.A.3 2007 New Conversions for English–Language Arts Grades 5 and 6 77
Table 3.A.4 2007 New Conversions for English–Language Arts Grade 7 (with and without essay) 78
Table 3.A.5 2007 New Conversions for English–Language Arts Grades 8 and 9 79
Table 3.A.6 New Conversions for English–Language Arts Grades 10 and 11 80
Table 3.A.7 New Conversions for History–Social Science Grade 8 and World History 81
Table 3.A.8 2007 New Conversion for History–Social Science Grade 11 82
Table 3.A.9 2007 New Conversions for Mathematics Grades 2 and 3 83
Table 3.A.10 2007 New Conversions for Mathematics Grades 4 and 5 84
Table 3.A.11 2007 New Conversions for Mathematics Grades 6 and 7 85
Table 3.A.12 2007 New Conversions for General Mathematics and Algebra I 86
Table 3.A.13 2007 New Conversions for Geometry and Algebra II 87
Table 3.A.14 2007 New Conversions for Summative High School Mathematics and Integrated Mathematics 1 88
Table 3.A.15 2007 New Conversions for Integrated Mathematics 2 and Integrated Mathematics 3 89
Table 3.A.16 2007 New Conversions for Grade 5 and Grade 8 Science 90
Table 3.A.17 2007 New Conversion for Grade 10 Life Science 91
Table 3.A.18 New Conversions for Biology and Earth Science 92
Table 3.A.19 2007 New Conversions for Chemistry and Physics 93
Table 3.A.20 2007 New Conversions for Integrated Science 1 and 2 94
Table 3.A.21 2007 New Conversions for Integrated Science 3 and 4 95
Table 4.1 CST ARP Member Qualifications, by subject and total 97
Table 4.A.1 Correlations Between CSTs for English–Language Arts and CAT/6 Survey Tests 106
Table 4.A.2 Correlations Between Grade-specific CSTs for Mathematics and CAT/6 Survey Mathematics Tests 106
Table 4.A.3 Correlations Between End-of-Course CSTs for Mathematics and CAT/6 Survey Mathematics Tests 106
Table 4.A.4 Correlations Between End-of-Course CSTs for Science and CAT/6 Survey Science Tests 107
Table 5.1 Mean and Standard Deviation of Raw and Scale Scores for CSTs 111
Table 5.2 Percentage of Examinees in Proficiency Levels for CSTs 112
Table 5.A.1 Score Reports Reflecting CST Results 114
Table 5.B.1 Distribution of CST Scale Scores for English–Language Arts 118
Table 5.B.2 Distribution of CST Scale Scores for History–Social Science 118
Table 5.B.3 Distribution of CST Scale Scores for Mathematics Grade 2 through 7 119
Table 5.B.4 Distribution of Scale Scores for Mathematics End-of-Course CSTs 119
Table 5.B.5 Distribution of CST Scale Scores for Science 120

Table 5.B.6 Distribution of CST Scale Scores for Grade-Specific Population 121
Table 6.1 Subgroup Definitions 122
Table 6.A.1 Demographic Summary for English–Language Arts Grade 2 133
Table 6.A.2 Demographic Summary for English–Language Arts Grade 3 134
Table 6.A.3 Demographic Summary for English–Language Arts Grade 4 135
Table 6.A.4 Demographic Summary for English–Language Arts Grade 5 136
Table 6.A.5 Demographic Summary for English–Language Arts Grade 6 137
Table 6.A.6 Demographic Summary for English–Language Arts Grade 7 138
Table 6.A.7 Demographic Summary for English–Language Arts Grade 8 139
Table 6.A.8 Demographic Summary for English–Language Arts Grade 9 140
Table 6.A.9 Demographic Summary for English–Language Arts Grade 10 141
Table 6.A.10 Demographic Summary for English–Language Arts Grade 11 142
Table 6.A.11 Demographic Summary for History–Social Science Grade 8 143
Table 6.A.12 Demographic Summary for World History 144
Table 6.A. 13 Demographic Summary for History–Social Science Grade 11 145
Table 6.A.14 Demographic Summary for Mathematics Grade 2 146
Table 6.A.15 Demographic Summary for Mathematics Grade 3 147
Table 6.A.16 Demographic Summary for Mathematics Grade 4 148
Table 6.A.17 Demographic Summary for Mathematics Grade 5 149
Table 6.A.18 Demographic Summary for Mathematics Grade 6 150
Table 6.A.19 Demographic Summary for Mathematics Grade 7 151
Table 6.A.20 Demographic Summary for General Mathematics 152
Table 6.A.21 Demographic Summary for Algebra I 153
Table 6.A.22 Demographic Summary for Geometry 154
Table 6.A.23 Demographic Summary for Algebra II 155
Table 6.A.24 Demographic Summary for Summative High School Mathematics 156
Table 6.A.25 Demographic Summary for Integrated Mathematics 1 157
Table 6.A.26 Demographic Summary for Integrated Mathematics 2 158
Table 6.A.27 Demographic Summary for Integrated Mathematics 3 159
Table 6.A.28 Demographic Summary for Science Grade 5 160
Table 6.A.29 Demographic Summary for Science Grade 8 161
Table 6.A.30 Demographic Summary for Grade 10 Life Science 162
Table 6.A.31 Demographic Summary for Biology 163
Table 6.A.32 Demographic Summary for Chemistry 164
Table 6.A.33 Demographic Summary for Earth Science 165
Table 6.A.34 Demographic Summary for Physics 166
Table 6.A.35 Demographic Summary for Integrated Science 1 167
Table 6.A.36 Demographic Summary for Integrated Science 2 168
Table 6.A.37 Demographic Summary for Integrated Science 3 169
Table 6.A.38 Demographic Summary for Integrated Science 4 170
Table 6.B.1 Matrix of Test Variations, Accommodations, and Modifications 171
Table 6.B.2 Matrix of Test Variations for English Learners 173
Table 6.C.1 Accommodation Summary for English–Language Arts Grade 2 174
Table 6.C.2 Accommodation Summary for English–Language Arts Grade 3 179
Table 6.C.3 Accommodation Summary for English–Language Arts Grade 4 184
Table 6.C.4 Accommodation Summary for English–Language Arts Grade 5 189
Table 6.C.5 Accommodation Summary for English–Language Arts Grade 6 194
Table 6.C.6 Accommodation Summary for English–Language Arts Grade 7 199
Table 6.C.7 Accommodation Summary for English–Language Arts Grade 8 204
Table 6.C.8 Accommodation Summary for English–Language Arts Grade 9 209
Table 6.C.9 Accommodation Summary for English–Language Arts Grade 10 214
Table 6.C.10 Accommodation Summary for English–Language Arts Grade 11 219
Table 6.C.11 Accommodation Summary for History–Social Science Grade 8 224
Table 6.C.12 Accommodation Summary for World History 229
Table 6.C.13 Accommodation Summary for History–Social Science Grade 11 234
Table 6.C. 14 Accommodation Summary for Mathematics Grade 2 239
Table 6.C.15 Accommodation Summary for Mathematics Grade 3 244
Table 6.C.16 Accommodation Summary for Mathematics Grade 4 249
Table 6.C.17 Accommodation Summary for Mathematics Grade 5 254
Table 6.C.18 Accommodation Summary for Mathematics Grade 6 259
Table 6.C.19 Accommodation Summary for Mathematics Grade 7 264
Table 6.C.20 Accommodation Summary for General Mathematics 269
Table 6.C.21 Accommodation Summary for Algebra I 274
Table 6.C.22 Accommodation Summary for Geometry 280
Table 6.C.23 Accommodation Summary for Algebra II 285
Table 6.C.24 Accommodation Summary for Summative High School Mathematics 290

Table 6.C.25 Accommodation Summary for Integrated Mathematics 1 295
Table 6.C.26 Accommodation Summary for Integrated Mathematics 2 300
Table 6.C.27 Accommodation Summary for Integrated Mathematics 3 305
Table 6.C.28 Accommodation Summary for Grade 5 Science 310
Table 6.C.29 Accommodation Summary for Grade 8 Science 315
Table 6.C.30 Accommodation Summary for Grade 10 Life Science 320
Table 6.C.31 Accommodation Summary for Biology 325
Table 6.C.32 Accommodation Summary for Chemistry 330
Table 6.C.33 Accommodation Summary for Earth Science 335
Table 6.C.34 Accommodation Summary for Physics 340
Table 6.C.35 Accommodation Summary for Integrated Science 1 345
Table 6.C.36 Accommodation Summary for Integrated Science 2 350
Table 6.C.37 Accommodation Summary for Integrated Science 3 355
Table 6.C.38 Accommodation Summary for Integrated Science 4 360
Table 6.D.1 Operational Items Exhibiting Significant DIF 365
Table 6.D.2 Field-test Items Exhibiting Significant DIF 366
Table 6.D.3 DIF Classifications for English–Language Arts Grade 2 Operational Items 368
Table 6.D.4 DIF Classifications for English–Language Arts Grade 3 Operational Items 368
Table 6.D.5 DIF Classifications for English–Language Arts Grade 4 Operational Items 369
Table 6.D.6 DIF Classifications for English–Language Arts Grade 5 Operational Items 369
Table 6.D.7 DIF Classifications for English–Language Arts Grade 6 Operational Items 369
Table 6.D.8 DIF Classifications for English–Language Arts Grade 7 Operational Items 370
Table 6.D.9 DIF Classifications for English–Language Arts Grade 8 Operational Items 370
Table 6.D.10 DIF Classifications for English–Language Arts Grade 9 Operational Items 370
Table 6.D.11 DIF Classifications for English–Language Arts Grade 10 Operational Items 371
Table 6.D.12 DIF Classifications for English–Language Arts Grade 11 Operational Items 371
Table 6.D.13 DIF Classifications for History–Social Science Grade 8 Operational Items 371
Table 6.D.14 DIF Classifications for World History Operational Items 372
Table 6.D.15 DIF Classifications for History–Social Science Grade 11 Operational Items 372
Table 6.D.16 DIF Classifications for Mathematics Grade 2 Operational Items 372
Table 6.D.17 DIF Classifications for Mathematics Grade 3 Operational Items 373
Table 6.D.18 DIF Classifications for Mathematics Grade 4 Operational Items 373
Table 6.D.19 DIF Classifications for Mathematics Grade 5 Operational Items 373
Table 6.D.20 DIF Classifications for Mathematics Grade 6 Operational Items 374
Table 6.D.21 DIF Classifications for Mathematics Grade 7 Operational Items 374
Table 6.D.22 DIF Classifications for General Mathematics Operational Items 374
Table 6.D.23 DIF Classifications for Algebra I Operational Items 375
Table 6.D.24 DIF Classifications for Geometry Operational Items 375
Table 6.D.25 DIF Classifications for Algebra II Operational Items 375
Table 6.D.26 DIF Classifications for Summative High School Mathematics Operational Items 376
Table 6.D.27 DIF Classifications for Integrated Mathematics 1 Operational Items 376
Table 6.D.28 DIF Classifications for Integrated Mathematics 2 Operational Items 376
Table 6.D.29 DIF Classifications for Integrated Mathematics 3 Operational Items 377
Table 6.D.30 DIF Classifications for Science Grade 5 Operational Items 377
Table 6.D.31 DIF Classifications for Science Grade 8 Operational Items 377
Table 6.D.32 DIF Classifications for Grade 10 Life Science Operational Items 378
Table 6.D.33 DIF Classifications for Biology Operational Items 378
Table 6.D.34 DIF Classifications for Chemistry Operational Items 378
Table 6.D.35 DIF Classifications for Earth Science Operational Items 379
Table 6.D.36 DIF Classifications for Physics Operational Items 379
Table 6.D.37 DIF Classifications for Integrated Science 1 Operational Items 379
Table 6.D.38 DIF Classifications for Integrated Science 2 Operational Items 380
Table 6.D.39 DIF Classifications for Integrated Science 3 Operational Items 380
Table 6.D.40 DIF Classifications for Integrated Science 4 Operational Items 380
Table 6.D.41 DIF Classifications for English–Language Arts Grade 2 Field-test Items 381
Table 6.D.42 DIF Classifications for English–Language Arts Grade 3 Field-test Items 381
Table 6.D.43 DIF Classifications for English–Language Arts Grade 4 Field-test Items 381
Table 6.D.44 DIF Classifications for English–Language Arts Grade 5 Field-test Items 382
Table 6.D.45 DIF Classifications for English–Language Arts Grade 6 Field-test Items 382
Table 6.D.46 DIF Classifications for English–Language Arts Grade 7 Field-test Items 382
Table 6.D.47 DIF Classifications for English–Language Arts Grade 8 Field-test Items 383
Table 6.D.48 DIF Classifications for English–Language Arts Grade 9 Field-test Items 383
Table 6.D.49 DIF Classifications for English–Language Arts Grade 10 Field-test Items 383
Table 6.D.50 DIF Classifications for English–Language Arts Grade 11 Field-test Items 384
Table 6.D.51 DIF Classifications for History–Social Science Grade 8 Field-test Items 384
Table 6.D.52 DIF Classifications for World History Field-test Items 384

Table 6.D.53 DIF Classifications for History–Social Science Grade 11 Field-test Items 385
Table 6.D.54 DIF Classifications for Mathematics Grade 2 Field-test Items 385
Table 6.D.55 DIF Classifications for Mathematics Grade 3 Field-test Items 385
Table 6.D.56 DIF Classifications for Mathematics Grade 4 Field-test Items 386
Table 6.D.57 DIF Classifications for Mathematics Grade 5 Field-test Items 386
Table 6.D.58 DIF Classifications for Mathematics Grade 6 Field-test Items 386
Table 6.D.59 DIF Classifications for Mathematics Grade 7 Field-test Items 387
Table 6.D.60 DIF Classifications for General Mathematics Field-test Items 387
Table 6.D.61 DIF Classifications for Algebra I Field-test Items 387
Table 6.D.62 DIF Classifications for Geometry Field-test Items 388
Table 6.D.63 DIF Classifications for Algebra II Field-test Items 388
Table 6.D.64 DIF Classifications for Summative High School Mathematics Field-test Items 388
Table 6.D.65 DIF Classifications for Integrated Mathematics 1 Field-test Items 389
Table 6.D.66 DIF Classifications for Integrated Mathematics 2 Field-test Items 389
Table 6.D.67 DIF Classifications for Integrated Mathematics 3 Field-test Items 389
Table 6.D.68 DIF Classifications for Science Grade 5 Field-test Items 390
Table 6.D.69 DIF Classifications for Science Grade 8 Field-test Items 390
Table 6.D.70 DIF Classifications for Grade 10 Life Science Field-test Items 390
Table 6.D.71 DIF Classifications for Biology Field-test Items 391
Table 6.D.72 DIF Classifications for Chemistry Field-test Items 391
Table 6.D.73 DIF Classifications for Earth Science Field-test Items 391
Table 6.D.74 DIF Classifications for Physics Field-test Items 392
Table 6.D.75 DIF Classifications for Integrated Science 1 Field-test Items 392
Table 6.D.76 DIF Classifications for Integrated Science 2 Field-test Items 392
Table 6.D.77 DIF Classifications for Integrated Science 3 Field-test Items 393
Table 6.D.78 DIF Classifications for Integrated Science 4 Field-test Items 393
Table 7.1 Summary of Items and Forms Presented in 2007 CSTs 395
Table 7.2 Average and Median Proportion Correct and Point-Biserial 397
Table 7.A.1 Item-by-item p-value and Point-Biserial for English–Language Arts 402
Table 7.A.2 Item-by-item p-value and Point-Biserial for History–Social Science 404
Table 7.A.3 Item-by-item p-value and Point-Biserial for Mathematics 406
Table 7.A.4 Item-by-item p-value and Point-Biserial for Mathematics [continued] 408
Table 7.A.5 Item-by-item p-value and Point-Biserial for Science 410
Table 7.A.6 Item-by-item p-value and Point-Biserial for Science [continued] 412
Table 7.A.7 Item-by-item p-value and Point-Biserial for Mathematics Grade Specific CSTs 414
Table 7.B.1 IRT b-values for English–Language Arts Grade 2 416
Table 7.B.2 IRT b-values for English–Language Arts Grade 3 416
Table 7.B.3 IRT b-values for English–Language Arts Grade 4 416
Table 7.B.4 IRT b-values for English–Language Arts Grade 5 417
Table 7.B.5 IRT b-values for English–Language Arts Grade 6 417
Table 7.B.6 IRT b-values for English–Language Arts Grade 7 417
Table 7.B.7 IRT b-values for English–Language Arts Grade 8 418
Table 7.B.8 IRT b-values for English–Language Arts Grade 9 418
Table 7.B.9 IRT b-values for English–Language Arts Grade 10 418
Table 7.B.10 IRT b-values for English–Language Arts Grade 11 419
Table 7.B.11 IRT b-values for History–Social Science Grade 8 419
Table 7.B.12 IRT b-values for World History 419
Table 7.B.13 IRT b-values for History–Social Science Grade 11 420
Table 7.B.14 IRT b-values for Mathematics Grade 2 420
Table 7.B.15 IRT b-values for Mathematics Grade 3 420
Table 7.B.16 IRT b-values for Mathematics Grade 4 420
Table 7.B.17 IRT b-values for Mathematics Grade 5 421
Table 7.B.18 IRT b-values for Mathematics Grade 6 421
Table 7.B.19 IRT b-values for Mathematics Grade 7 422
Table 7.B.20 IRT b-values for General Mathematics 422
Table 7.B.21 IRT b-values for Algebra I 422
Table 7.B.22 IRT b-values for Geometry 423
Table 7.B.23 IRT b-values for Algebra II 423
Table 7.B.24 IRT b-values for Summative High School Mathematics 423
Table 7.B.25 IRT b-values for Integrated Mathematics 1 424
Table 7.B.26 IRT b-values for Integrated Mathematics 2 424
Table 7.B.27 IRT b-values for Integrated Mathematics 3 424
Table 7.B.28 IRT b-values for Science Grade 5 425
Table 7.B.29 IRT b-values for Science Grade 8 425
Table 7.B.30 IRT b-values for Life Science 425
Table 7.B.31 IRT b-values for Biology 426

Table 7.B.32 IRT b-values for Chemistry ... 426
Table 7.B.33 IRT b-values for Earth Science ... 426
Table 7.B.34 IRT b-values for Physics ... 427
Table 7.B.35 Distribution of IRT b-values for English–Language Arts ... 428
Table 7.B.36 Distribution of IRT b-values for History–Social Science ... 428
Table 7.B.37 Distribution of IRT b-values for Mathematics Grade 2 through 7 ... 429
Table 7.B.38 Distribution of IRT b-values for Mathematics End-of-Course CSTs ... 429
Table 7.B.39 Distribution of IRT b-values for Science ... 430
Table 7.B.40 Distribution of IRT b-values for English–Language Arts (field-test items) ... 430
Table 7.B.41 Distribution of IRT b-values for History–Social Science (field-test items) ... 431
Table 7.B.42 Distribution of IRT b-values for Mathematics Grade 2 through 7 (field-test items) ... 431
Table 7.B.43 Distribution of IRT b-values for Mathematics End-of-Course CSTs (field-test items) ... 432
Table 7.B.44 Distribution of IRT b-values for Science (field-test items) ... 432
Table 7.B.45 IRT Model Data Fit Distribution for English–Language Arts ... 433
Table 7.B.46 IRT Model Data Fit Distribution for History–Social Science Grade 8, World History, Grade 11 ... 433
Table 7.B.47 IRT Model Data Fit Distribution for Mathematics Grade 2 through 7 ... 434
Table 7.B.48 IRT Model Data Fit Distribution for Mathematics End-of-Course Tests ... 434
Table 7.B.49 IRT Model Data Fit Distribution for Science ... 435
Table 7.B.50 IRT Model Data Fit Distribution for English–Language Arts (field-test items) ... 435
Table 7.B.51 IRT Model Data Fit Distribution for History–Social Science Grade 8, World History, Grade 11 (field-test items) ... 436
Table 7.B.52 IRT Model Data Fit Distribution for Mathematics Grade 2 through 7 (field-test items) ... 436
Table 7.B.53 IRT Model Data Fit Distribution for Mathematics End-of-Course Tests (field-test items) ... 437
Table 7.B.54 IRT Model Data Fit Distribution for Science (field-test items) ... 437
Table 8.1 Reliabilities and Standard Errors of Measurement for the CSTs ... 439
Table 8.2 Scale Score Conditional Standard Error of Measurement at Cut Points ... 441
Table 8.A.1 Subscore Reliabilities and Correlations for English–Language Arts ... 445
Table 8.A.2 Subscore Reliabilities and Correlations for History–Social Science ... 447
Table 8.A.3 Subscore Reliabilities and Correlations for Mathematics ... 448
Table 8.A.4 Subscore Reliabilities and Correlations for Science ... 452
Table 8.A.5 Subscore Reliabilities and Correlations for Grade Specific Tests ... 455
Table 8.A.6 Reliabilities and SEM for the CSTs by GENDER ... 457
Table 8.A.7 Reliabilities and SEM for the CSTs by NSLP ... 458
Table 8.A.8 Reliabilities and SEM for the CSTs by SPECIAL SERVICES ... 459
Table 8.A.9 Reliabilities and SEM for the CSTs by ENGLISH-LANGUAGE FLUENCY ... 460
Table 8.A.10 Reliabilities and SEM for the CSTs by PRIMARY ETHNICITY ... 462
Table 8.A.11 Subscore Reliabilities and SEM for English–Language Arts by GENDER/NSLP ... 465
Table 8.A.12 Subscore Reliabilities and SEM for History–Social Science by GENDER/NSLP ... 468
Table 8.A.13 Subscore Reliabilities and SEM for Mathematics by GENDER/NSLP ... 469
Table 8.A.14 Subscore Reliabilities and SEM for Science by GENDER/NSLP ... 473
Table 8.A.15 Subscore Reliabilities and SEM for Grade Specific Tests by GENDER/NSLP ... 476
Table 8.A.16 Subscore Reliabilities and SEM for ELA by SPECIAL SERVICES/LANGUAGE FLUENCY ... 478
Table 8.A.17 Subscore Reliabilities and SEM for History–Social Science by SPECIAL SERVICES/LANGUAGE FLUENCY ... 481
Table 8.A.18 Subscore Reliabilities and SEM for Mathematics by SPECIAL SERVICES/LANGUAGE FLUENCY ... 482
Table 8.A.19 Subscore Reliabilities and SEM for Science by SPECIAL SERVICES/LANGUAGE FLUENCY ... 487
Table 8.A.20 Subscore Reliabilities and SEM for Grade Specific Tests by SPECIAL SERVICES/LANGUAGE FLUENCY ... 490
Table 8.A.21 Subscore Reliabilities and SEM for English–Language Arts by PRIMARY ETHNICITY ... 492
Table 8.A.22 Subscore Reliabilities and SEM for History–Social Science by PRIMARY ETHNICITY ... 495
Table 8.A.23 Subscore Reliabilities and SEM for Mathematics by PRIMARY ETHNICITY ... 496
Table 8.A.24 Subscore Reliabilities and SEM for Science by PRIMARY ETHNICITY ... 501
Table 8.A.25 Subscore Reliabilities and SEM for Grade Specific Tests by PRIMARY ETHNICITY ... 504
Table 8.A.26 Overall Subgroup Reliabilities ... 506
Table 8.A.27 Overall Subgroup Reliabilities (continued) ... 508
Table 8.B.1 Reliability of Classification for English–Language Arts Grade 2 ... 510
Table 8.B.2 Reliability of Classification for English–Language Arts Grade 3 ... 510
Table 8.B.3 Reliability of Classification for English–Language Arts Grade 4 (Reading only) ... 510
Table 8.B.4 Reliability of Classification for English–Language Arts Grade 4 (Reading & Writing) ... 511
Table 8.B.5 Reliability of Classification for English–Language Arts Grade 5 ... 511
Table 8.B.6 Reliability of Classification for English–Language Arts Grade 6 ... 511
Table 8.B.7 Reliability of Classification for English–Language Arts Grade 7 (Reading only) ... 512
Table 8.B.8 Reliability of Classification for English–Language Arts Grade 7 (Reading & Writing) ... 512
Table 8.B.9 Reliability of Classification for English–Language Arts Grade 8 ... 512
Table 8.B.10 Reliability of Classification for English–Language Arts Grade 9 ... 513
Table 8.B.11 Reliability of Classification for English–Language Arts Grade 10 ... 513
Table 8.B.12 Reliability of Classification for English–Language Arts Grade 11 ... 513
Table 8.B.13 Reliability of Classification for History–Social Science Grade 8 ... 514
Table 8.B.14 Reliability of Classification for World History ... 514

Table 8.B.15 Reliability of Classification for History–Social Science Grade 11 ... 514
Table 8.B.16 Reliability of Classification for Mathematics Grade 2 ... 515
Table 8.B.17 Reliability of Classification for Mathematics Grade 3 ... 515
Table 8.B.18 Reliability of Classification for Mathematics Grade 4 ... 515
Table 8.B.19 Reliability of Classification for Mathematics Grade 5 ... 516
Table 8.B.20 Reliability of Classification for Mathematics Grade 6 ... 516
Table 8.B.21 Reliability of Classification for Mathematics Grade 7 ... 516
Table 8.B.22 Reliability of Classification for General Mathematics ... 517
Table 8.B.23 Reliability of Classification for Algebra I ... 517
Table 8.B.24 Reliability of Classification for Geometry ... 517
Table 8.B.25 Reliability of Classification for Algebra II ... 518
Table 8.B.26 Reliability of Classification for Summative High School Mathematics ... 518
Table 8.B.27 Reliability of Classification for Integrated Mathematics 1 ... 518
Table 8.B.28 Reliability of Classification for Integrated Mathematics 2 ... 519
Table 8.B.29 Reliability of Classification for Integrated Mathematics 3 ... 519
Table 8.B.30 Reliability of Classification for Science Grade 5 ... 519
Table 8.B.31 Reliability of Classification for Science Grade 8 ... 520
Table 8.B.32 Reliability of Classification for Grade 10 Life Science ... 520
Table 8.B.33 Reliability of Classification for Biology ... 520
Table 8.B.34 Reliability of Classification for Chemistry ... 521
Table 8.B.35 Reliability of Classification for Earth Science ... 521
Table 8.B.36 Reliability of Classification for Physics ... 521
Table 8.B.37 Reliability of Classification for Integrated Science 1 ... 522
Table 8.B.38 Reliability of Classification for Integrated Science 2 ... 522
Table 8.B.39 Reliability of Classification for Integrated Science 3 ... 522
Table 8.B.40 Reliability of Classification for Integrated Science 4 ... 523
Table 8.B.41 Reliability of Classification for Algebra I – 8 ... 523
Table 8.B.42 Reliability of Classification for Geometry – 9 ... 523
Table 8.B.43 Reliability of Classification for Algebra II –10 ... 524
Table 8.B.44 Reliability of Classification for High School Math – 11 ... 524
Table 8.B.45 Reliability of Classification for World History – 10 ... 524
Table 9.B.1 Distribution of Essay Scores for ELA Grade 4—Overall and by Subgroup ... 537
Table 9.B.2 Distribution of Essay Scores for ELA Grade 7—Overall and by Subgroup ... 537
Table 9.B.3 Mean Scores for ELA Grade 4 Essay—Overall and by Subgroup ... 538
Table 9.B.4 Mean Scores for ELA Grade 7 Essay—Overall and by Subgroup ... 538
Table 9.B.5. Effect Sizes for ELA Grades 4 and 7 Essay—by Subgroup ... 539
Table 9.B.6 Inter-Rater Analyses for ELA Grade 4 ... 540
Table 9.B.7 Inter-Rater Analyses for ELA Grade 7 ... 540
Table 9.B.8 Descriptive Statistics for the Ratings by the Two Raters ... 540
Table 9.B.9 Generalizability Analyses for Grade 4 Essay—[(Person: Essay) x Rater] ... 541
Table 9.B.10 Generalizability Analyses for Grade 7 Essay—[(Person: Essay) x Rater] ... 541
Table 10.A.1 Number of Examinees Tested, Scale Score Means and Standard Deviations of CSTs Across 2005, 2006, and 2007 ... 545
Table 10.A.2 Percentage of Proficient and Above and Percentage of Advanced Across 2005, 2006, and 2007 ... 546
Table 10.A.3 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for English–Language Arts (Grades 2 through 6) ... 547
Table 10.A.4 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for English–Language Arts (Grades 7 through 11) ... 547
Table 10.A.5 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for History–Social Science (Grades 8, 10, and 11) ... 548
Table 10.A.6 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for Mathematics (Grades 2 through 6) ... 548
Table 10.A.7 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for Math (Gr. 7, Gen. Math, Algebra I, Geometry, & Algebra II) ... 549
Table 10.A.8 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for Mathematics (High School Math, Integrated Math 1, 2, & 3) ... 549
Table 10.A.9 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for Science (Biology, Chemistry, and Earth Science) ... 550
Table 10.A.10 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for Science (Physics, Integrated Science 1, 2, 3, and 4) ... 550
Table 10.B.1 Average Proportion Correct of CSTs Across 2005, 2006, and 2007 ... 551
Table 10.B.2 Overall IRT b-values for Operational Test Items Across 2005, 2006, and 2007 ... 552
Table 10.B.3 Average Point Biserial Correlation of CSTs Across 2005, 2006, and 2007 ... 553
Table 10.B.4 Reliabilities and Standard Error of Measurement (SEM) of CSTs Across 2005, 2006, and 2007 ... 554
Table A1.1 Distribution of Books by Core for Each Grade ... 555
Table A1.2 Examples of the Structure of the Core Tests ... 556
Table A1.3 Jackknife Data ... 557
Table A2.1 ELA Mean Scale Score ... 562
Table A2.2 ELA Percent Proficient or Above ... 562

CST Technical Report Acronyms and Initialisms

API	Academic Performance Index
ARP	Assessment Review Panel
AYP	Adequate Yearly Progress
CAHSEE	California High School Exit Examination
CAPA	California Alternate Performance Assessment
CAT/6 Survey	California Achievement Tests, Sixth Edition Survey
CDE	California Department of Education
CR	constructed response
CSEM	conditional standard error of measurement
CST	California Standards Tests
CSU	California State University
DIF	Differential Item Functioning
EAP	Early Assessment Program
EL	English Learner
ELA	English–language arts
ELD	English Language Development
EM	expectation maximization
EOC	end-of-course
ePEN™	Electronic Performance Evaluation Network™
ETS	Educational Testing Service
FIA	final item analyses
FTP	file transfer protocol
GENASYS	Generalized Analysis System
GM	General Mathematics
HSM	Summative High School Mathematics
HSS	history–social science
IEP	individualized education program
I-FEP	initially–fluent English proficient
IRT	item response theory
LAUSD	Los Angeles Unified School District
MC	multiple choice
MH DIF	Mantel-Haenszel DIF
NCLB	*No Child Left Behind Act of 2001*
NSLP	National School Lunch Program
OTI	Office of Testing Integrity
p-value	item proportion correct
PEM	Pearson Educational Measurement
PSAA	*Public School Accountability Act*
Pt-Rbis	point-biserial correlations
RACF	Random Access Control Facility
R-FEP	reclassified–fluent English proficient
SBE	State Board of Education
SDAIE	specially designed academic instruction in English
SEM	standard error of measurement
SPAR	statewide pupil assessment review
STAR	Standardized Testing and Reporting
STS	Standards-based Tests in Spanish
WRMSD	weighted root mean square difference

Chapter 1: Introduction

Background

In 1997 and 1998, the California State Board of Education (SBE) adopted rigorous content standards in four major content areas: English–language arts (ELA), mathematics, history–social science, 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.

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). Senate Bill 1448, approved by the Legislature and the Governor in August 2004, reauthorized the STAR Program through January 1, 2011, in grades three through eleven. STAR Program testing in grade two has been extended to the 2007–08 school year (spring 2008 administration).

The primary goal of the STAR Program is to help measure how well students are mastering these content standards. The STAR Program has five components:

- California Standards Tests (CSTs) produced for California public schools
- California Achievement Tests, Sixth Edition Survey (CAT/6 Survey) for grades 3 and 7, published by CTB/McGraw-Hill
- California Alternate Performance Assessment (CAPA), an assessment produced for students with significant cognitive disabilities who are not able to take the CSTs or the CAT/6 Survey
- Standards-based Tests in Spanish (STS), an assessment of California content standards for Spanish-speaking English learners in grades 2–4 in spring 2007.
- Aprenda: La prueba de logros en español, Tercera edición (Aprenda 3) published by Harcourt Assessment Inc.

Education Code 60602 Legislative Intent

The results for tests within the STAR Program are used for three primary purposes:

Excerpted from California Education Code Section 60602, http://www.leginfo.ca.gov/cgi-bin/displaycode?section=edc&group=60001-61000&file=60600-60603.

"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."

Additionally, STAR program assessments are used to provide data for state and federal accountability purposes.

California Standardized Tests (CSTs)

The 38 CSTs form the cornerstone of the STAR program. These tests carry the most weight for calculating school and district Academic Performance Index (API). Additionally, the CSTs for English–language arts (ELA) and mathematics (grades two through eight) are used in determining Adequate Yearly Progress (AYP) that applies toward meeting the requirement of the federal *No Child Left Behind* (*NCLB*) *Act of 2001* to have all students score proficient or above by 2014.

The 38 CSTs, given in English, are designed to show how well students are doing with respect to California content standards. These content standards, approved by the SBE, describe what students should know and be able to do at each grade level. Students in grades two through eleven are tested in English–language arts (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. All grade ten students take the CST for Grade 10 Life Science; students in grades nine through eleven can also take an end-of-course (EOC) World History test and an EOC science test.

Each of the CSTs was administered to approximately 400,000 to 500,000 test-takers in 2007. The numbers were smaller for all EOC CSTs with the exception of Algebra I, which approximately 700,000 examinees took. The details on similar statistics for each CST are presented later in this report.

All students enrolled in grades 2 through 11 in California public schools on the day testing begins are required to take the CSTs or CAPA. This includes English learners, regardless of the length of time they have been in U.S. schools or their fluency in English, and students with disabilities who receive special education services. For students with significant cognitive disabilities, the decision to administer the CSTs (or CAPA) is made by their individualized education program (IEP) team. Parents may submit written requests to have their children exempted from taking any test or just the essay in the Grade 4 and Grade 7 ELA tests. Only students with written parent requests may be exempted from taking the tests.

This technical report addresses the characteristics of the California Standards Tests administered in Spring 2007. The 2007 CSTs included the following tests:

• English–Language Arts, grades 2 to 11	• World History
• Mathematics, grades 2 to 7	• Grade 5 Science
• General Mathematics, grades 8 and 9	• Grade 8 Science
• Algebra I	• Grade 10 Life Science
• Geometry	• Biology
• Algebra II	• Chemistry
• Summative High School Mathematics	• Earth Science
• Integrated Mathematics 1	• Physics
• Integrated Mathematics 2	• Integrated Science 1
• Integrated Mathematics 3	• Integrated Science 2

• History–Social Science, grade 8 • U.S. History, grade 11	• Integrated Science 3 • Integrated Science 4

All CSTs are comprised of four-option multiple-choice items. The CSTs for English–Language Arts for grades 4 and 7 tests also include one essay item. These essay items are reported on an eight-point scale.

The CSTs are administered at different times depending upon the progression of the school year within each particular district. Specifically, schools must administer the CSTs and the CAT/6 Survey tests within a 21-day window comprised of the 10 days before and 10 days after the day on which 85 percent of the instructional year is completed. The CSTs are administered in an untimed fashion; California Department of Education (CDE) guidelines of times within which most students would be expected to finish the CSTs by test and grade level can be found in Appendix 1.A—2007 CST Item and Time Chart.

Results of the CSTs are reported using scale scores, which in 2007 ranged from 150 to 600 for each test. In addition, the CST test performance for each student is categorized into one of the following proficiency levels: far below basic, below basic, basic, proficient, and advanced. The state's target is for all students to score proficient or advanced. For all CSTs, the minimum scale scores defining basic and proficient are 300 and 350, respectively. The minimum scale scores defining below basic and advanced vary by CST. These may be found in Tables 3.A.1 to 3.A.21.

In addition to total scale scores, CST score report information includes student performance on various reporting clusters. This information is reported in terms of percent correct scores.

All CSTs include a set of six field-test items that are not counted towards students' scores. Most CSTs consist of several versions, each of which contains a different set of six field-test items.

Significant Development in 2007

Algebra I Testing in 2007

Students in grade 7 who were enrolled in an Algebra I course took the CST for Algebra I instead of the grade-level test.

World History Testing in 2007

Students in grades 9, 10, and 11 who were enrolled in a World History course took the end-of-course (EOC) CST for World History. This CST was previously only taken by all students in grade 10.

Overview of the Technical Report

This technical report is divided into ten chapters as described below.

- Chapter 1 introduces the STAR Program.
- Chapter 2 describes the procedures followed in developing valid CST items and in constructing the 2007 CSTs. In addition, characteristics of the constructed 2007 test forms are presented in this chapter. The test construction based on cluster information has been added to this year's report.
- Chapter 3 describes the procedures followed to equate and scale the CSTs and documents the CST score equating conversions. The new form conversions are presented for each CST.
- Chapter 4 details the procedures designed to ensure the validity aspect of CSTs. A section on content validity is also included in this year's report.

- Chapter 5 describes the kinds of score reports that are produced at the end of each administration of CSTs. It also summarizes the test-level analyses performed on scores obtained on the spring 2007 administration of the tests.
- Chapter 6 highlights the importance of maintaining fairness in the CSTs for various subgroups. This chapter summarizes demographic differences in performance, describes accommodations and modifications, and summarizes analyses of differential item functioning. This chapter also includes a section describing procedures followed by Educational Testing Service (ETS) to ensure test security.
- Chapter 7 discusses the various types of evidence collected to ensure the acceptable quality of operational and field-test items. Summaries of classical item analysis statistics, Rasch difficulty estimates, and evaluations of the Rasch model-data fit are included in this chapter.
- Chapter 8 summarizes the reliability analyses, including test reliability, accuracy, and consistency of the CST proficiency-level classifications, and intercorrelations of reporting cluster scores. Some of these analyses are also replicated for various subsections of the test-taking population in order to look at reliabilities at subgroup levels. Overall reliabilities are presented for end of course tests for the corresponding grade-specific examinees as well.
- Chapter 9 presents a comprehensive overview of the constructed response items administered at grades 4 and 7 as part of English–language arts tests. This year's report present a finer design for the Generalizability analyses.
- Chapter 10 presents historical comparisons of various item- and test-level indicators, over a period of three years.

Each chapter contains summary tables in the body of the text. However, extended appendices reporting technical data for the different CSTs are listed at the end of the relevant chapters.

Appendix 1.A—2007 CST Item and 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	**71**	**150**	**71**	**150**	**81**	**170**	**81**	**170**	**81**	**170**	**81**	**170**	**81**	**170**	**81**	**170**	**81**	**170**	**96****	**185**
Part 1		50		50		85		85		85		85		85		85		85		85
Part 2		50		50		85		85		85		85		85		85		85		100**
Part 3–only grades 2 & 3		50		50		--		--		--		--		--		--		--		--
Writing Applications					1	75*					1	75*								
Mathematics	**71**	**150**	**71**	**150**	**71**	**150**	**71**	**150**	**71**	**150**	**71*****	**150*****	**71**	**180**	**71**	**180**	**71**	**180**	**86****	**195**
Part 1		50		50		75		75		75		75		90		90		90		90
Part 2		50		50		75		75		75		75		90		90		90		105**
Part 3–only grades 2 & 3		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****	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**			**66**	**110**	**66**	**110**	**66**	**110**
Part 1																55		55		55
Part 2																55		55		55
Science—Grade level	**--**	**--**	**--**	**--**	**--**	**--**	**66**	**140**	**--**	**--**	**--**	**--**	**66**	**120**	**--**	**--**	**66**	**120**	**--**	**--**
Part 1								70						60				60		
Part 2								70						60				60		
Science—End-of-course*****	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**66**	**120**	**66**	**120**	**66**	**120**
Part 1																60		60		60
Part 2																60		60		60

*	The writing tests in grades four and seven are given on separate dates and are not included in the estimated time for English–language arts.
**	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 California State University (CSU) Early Assessment Program (EAP). To participate in the EAP for English, students must take the English–Language Arts CST, the EAP multiple-choice questions for English, and the EAP writing test. The time shown in the chart does not include 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.
***	Item numbers and times are for the CST for Grade 7 Mathematics. Follow the item and time guidelines for CSTs for mathematics for grades 8–11 to estimate test administration for students in grade 7 taking the CST for Algebra I.
***	World History is designated as an end-of-course test. In 2007, this CST was administered to eligible students in grades 9, 10, and 11.
*****	End-of-course science tests include Biology, Chemistry, Earth Science, Physics, and Integrated Science 1–4.

Chapter 2: CST Development Procedures

The CSTs were constructed to measure the California content standards as well as to meet psychometric criteria for difficulty and reliability. The psychometric criteria were evaluated using projections based on item statistics from field-testing or previous operational administrations.

Test Assembly Procedures

Test blueprints for the components of the STAR Program were proposed by ETS, reviewed and approved by the respective Assessment Review Panels (ARPs), 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. For each test, the California content standards were used as the basis for choosing items. Additional technical targets (e.g., difficulty and discrimination) for test construction were established based on past characteristics of the tests, with the goal of maintaining parallel forms to the greatest extent possible.

Test Specifications

Statistical Specifications

The primary statistical targets used for CST test assembly in 2007 were the test information function based on the item response theory (IRT) item parameters and an average biserial correlation. When using the Rasch model, the target information function makes it possible to choose items to produce a test that has the desired precision of measurement at all ability levels. The target mean and standard deviation of item b-values consistent with the information curves were also provided to test development staff to help with the test construction process. The biserial correlation is a measure of how well the items discriminate among test takers and is related to the overall reliability of the test.

These specifications were developed from the analyses of test forms administered in years 2001 to 2006; the target values and ranges for the specifications are presented in Table 2.1 on page 7. 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. The target b-value range approximates a minimum percent-correct value (p-value) of 0.20 and a maximum p-value of 0.95 for each test. Since the items included in the General Math, Summative High School Math, Integrated Math, and Integrated Science tests are drawn from other tests, targets for their classical statistical characteristics were not defined separately.

Assembly targets included the total test target, the linking block target and (reporting) cluster score targets. The latter was used to stabilize cluster score performance across years. The target mean and standard deviations of the IRT b-values for the clusters are presented in Tables 2.C.1 through 2.C.8 in Appendix 2.C. Since the cluster scores include fewer items than the total test, there is always more variability between the target and the constructed curve for the cluster scores.

Meeting the target for the total test was of primary importance. The linking block target consisted of a proportionally adjusted (for numbers of items) total target. To aid comparisons, the linking block curves were proportionally adjusted to the full test length and were presented with the total test curves. The graphics for the total test and linking blocks are presented in Figures 2.B.1 through 2.B.4, starting on page 27, for the ELA, history–social science, mathematics, and science tests, respectively. These curves present the target test information curves in comparison with the projected test features for the total and linking block for each test. Figures 2.C.1 through 2.C.29 present similar information for the cluster scores for the ELA, history–social science, mathematics, and science tests, respectively.

Content Specifications

ETS developed all CST test items to conform to the SBE-approved content standards and test blueprints. The content blueprints for the CSTs can be found on the CDE Web site, at http://www.cde.ca.gov/ta/tg/sr/blueprints.asp. Although the test blueprints called for distributions of items at the individual standard level, for reporting purposes, the content for each CST was aggregated across standards into subcontent areas, referred to as "reporting clusters." For each CST reporting cluster, the percentage of questions correctly answered by students was reported. A description of the CST reporting clusters and the standards that comprise the reporting clusters is provided in Appendix 2.A—Reporting Clusters starting on page 15.

Table 2.1 Target Statistical Specifications for CSTs

Subject	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
History–Social Science	**8**	0.18	0.53	0.20	0.95	0.33 – 0.37	0.14
	World History	0.15	0.52	0.20	0.95	0.33 – 0.37	0.14
	11	0.09	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 Math	N/A	N/A	0.20	0.95	N/A	0.14
	Algebra I	-0.07	0.72	0.20	0.95	0.31 – 0.35	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
	High School Math	N/A	N/A	0.20	0.95	N/A	0.14
	Integrated Math 1	N/A	N/A	0.20	0.95	N/A	0.14
	Integrated Math 2	N/A	N/A	0.20	0.95	N/A	0.14
	Integrated Math 3	N/A	N/A	0.20	0.95	N/A	0.14
Science	**Grade 5 Science**	-0.70	0.57	0.20	0.95	> 0.34	0.14
	Grade 8 Science	-0.49	0.74	0.20	0.95	> 0.34	0.14
	Grade 10 Life Science	-0.48	0.72	0.20	0.95	> 0.34	0.14
	Biology	-0.45	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	-0.27	0.47	0.20	0.95	> 0.34	0.14
	Physics	-0.21	0.51	0.20	0.95	> 0.34	0.14
	Integrated Science 1	N/A	N/A	0.20	0.95	N/A	0.14

Subject	CST	Target Mean b	Target SD b	Min p-value	Max p-value	Mean Point Biserial	Min Point Biserial
	Integrated Science 2	N/A	N/A	0.20	0.95	N/A	0.14
	Integrated Science 3	N/A	N/A	0.20	0.95	N/A	0.14
	Integrated Science 4	N/A	N/A	0.20	0.95	N/A	0.14

Note: The 2007 CSTs for General Math, Summative High School Math, Integrated Math, and Integrated Science were assembled using the items from other operational CSTs based on content specifications and were not assembled to statistical specifications.

Item Development

ETS has maintained item specifications for each CST. ETS followed the SBE-approved Item Utilization Plan to guide the development of the quantity of items for each subject area. Item specification documents included the constructs to be measured and the California content standards included in the test blueprints. The item specifications help ensure that the CSTs consistently match the content standards from year to year. Item writing emphasis is determined in consultation with the CDE. The item specifications also provide specific and important guidance to item writers, and ensure that items are consistent in approach and written to measure the standards. The item specifications describe the general characteristics of the items for each content standard, indicate item types, or content to be avoided, and define the content limits for the items. In summary, the specifications include the following:

- A statement of the strand or topic for the standard
- A full statement of the academic content standard, as found in each CST blueprint
- The expected cognitive level(s) of items written for the standard (Acquire, Integrate, or Extend), as defined by ETS and approved by CDE
- The construct(s) appropriately measured by the standard
- A description of the kinds of stems appropriate for multiple-choice items for the standard
- A description of the kinds of distracters appropriate for multiple-choice items for the standard
- A description of specific kinds of items to be avoided, if any (e.g., no ELA items about insignificant details)
- A description of appropriate stimuli (e.g., charts, tables, graphs, or other artwork) for mathematics, science, and history–social science items
- The content limits for the standard (e.g., 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

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

- A list of topics to be avoided
- The acceptable ranges for passage length
- The expected distribution of passages by genre
- Guidelines for readability and concept load, using CDE/ETS–agreed-to standards
- Expected use of artwork
- The target number of items attached to each reading passage and each writing passage
- Writing passages for Grades 4 and 7 to have a readability level appropriate to their respective grades

Item Review Process

The items selected for each CST undergo an extensive item review process that is designed to provide all California students with the best standards-based tests possible. This section summarizes the various reviews that ensured the validity of 2007 CST items and test forms.

Internal Reviews

After the items have been written, ETS employs a series of internal reviews. The reviews establish the criteria used to judge the content validity of the item, making sure that each item is measuring what it is intended to measure. The internal reviews also examine the overall quality of the test items before they are prepared for presentation to CDE and the ARPs. Because of the complexities involved in producing defensible items for high-stakes programs such as the STAR Program, it is essential that many experienced individuals review each item before it is brought to CDE and the ARP and Statewide Pupil Assessment Review (SPAR) panels.

The ETS review process for the CST included the following:

- Internal content review
- Internal editorial review
- Internal sensitivity review

Throughout this multi-step item review process, the lead content area assessment specialists and development team members continually evaluate the relevance of the information being assessed, its relevance to the California content standards, its match to the test and item specifications, and its appropriateness to the population being assessed. Items that are only peripherally related to the test and item specifications, that do not measure core outcomes reflected in the California content standards, or that are not developmentally appropriate are eliminated early in this rigorous review process.

Internal Content Review

Test items and materials receive two reviews from the content area assessment specialists. These assessment specialists make sure that the test items and related materials are in compliance with ETS's written guidelines for clarity, style, accuracy, and appropriateness for California students, and in compliance with the approved item specifications. Assessment specialists review each item following the criteria below:

- Relevance of each item as the item relates to the purpose of the test
- Match of each item to the item specifications, including cognitive level
- Match of each item to the principles of quality item development
- Match of each item to the identified standard (or standards, for history–social science)
- 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 artwork, graphs, figures, etc.

The assessment specialists also check all items against their classification codes, both to evaluate the correctness of the classification and to ensure that a given task is of a type appropriate to the outcome it was intended to measure. The reviewers accept the item and classification as written, suggest revisions, or recommend that the item be discarded. These steps occurred prior to CDE review.

Internal Editorial Review

After the content area assessment specialists review each item, a group of specially trained editors review each item in preparation for review by CDE and the ARPs. The editors check questions 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.

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, conduct the next level of review. These trained staff members review every item before it is prepared for CDE and ARP review. In addition, 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

Assessment Review Panels

ETS is responsible for working with ARPs as items are developed for the CSTs. The ARPs are advisory panels to CDE and ETS on areas related to the item development for the CSTs. The ARPs are responsible for reviewing all newly developed items for alignment to the California content standards. The ARPs also review the items for accuracy of item content, clarity of phrasing, and item quality. ETS provides the ARPs with the opportunity to review the items with the applicable field-test statistics and to make recommendations for the use of items in subsequent test forms. The ARPs may raise, in their examination of test items, concerns related to age/grade appropriateness, gender, racial/ethnic, and socioeconomic bias.

ARP Meetings for Review of CST Items

The ETS content area assessment specialists facilitate the CST ARP meetings. Each meeting begins with a brief training session on how to review items. ETS provides this training, which consists of the following steps:

- An overview of the purpose and scope of the CST
- An overview of the CST test design specifications and blueprints
- An analysis of the CST item specifications
- An 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:

- 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 distracters
- Bias and sensitivity factors

Criteria also include more global issues, including—for ELA—the appropriateness, difficulty, and readability of reading passages. The committee is also trained on how to make recommendations for revising items. Guidelines for reviewing items are provided by ETS and approved by CDE. The set of guidelines for reviewing items is summarized below:

Item Guidelines: 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 from bias against any person or group?

Stimulus Guidelines: 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, panel members review a set of items independently and record their individual comments. The next step in the review process is for the group to discuss each item. The content area assessment specialists facilitate the discussion and record all recommendations. These recommendations are recorded in a master item review booklet. Item review binders and other item evaluation materials also identify potential bias and sensitivity factors the ARP will consider as part of its item reviews.

Depending upon CDE approval and the numbers of items still to be reviewed, some ARPs are further divided into smaller groups. The Science ARP, for example, divides into content area and grade-level groups. These smaller groups are facilitated by the content area assessment specialists, as well.

ETS staff maintain 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.

SPAR Panel

The Statewide Pupil Assessment Review panel is responsible for reviewing and approving a single achievement test to be used statewide for the testing of students in California public schools, grades 2–11. At the SPAR panel meetings, all new items are presented in binders for review. The SPAR panel representatives ensure that the test items conformed to the requirements of *Education Code* Section 60614. The constructed-response writing tasks are also presented for review. If the SPAR panel rejects specific items and/or constructed-response writing tasks, the items and/or tasks are replaced. For the SPAR panel meeting, the item development coordinator or an ETS content

specialist who had been requested in advance by CDE attends the opening session and remains in a nearby location or near a telephone to be available to respond to any questions during the course of the meeting.

Technical Characteristics of the Assembled Tests

Technical characteristics of the assembled tests prior to administration were estimated using Gulliksen's (1987) formula for estimating test reliability from item p-values and item point-biserial correlations:

$$r_{xx} = \left(\frac{K}{K-1}\right)\left(1 - \frac{\sum_{g=1}^{K} s_g^{\,2}}{\left(\sum_{g=1}^{K} r_{xg} s_g\right)^2}\right), \tag{2.1}$$

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 means are calculated by summing the item p-values and estimated standard deviations are calculated by summing the item reliability indices. Table 2.B.1 on page 25 presents these summary values by subject area and grade.

In general, the projected reliabilities of the CSTs were at or above the levels considered acceptable for such tests, ranging from 0.88 to 0.94. These values were also consistent with reliability for the CSTs in the past several years. The English–language arts tests had the highest reliabilities, ranging from 0.93 to 0.94 across all grades. These values were very similar to values for 2004, 2005 and 2006.

It should be noted that the projected reliabilities in Table 2.B.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. Chapters 7 and 8 present item p-values, point-biserial correlations, and test reliability estimates based on the data from the 2007 CST administration.

Table 2.B.2 on page 25 shows the mean observed statistics based on field-test statistics for the CST tests. These values can be compared to the target values in Table 2.1. This generally suggests that the average difficulty of the test forms, based on field-test statistics, was in line with the target specifications. The spread of item difficulties was in line with specifications for the most part; however, in some cases the observed spread was less than the target spread. The field-test-based projected point-biserial correlation exceeded the target in all cases.

The graphics in Figure 2.B.1, Figure 2.B.2, Figure 2.B.3, and Figure 2.B.4, for the total test, and Figures 2.C.1 through 2.C.29, for the cluster scores, show the comparisons of the target test information function and the projected test information function based on field test item parameter estimates for each of the CSTs. Since the integrated tests like General Math and the integrated math and science tests are built from other test components, such analyses are not applicable for those tests. The information function of the linking set, adjusted to mimic full test length, is also presented for each test.

In 2007, some forms included items from the previous vendor for which b-values were not available. In such cases, the projected information function was computed based on a subset of the

items with the target adjusted for test length. For almost all tests, the projected test information curve and adjusted linking set information curve were reasonably close to the target curve. This was specifically true for Grade 3 Math, Algebra I, and Geometry in comparison to information functions computed in 2006. Exceptions to this scenario were most of the lower to middle level science tests, for which constructing a test of desired difficulty level from the current pool of items proved to be difficult. It is anticipated that, over the next few administrations, field-testing easier items will continue to adjust the overall difficulty of this test.

Item Development for 2007

As per the 2007 Scope of Work, ETS has developed an Item Utilization Plan to continue the development of items for CST, STS, CAPA, and CMA over the next five years. This plan includes strategies for continued coverage of all appropriate standards for all tests in each content area and at each grade level.

Item writer training was conducted over two days in Burbank in April 2006. An effort was made to evenly distribute the 60 participants across the four CST content areas. At this session, ETS test development specialists trained attendees in the basics of item writing. They also reviewed items that participants created during the training, offering feedback in both group and individual settings.

The development of new items during this cycle was limited to a level that would allow for replacement of items no longer available for use on operational forms. Thus, the item writers who participated were particularly experienced in writing to the standards assessed on the CSTs. All item writers met the following minimum qualifications:

- 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.

Reference

Gulliksen, H. *Theory of Mental Tests*. Hillsdale, NJ: Erlbaum, 1987.

Appendix 2.A—Reporting Clusters

English–Language Arts

Grade 2 English–Language Arts Standards Test

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

Grade 3 English–Language Arts Standards Test

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

Grade 4 English–Language Arts Standards Test

Reading	
Word Analysis and Vocabulary Development	18 items
Reading Comprehension	15 items
Literary Response and Analysis	9 items
Writing	
Writing Strategies	15 items
Written and Oral Language Conventions	18 items
Writing Applications	8 points (1 task)

Grade 5 English–Language Arts Standards Test

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

Grade 6 English–Language Arts Standards Test

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

Writing	
Writing Strategies	17 items
Written Conventions	16 items

Grade 7 English–Language Arts Standards Test

Reading	
Word Analysis and Vocabulary Development	11 items
Reading Comprehension	18 items
Literary Response and Analysis	13 items
Writing	
Writing Strategies	17 items
Written Conventions	16 items
Writing Applications	8 points (1 task)

Grade 8 English–Language Arts Standards Test

Reading	
Word Analysis and Vocabulary Development	9 items
Reading Comprehension	18 items
Literary Response and Analysis	15 items
Writing	
Writing Strategies	17 items
Written Conventions	16 items

Grade 9 English–Language Arts Standards Test

Reading	
Word Analysis and Vocabulary Development	8 items
Reading Comprehension	18 items
Literary Response and Analysis	16 items
Writing	
Writing Strategies	20 items
Written Conventions	13 items

Grade 10 English–Language Arts Standards Test

Reading	
Word Analysis and Vocabulary Development	8 items
Reading Comprehension	18 items
Literary Response and Analysis	16 items
Writing	
Writing Strategies	20 items
Written Conventions	13 items

Grade 11 English–Language Arts Standards Test

Reading	
Word Analysis and Vocabulary Development	8 items
Reading Comprehension	19 items
Literary Response and Analysis	17 items

Writing	
Writing Strategies	22 items
Written Conventions	9 items

History–Social Science

Grade 8 History–Social Science Standards Test

World History and Geography: Ancient Civilizations (Grade 6 Standards)	16 items
World History and Geography: Medieval and Early Modern Times (Grade 7 Standards)	
Late Antiquity and the Middle Ages	14 items
Renaissance/Reformation	10 items
United States History and Geography: Growth and Conflict (Grade 8 Standards)	
U.S. Constitution and the Early Republic	22 items
Civil War and its Aftermath	13 items

Grade 11 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: 5–6	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: 1–2	13 items
Industrial Expansion and Imperialism	
Standards: 3–4	10 items
Causes and Effects of the First World War	
Standards: 5–6	14 items
Causes and Effects of the Second World War	
Standards: 7–8	13 items
International Developments in the Post-World War II Era	
Standards: 9–10	10 items

Mathematics

Grade 2 Mathematics Standards Test

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

Grade 3 Mathematics Standards Test

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

Grade 4 Mathematics Standards Test

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

Grade 5 Mathematics Standards Test

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

Grade 6 Mathematics Standards Test

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

Grade 7 Mathematics Standards Test

Number Sense	
Rational numbers	14 items
Exponents, powers, and roots	8 items
Algebra and Functions	
Quantitative relationships and evaluating expressions	10 items
Multi-step problems, graphing, and functions	15 items
Measurement and Geometry	13 items
Statistics, Data Analysis, and Probability	5 items

Grade 8/9 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
Multi-step 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	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

(Note: Standards 24.0–25.3 are embedded within the 65 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	17 items
Exponents and Logarithms	
Standards: 11.0–15.0	15 items
Series, Combinatorics, and Probability and Statistics	
Algebra II Standards 18.0–25.0 and Probability and Statistics 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

Integrated Mathematics 1 Standards Test

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

Integrated Mathematics 2 Standards Test

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 Statistic	5 items

Integrated Mathematics 3 Standards Test

Geometry	5 items
Algebra II	
Polynomials and rational expressions	19 items
Quadratics, conics, and complex numbers	17 items
Exponents and logarithms	15 items
Series, combinatorics, and probability and statistics	9 items

Science

Grade 5 Science Standards Test

Physical Science	
Grade 5	11 items
Grade 4	8 items
Life Science	
Grade 5	13 items
Grade 4	9 items
Earth Science	
Grade 5	11 items
Grade 4	8 items

Grade 8 Science Standards Test

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

Grade 10 Life Science Standards Test

Cell Biology	
Standards: 1 a–h	10 items
Genetics	
Standards: 2 a–g, 3 a–b, 4 a–e, 5 a–c	12 items
Ecology	
Standards: 6 a–f	11 items
Evolution	
Standards: 7 a–d, 8 a–e	11 items
Physiology	
Standards: 9 a–e, 10 a–e	10 items
Investigation and Experimentation	
Standards: 1 a–n	6 items

Biology Standards Test

Cell Biology	
Standards: 1 a–h	9 items
Genetics	
Standards: 2 a–g, 3 a–b, 4 a–e, 5 a–c	18 items
Ecology and Evolution	

Ecology (Standards: 6 a–f) Evolution (Standards: 7 a–d, 8 a–e)	16 items
Physiology	
Standards: 9 a–e, 10 a–e	11 items
Investigation and Experimentation	
Standards: 1 a–n	6 items
Chemistry Standards Test	
Atomic and Molecular Structure	
Atomic and molecular structure (Standards: 1 a–e) Nuclear processes (Standards: 11 a–e)	8 items
Chemical Bonds, Biochemistry	
Chemical bonds (Standards: 2 a–e) Organic and biochemistry (Standards: 10 a–c)	9 items
Kinetics, Thermodynamics	
Gases and their properties (Standards: 4 a–f) Chemical thermodynamics (Standards: 7 a–d) Solutions (Standards: 6 a–d)	14 items
Chemical Reactions	
Acids and bases (Standards: 5 a–d) Reaction rates (Standards: 8 a–c) Chemical equilibrium (Standards: 9 a–b)	13 items
Conservation of Matter and Stoichiometry	
Standards: 3 a–e	10 items
Investigation and Experimentation	
Standards: 1 a–n	6 items
Earth Science Standards Test	
Astronomy and Cosmology	
Earth's place in the universe (Standards: 1 a–f, 2 a–d)	12 items
Solid Earth	
Dynamic earth processes (Standards: 3 a–e) California geology (Standards: 9 a–c)	14 items
The Earth's Energy	
Energy in the Earth system (Standards: 4 a–c, 5 a–e, 6 a–c) Structure and composition of the atmosphere (Standards: 8 a–c) Biogeochemical cycles (Standards: 7 a-c)	28 items
Investigation and Experimentation	
Standards: 1 a–n	6 items
Physics Standards Test	
Motion and Forces	
Standards: 1 a–g	12 items
Conservation of Energy and Momentum	
Standards: 2 a–g	12 items

Heat and Thermodynamics	
Standards: 3 a–e	9 items
Waves	
Standards: 4 a–f	10 items
Electric and Magnetic Phenomena	
Standards: 5 a–i	11 items
Investigation and Experimentation	
Standards: 1 a–n	6 items

Integrated Science 1 Standards Test

Biology/Life Sciences	
Ecology (Standards: 6 a–f) Evolution (Standards: 8 a–b, e)	10 items
Chemistry	
Atomic and Molecular structure (Standards: 1 a–e) Chemical bonds (Standards: 2 a–c) Acids and bases (Standards: 5 a, c) Chemical thermodynamics (Standards: 7 b–c)	15 items
Earth Sciences	
Dynamic earth processes (Standards: 3 a–e) Biogeochemical cycles (Standards: 7 a–c) California geology (Standards: 9 b–c)	17 items
Physics	
Waves (Standards: 4 a–b, d–f) Electric and magnetic phenomena (Standards: 5 d–e, h–i)	12 items
Investigation and Experimentation	
Standards: 1 a–n	6 items

Integrated Science 2 Standards Test

Biology/Life Sciences	
Cell biology (Standards: 1 a, c–e, h) Genetics (Standards: 2 a–c, e–g, 3 a-b, 4 a–b)	15 items
Chemistry	
Conservation of matter and stoichiometry (Standards: 3 a) Solutions (Standards: 6 a–c) Organic and biochemistry (Standards: 10 a–c)	6 items
Earth Sciences	
Earth's place in the universe (Standards: 1 a, c, f) Energy in the Earth system (Standards: 4 b, 5 a–c, e, 6 a–c)	15 items
Physics	
Motions and forces (Standards: 1 a–f) Conservation of energy and momentum (Standards: 2 a–d)	18 items
Investigation and Experimentation	
Standards: 1 a–n	6 items

Integrated Science 3 Standards Test

Biology/Life Sciences	
Cell biology (Standards: 1 b, f, g) Genetics (Standards: 2 d, 4 c–e, 5 c) Evolution (Standards: 7 a–d, 8 c–d)	16 items
Chemistry	
Conservation of matter and stoichiometry (Standards: 3 b–e) Gases and their properties (Standards: 4 a–f) Solutions (Standards: 6 d) Reaction rates (Standards: 8 a–c) Chemical equilibrium (Standards: 9 a–b)	23 items
Earth Sciences	
Energy in the Earth system (Standards: 4 c) Structure and composition of the atmosphere (Standards: 8 a–c)	7 items
Physics	
Motions and forces (Standards: 1 g) Conservation of energy and momentum (Standards: 2 e–g) Electric and magnetic phenomena (Standards: 5 f–g)	8 items
Investigation and Experimentation	
Standards: 1 a–n	6 items

Integrated Science 4 Standards Test

Biology/Life Sciences	
Genetics (Standards: 5 a–b) Physiology (Standards: 9 a–e, 10 a–e)	13 items
Chemistry	
Chemical bonds (Standards: 2 d–e) Acids and bases (Standards: 5 b, d) Chemical thermodynamics (Standards: 7 a–d) Nuclear processes (Standards: 11 a–e)	10 items
Earth Sciences	
Earth's place in the universe (Standards: 1 b, d–e, 2 a–d) Energy in the Earth system (Standards: 4 a, 5 d) California geology (Standards: 9 a)	15 items
Physics	
Heat and thermodynamics (Standards: 3 a–e) Waves (Standards: 4 c) Electric and magnetic phenomena (Standards: 5 a–c)	16 items
Investigation and Experimentation	
Standards: 1 a–n	6 items

Appendix 2.B—Technical Characteristics Tables and Plots

Table 2.B.1 Summary of 2007 CST Projected Technical Characteristics

Subject	CST	Number of Items	Mean Raw Score	Standard Deviation of Raw Scores	Reliability
English–Language Arts	**2**	65	40.11	14.09	0.94
	3	65	40.04	12.56	0.93
	4*	75	44.76	15.04	0.94
	5	75	44.05	14.65	0.94
	6	75	42.03	14.56	0.93
	7*	75	44.15	14.36	0.93
	8	75	43.96	14.44	0.93
	9	75	43.15	15.45	0.94
	10	75	43.13	15.66	0.94
	11	75	42.98	15.79	0.94
History–Social Science	**8**	75	37.72	13.63	0.91
	World History	60	30.05	10.78	0.89
	11	60	30.07	11.12	0.90
Mathematics	**2**	65	47.58	11.38	0.93
	3	65	46.99	12.11	0.93
	4	65	44.94	12.93	0.94
	5	65	39.08	12.89	0.93
	6	65	37.76	12.62	0.92
	7	65	36.19	12.69	0.92
	General Mathematics	65	32.97	10.91	0.89
	Algebra I	65	34.48	11.71	0.91
	Geometry	65	42.38	11.76	0.92
	Algebra II	65	36.52	10.30	0.88
	High School Mathematics	65	44.65	11.94	0.92
	Integrated Math 1	65	37.41	12.61	0.92
	Integrated Math 2	65	39.07	10.75	0.90
	Integrated Math 3	65	36.90	10.41	0.88
Science	**Grade 5 Science**	60	34.77	10.12	0.88
	Grade 8 Science	60	32.12	10.80	0.90
	Grade 10 Life Science	60	33.00	12.58	0.93
	Biology	60	32.54	11.17	0.90
	Chemistry	60	34.67	10.28	0.89
	Earth Science	60	31.38	10.57	0.89
	Physics	60	33.43	10.52	0.89
	Integrated Science 1	60	33.83	10.43	0.89
	Integrated Science 2	60	33.31	10.63	0.89
	Integrated Science 3	60	31.10	10.74	0.89
	Integrated Science 4	60	33.78	10.74	0.89

* MC items

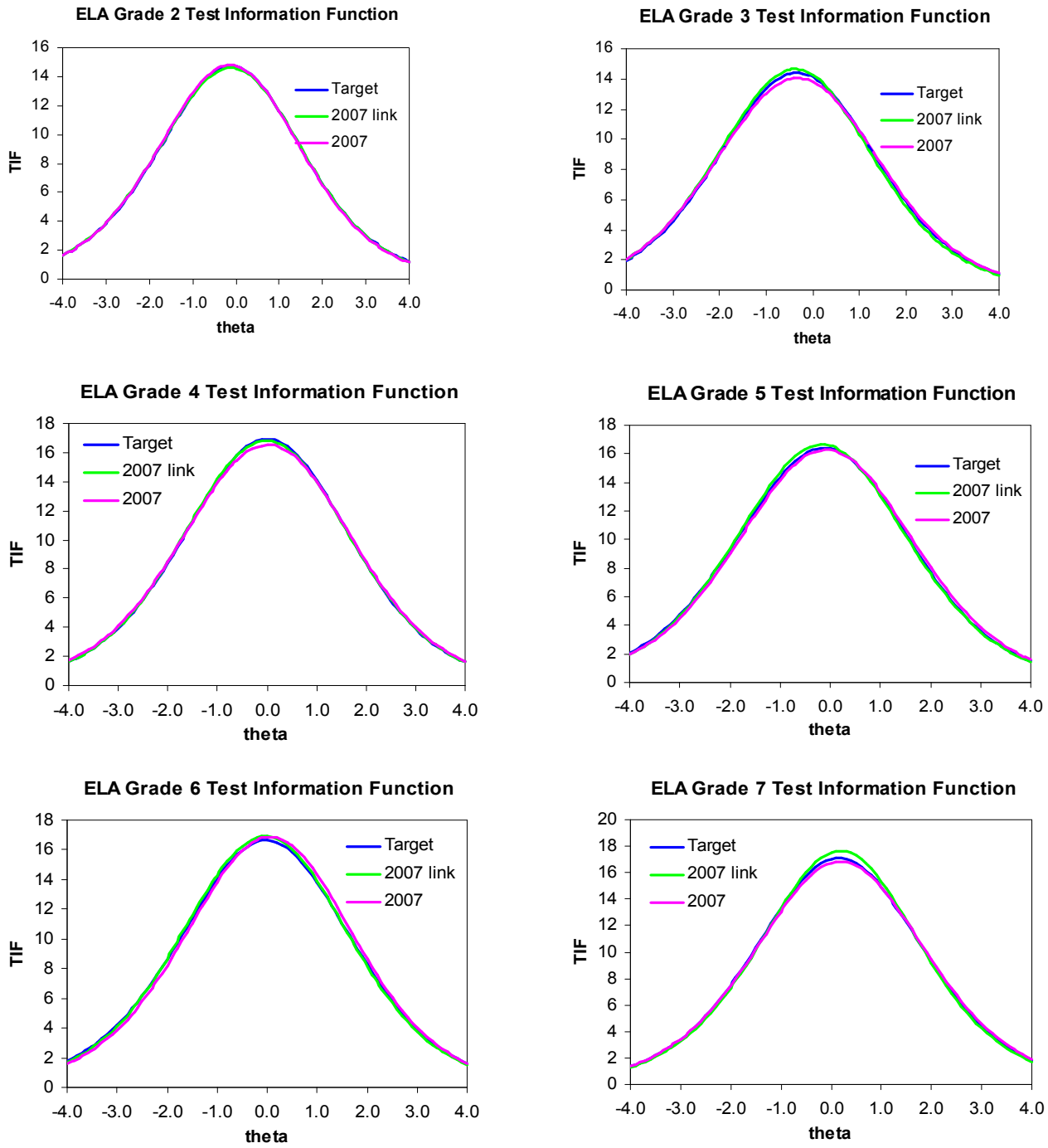
Table 2.B.2 Summary of 2007 CST Projected Statistical Attributes

Subject	CST	Mean b	SD b	Mean p-value	Min p-value	Max p-value	Mean Point Biserial	Min Point Biserial
English–Language Arts	**2***	-0.17	0.66	0.62	0.35	0.86	0.46	0.20
	3*	-0.33	0.82	0.62	0.31	0.88	0.42	0.23
	4*	-0.01	0.76	0.60	0.30	0.91	0.43	0.24
	5*	-0.09	0.82	0.59	0.27	0.93	0.42	0.23
	6*	0.03	0.68	0.56	0.27	0.86	0.41	0.28
	7*	0.18	0.70	0.59	0.27	0.87	0.41	0.22
	8*	-0.11	0.54	0.59	0.30	0.83	0.40	0.18
	9*	-0.08	0.57	0.58	0.33	0.88	0.43	0.19
	10*	-0.17	0.55	0.58	0.34	0.80	0.43	0.24
	11*	-0.20	0.61	0.57	0.27	0.82	0.44	0.18
History–Social Science	**8**	0.18	0.42	0.50	0.36	0.81	0.37	0.18
	World History	0.15	0.37	0.50	0.29	0.65	0.37	0.21
	11	0.10	0.48	0.50	0.30	0.71	0.38	0.18
Mathematics	**2**	-0.88	0.99	0.73	0.19	0.95	0.42	0.26
	3	-0.75	0.94	0.72	0.36	0.95	0.44	0.26
	4	-0.61	0.72	0.69	0.24	0.88	0.45	0.30
	5	-0.20	0.82	0.60	0.26	0.87	0.43	0.24
	6	-0.22	0.79	0.58	0.20	0.87	0.41	0.22
	7	-0.02	0.70	0.56	0.21	0.87	0.41	0.21
	General Math**	N/A	N/A	0.50	0.17	0.87	N/A	0.15
	Algebra I	-0.01	0.75	0.53	0.22	0.82	0.38	0.19
	Geometry	-0.77	0.79	0.65	0.35	0.91	0.40	0.18
	Algebra II	-0.41	0.94	0.56	0.21	0.96	0.34	0.15
	High School Math**	N/A	N/A	0.69	0.36	0.93	N/A	0.23
	Integrated Math 1**	N/A	N/A	N/A	0.26	0.85	N/A	0.16
	Integrated Math 2**	N/A	N/A	N/A	0.24	0.91	N/A	0.19
	Integrated Math 3**	N/A	N/A	N/A	0.25	0.91	N/A	0.19
Science	**Grade 5 Science**	-0.55	0.71	0.58	0.31	0.91	0.36	0.19
	Grade 8 Science	-0.07	0.58	0.54	0.20	0.76	0.37	0.20
	Grade 10 Life Science	-0.18	0.57	0.55	0.29	0.81	0.43	0.22
	Biology	-0.22	0.48	0.54	0.34	0.80	0.38	0.17
	Chemistry	-0.29	0.66	0.58	0.29	0.82	0.36	0.20
	Earth Science	0.02	0.47	0.52	0.26	0.75	0.36	0.16
	Physics	-0.18	0.60	0.56	0.28	0.83	0.36	0.19
	Integrated Science 1**	N/A	N/A	N/A	0.25	0.73	N/A	0.17
	Integrated Science 2**	N/A	N/A	N/A	0.38	0.82	N/A	0.19
	Integrated Science 3**	N/A	N/A	N/A	0.25	0.81	N/A	0.18
	Integrated Science 4**	N/A	N/A	N/A	0.28	0.78	N/A	0.20

* For those tests, not all test items had pretest b-values. The number of items with missing b-values for those tests ranged from 4 to 16. The projected mean and standard deviation of b-values in such cases were based only on the subset of test items, which had pretest b-values.

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

Figure 2.B.1 Comparison Plots for Target Information Function and Projected Test and Link Information for English–Language Arts



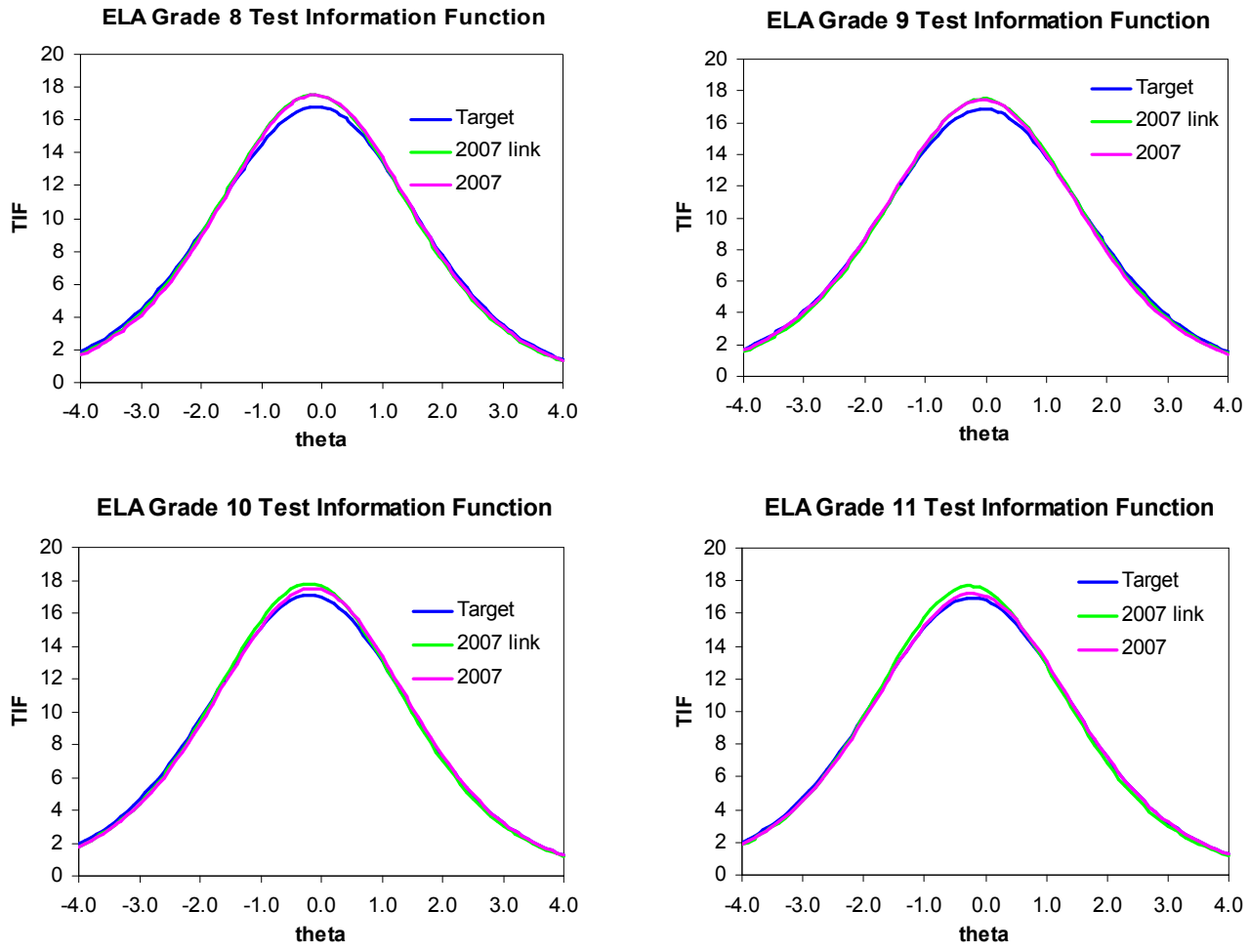
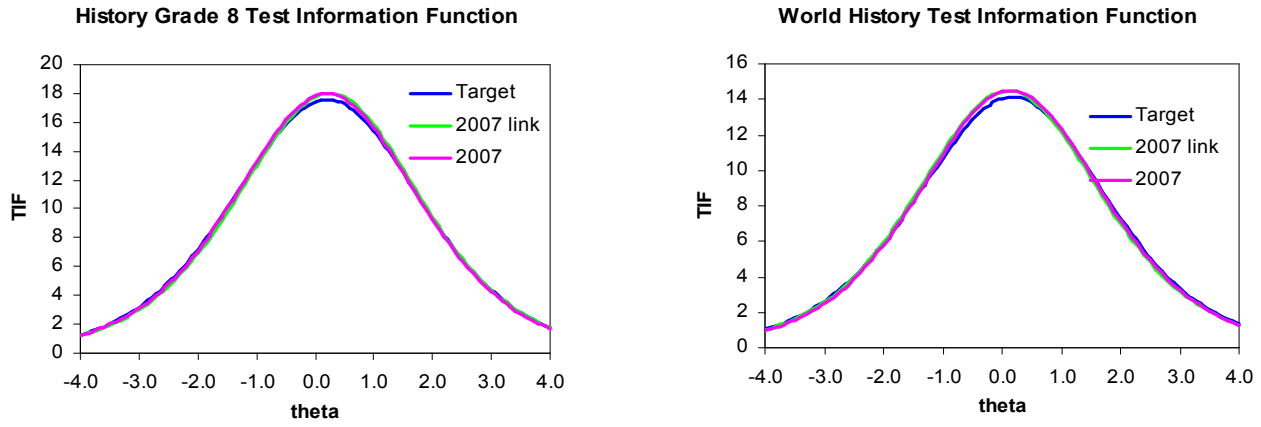


Figure 2.B.2 Comparison Plots for Target Information Function and Projected Test and Link Information for History–Social Science



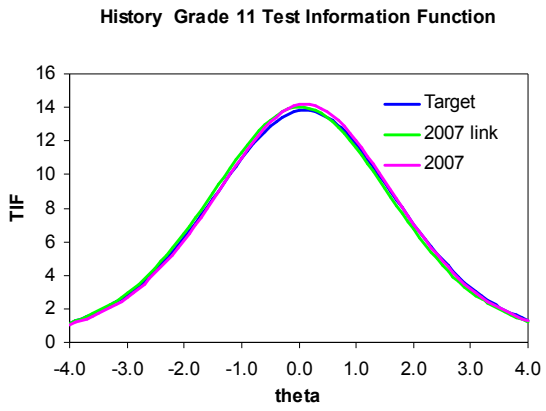
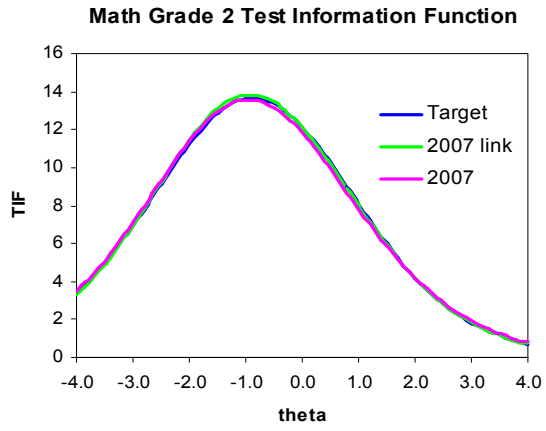
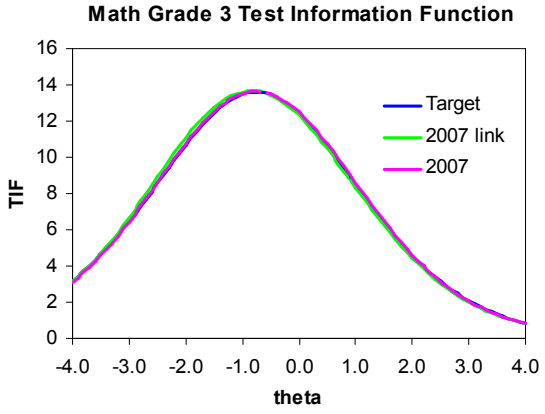
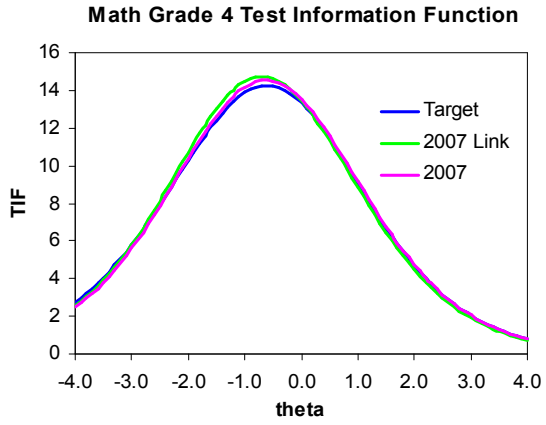
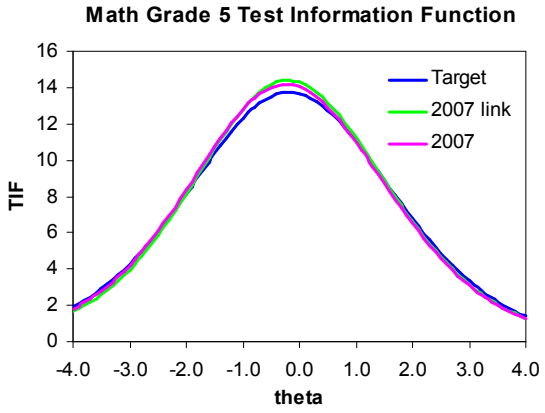


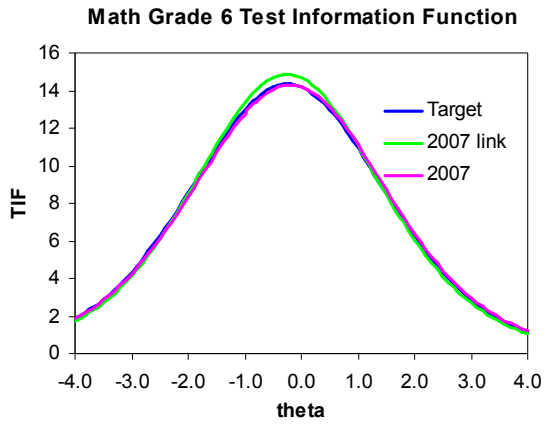
Figure 2.B.3 Comparison Plots for Target Information Function and Projected Test and Link Information for Mathematics

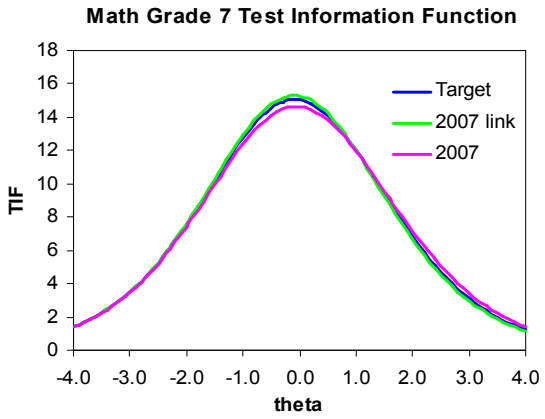


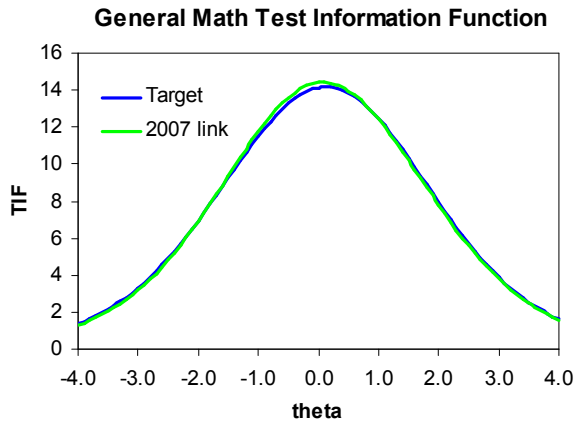


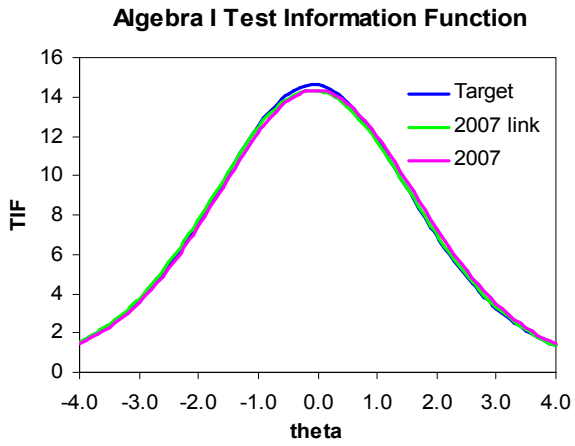


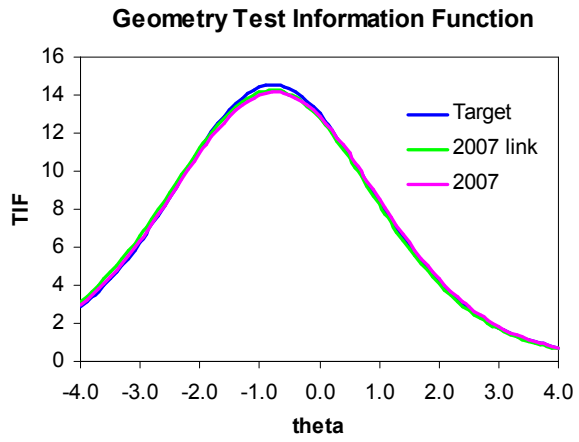


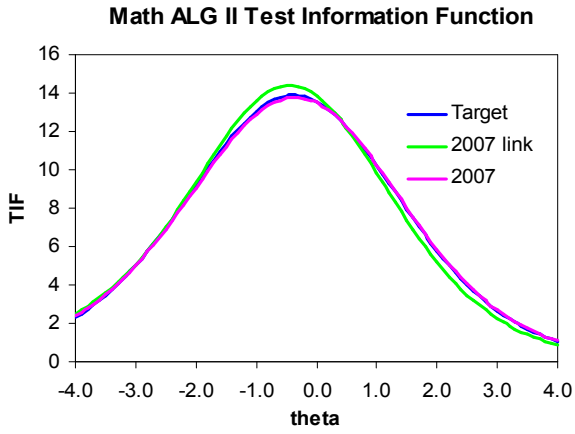

Math Grade 6 Test Information Function
TIF
theta
Target
2007 link
2007


Math Grade 7 Test Information Function
TIF
theta
Target
2007 link
2007


General Math Test Information Function
TIF
theta
Target
2007 link


Algebra I Test Information Function
TIF
theta
Target
2007 link
2007


Geometry Test Information Function
TIF
theta
Target
2007 link
2007


Math ALG II Test Information Function
TIF
theta
Target
2007 link
2007

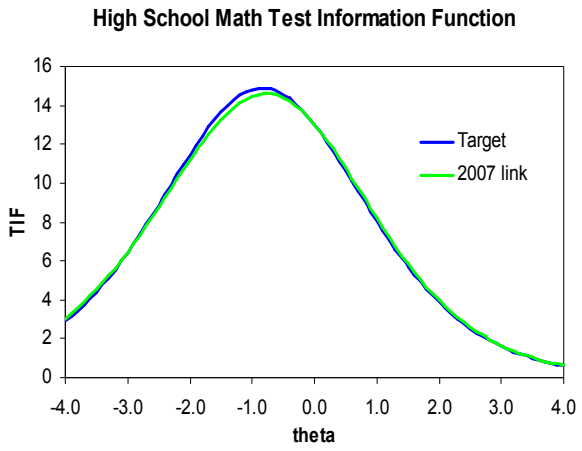
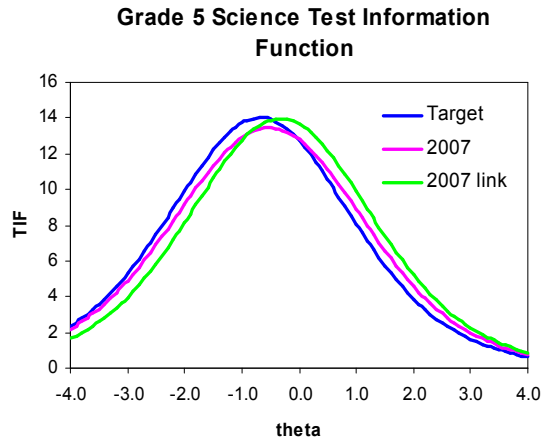
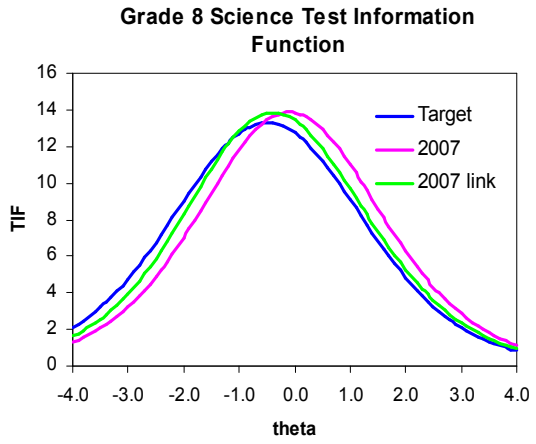
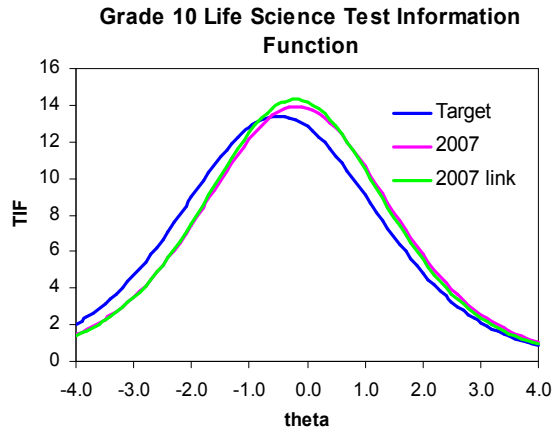
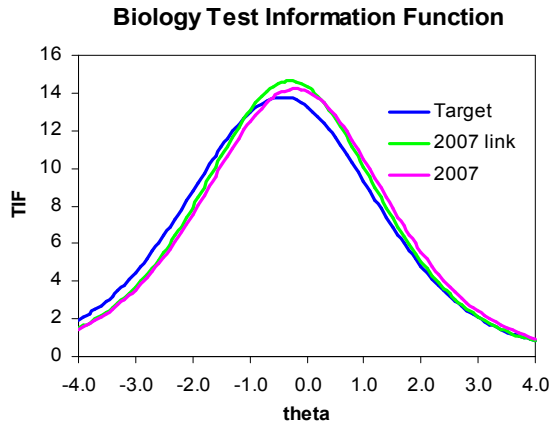


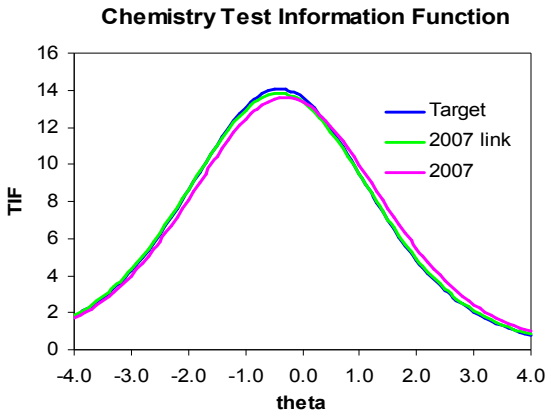
Figure 2.B.4 Comparison Plots for Target Information Function and Projected Test and Link Information for Science

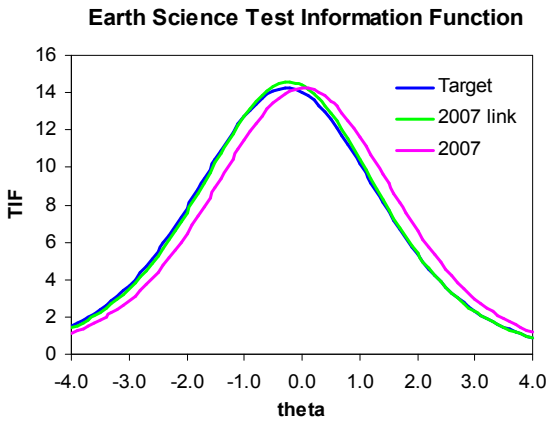


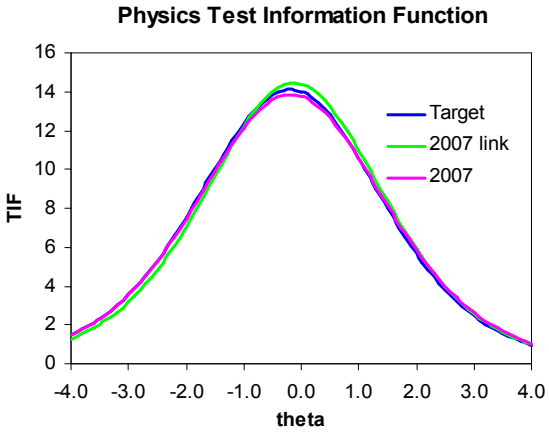







Chemistry Test Information Function
TIF
theta
Target
2007 link
2007
16
14
12
10
8
6
4
2
0
-4.0
-3.0
-2.0
-1.0
0.0
1.0
2.0
3.0
4.0


Earth Science Test Information Function
TIF
theta
Target
2007 link
2007
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


Physics Test Information Function
TIF
theta
Target
2007 link
2007
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 2.C—Cluster Targets

Table 2.C.1 Target Cluster IRT b-values for English–Language Arts (Grades 2 thru 7)

Clusters	Grade 2			Grade 3			Grade 4			Grade 5			Grade 6		
	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev
1	22	-0.31	0.85	20	-0.59	0.77	18	-0.33	0.74	14	-0.25	0.69	13	-0.20	0.71
2	15	-0.03	0.63	15	-0.07	0.61	15	0.04	0.69	16	0.06	0.93	17	0.20	0.62
3	6	-0.10	0.52	8	-0.63	0.83	9	0.06	0.75	12	-0.50	0.76	12	0.09	0.59
4	14	-0.22	0.56	13	-0.39	0.75	18	0.01	0.63	17	-0.33	1.02	16	-0.51	0.98
5	8	0.19	0.65	9	0.13	0.58	15	0.29	0.55	16	0.11	0.49	17	0.17	0.68

Table 2.C.2 Target Cluster IRT b-values for English–Language Arts (Grades 8 thru 11)

Clusters	Grade 7			Grade 8			Grade 9			Grade 10			Grade 11		
	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev
1	11	-0.19	0.64	9	-0.31	0.79	8	-0.12	0.66	8	-0.62	0.72	8	-0.43	0.57
2	18	-0.06	0.62	18	-0.04	0.69	18	-0.07	0.78	18	-0.18	0.61	19	-0.34	0.70
3	13	0.34	0.65	15	-0.11	0.62	16	0.09	0.67	16	0.12	0.52	17	0.09	0.71
4	16	0.23	0.64	16	-0.08	0.80	13	-0.23	0.62	13	-0.19	0.79	9	-0.25	0.69
5	17	0.40	0.57	17	-0.24	0.72	20	0.02	0.71	20	-0.35	0.54	22	-0.29	0.63

Table 2.C.3 Target Cluster IRT b-values for History–Social Science (Grade 8, World History, Grade 11)

Clusters	Grade 8			World History			Grade 11		
	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev
1	16	0.23	0.62	13	0.06	0.48	10	0.14	0.46
2	14	0.19	0.45	10	0.07	0.38	13	0.05	0.73
3	10	0.32	0.57	14	0.18	0.48	12	0.07	0.63
4	22	0.13	0.57	13	0.16	0.62	12	0.10	0.70
5	13	0.11	0.44	10	0.28	0.63	13	0.07	0.52

Table 2.C.4 Target Cluster IRT b-values for Mathematics (Grades 2 thru 7)

Clusters	Grade 2			Grade 3			Grade 4			Grade 5			Grade 6			Grade 7		
	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev
1	15	-0.65	0.80	16	-0.70	1.04	17	-0.89	1.04	12	-0.04	0.95	15	-0.12	0.84	14	-0.07	0.65
2	23	-0.82	0.89	16	-0.45	0.64	14	-0.56	0.64	17	-0.09	0.66	10	-0.39	0.56	8	0.27	0.42
3	6	-0.92	0.99	12	-0.86	0.93	18	-0.78	0.70	17	-0.32	1.09	19	-0.54	0.83	10	-0.17	0.74
4	14	-1.17	1.02	16	-0.86	1.15	12	-0.17	0.71	15	0.06	0.92	10	0.07	0.61	15	-0.17	0.60
5	7	-0.88	1.20	5	-1.32	1.31	4	-0.96	1.05	4	-1.04	1.38	11	-0.11	0.83	13	-0.03	0.41

Table 2.C.5 Target Cluster IRT b-values for Mathematics End-of-Course Tests

Clusters	General Mathematics			Algebra I			Geometry			Algebra II			Summative H.S. Mathematics		
	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev
1	14	0.12	0.70	14	0.12	0.70	23	-0.89	0.69	19	-0.83	1.07	18	-0.99	0.65
2	10	0.50	0.59	10	0.50	0.59	11	-0.63	0.83	17	-0.18	0.72	19	-0.90	0.64
3	11	-0.30	0.77	11	-0.30	0.77	16	-0.66	0.77	15	-0.51	0.53	23	-0.73	0.57
4	10	-0.02	0.99	10	-0.02	0.99	15	-0.81	0.66	14	0.00	0.96	5	-0.42	0.77
5	11	0.41	0.61	11	0.41	0.61									

Table 2.C.6 Target Cluster IRT b-values for Integrated Mathematics Tests

Clusters	Integrated Math 1			Integrated Math 2			Integrated Math 3		
	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev
1	15	-0.44	0.57	20	0.02	0.93	5	-0.75	0.93
2	9	0.05	0.37	22	0.01	0.69	19	0.00	1.07
3	14	0.34	0.63	8	0.36	0.62	17	0.10	0.66
4	7	0.77	0.44	10	0.10	0.72	16	-0.26	0.55
5	20	0.60	0.71	5	0.17	0.66	8	0.13	0.63

Table 2.C.7 Target Cluster IRT b-values for Science (Grades 5, 8 and 10)

Clusters	Grade 5 Science			Grade 8 Science			Grade 10 Life Science		
	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev
1	11	-0.81	0.75	8	-0.09	0.77	10	-0.04	0.93
2	8	-0.64	0.34	13	-0.62	0.72	12	-0.21	0.64
3	13	-0.70	0.46	16	-0.56	0.67	10	-0.63	0.63
4	9	-0.85	0.53	7	-0.56	0.85	11	-0.54	0.66
5	11	-0.68	0.63	10	-0.24	0.74	11	-0.61	0.61
6				6	-0.88	0.69	6	-1.10	0.51

Table 2.C.8 Target Cluster IRT b-values for Science End-of Course Tests

Clusters	Biology			Chemistry			Earth Science			Physics		
	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev	N	Mean	Stdev
1	9	-0.10	0.50	8	-0.52	0.52	12	-0.37	0.44	12	-0.43	0.52
2	18	-0.44	0.68	9	-0.62	0.44	14	-0.32	0.44	12	-0.24	0.52
3	16	-0.44	0.45	14	-0.36	0.55	28	-0.16	0.52	9	-0.40	0.61
4	11	-0.86	0.70	13	-0.08	0.45	6	-0.46	0.31	10	-0.14	0.40
5	6	-0.26	0.49	10	-0.37	0.56				11	0.15	0.43
6				6	-0.93	0.34				6	-0.20	0.44

Figure 2.C.1Comparison Plots for Target Cluster Information Function and Projected Cluster Information for ELA Grade 2

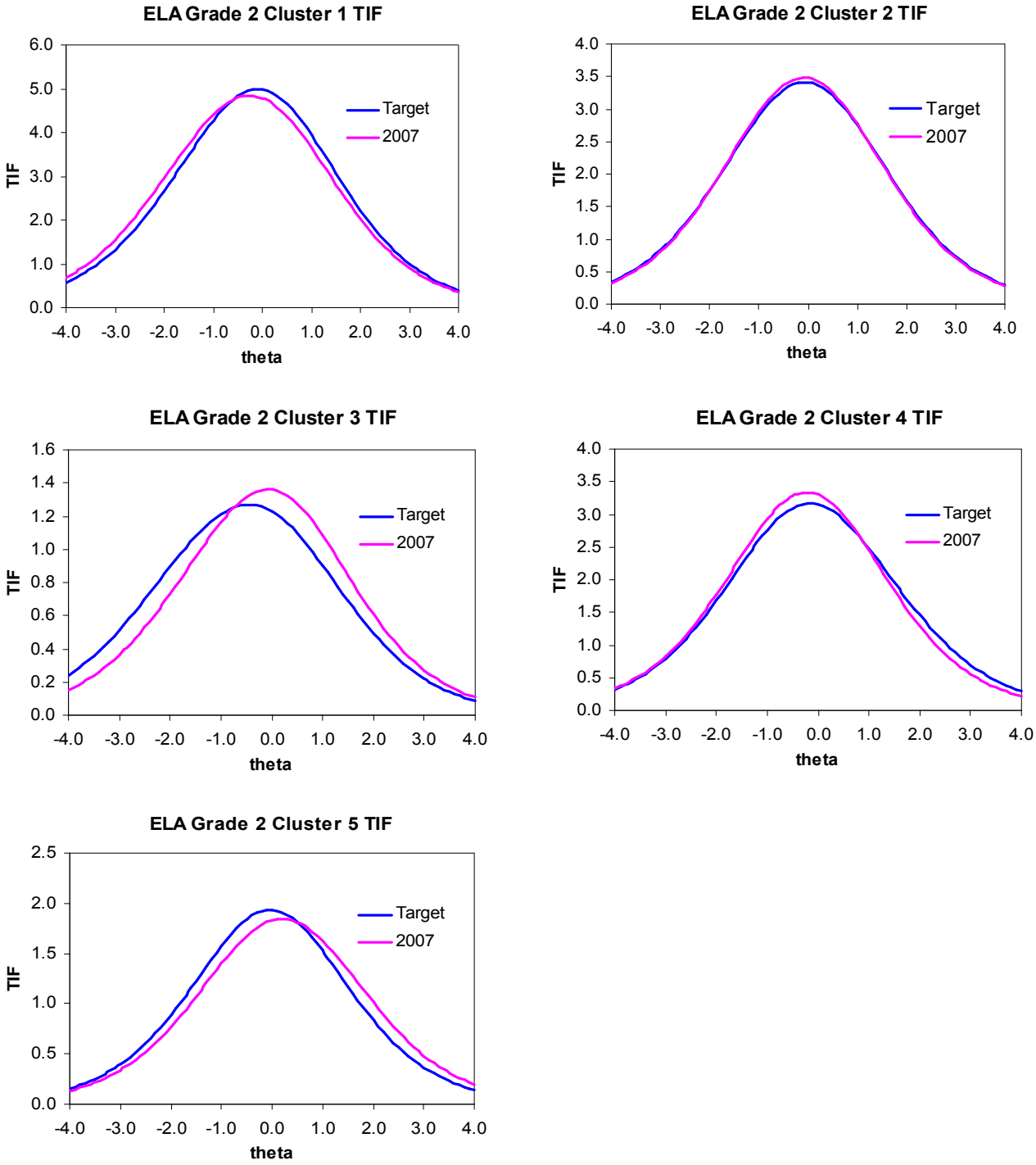


Figure 2.C.2 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for ELA Grade 3

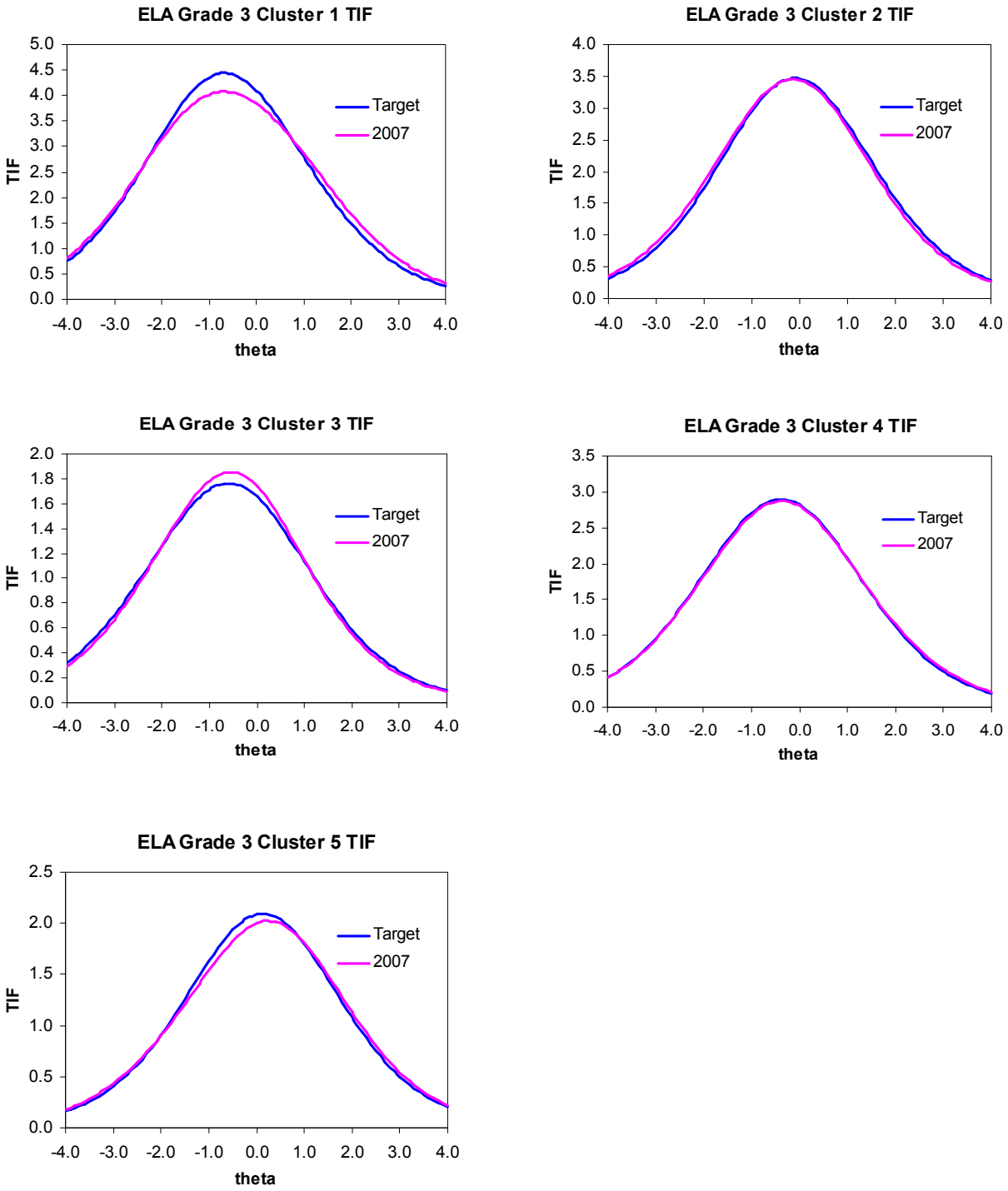


Figure 2.C. 3 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for ELA Grade 4

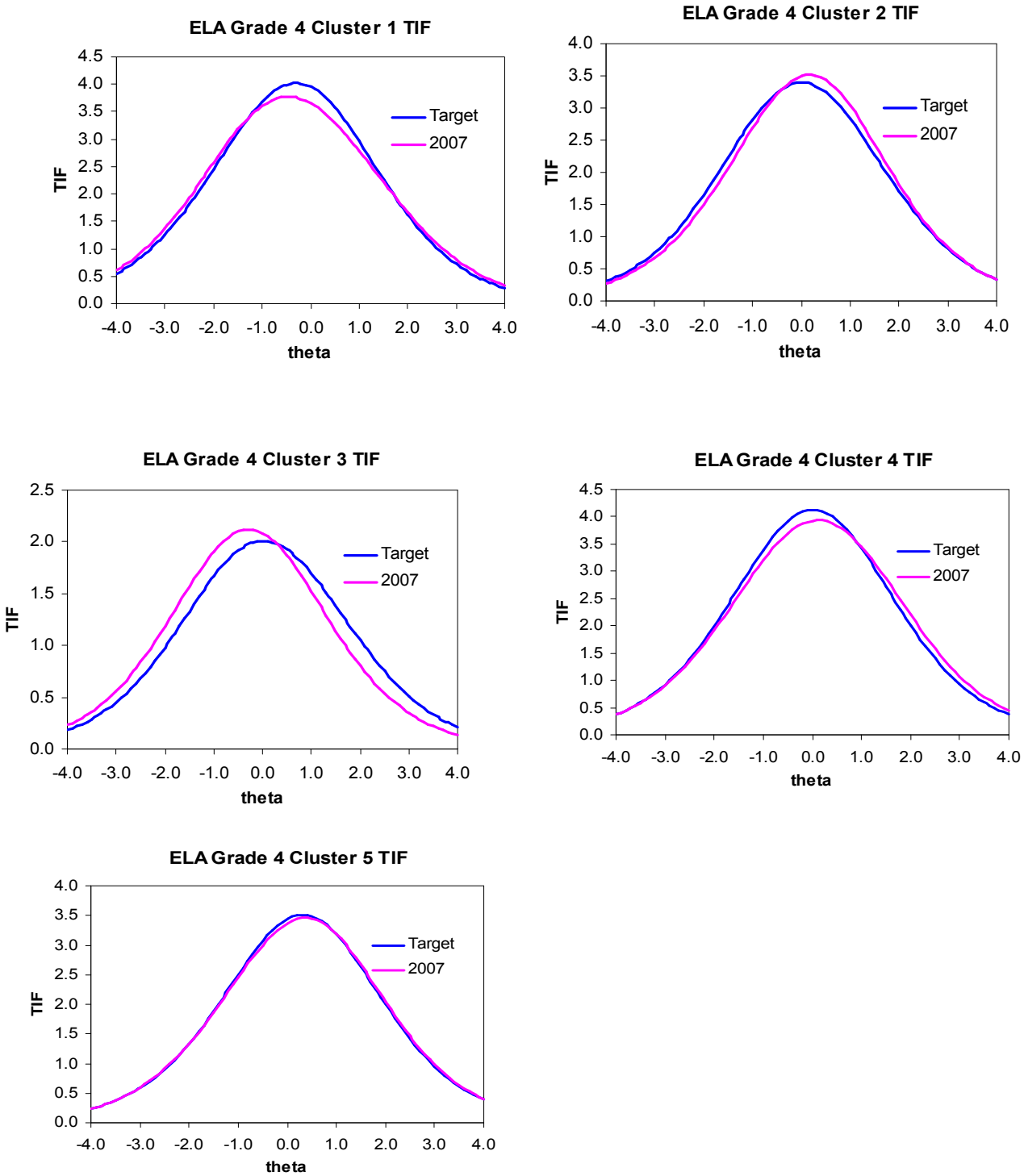
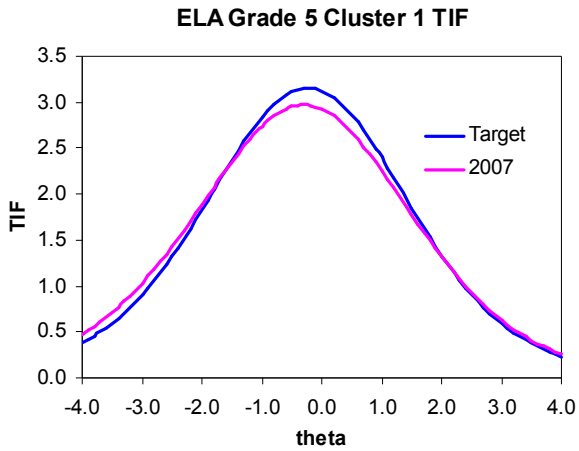
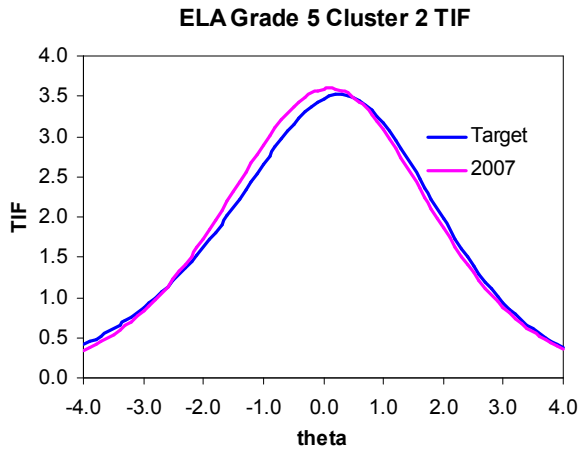
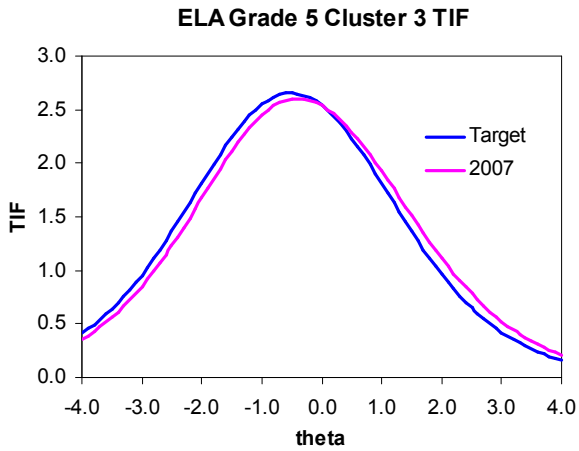
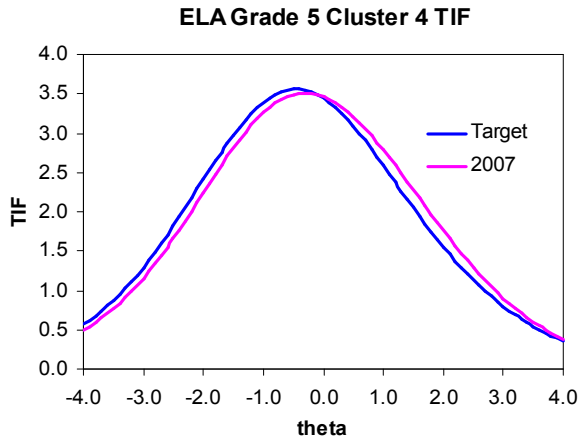


Figure 2.C.4 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for ELA Grade 5









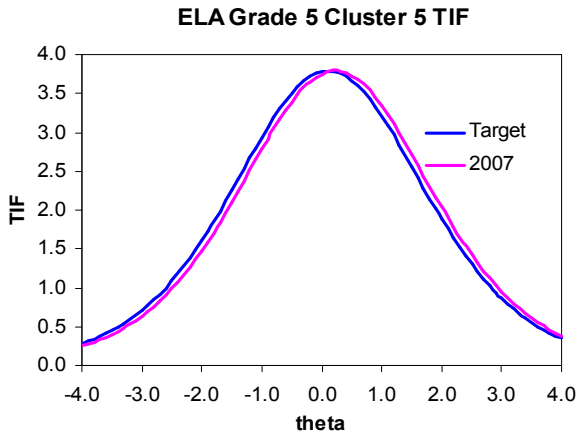
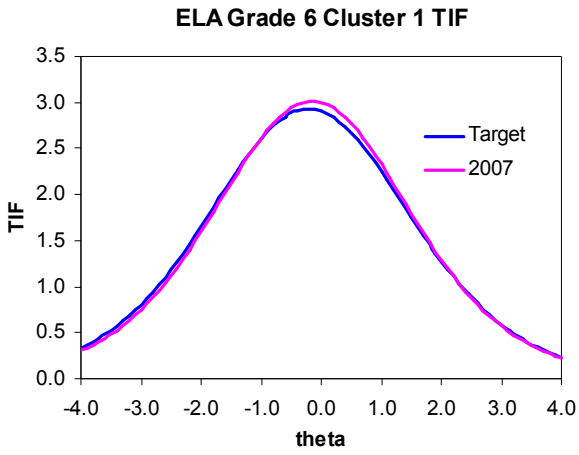
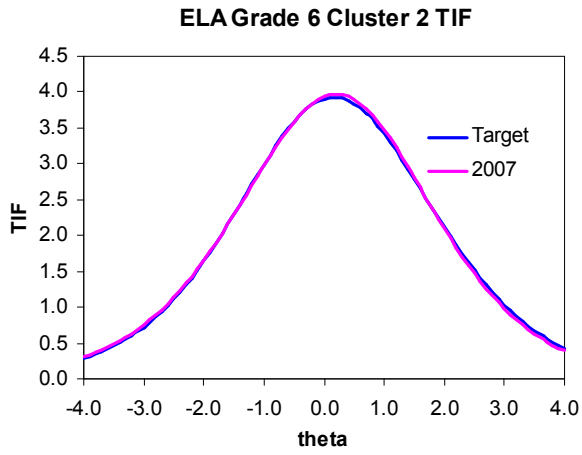
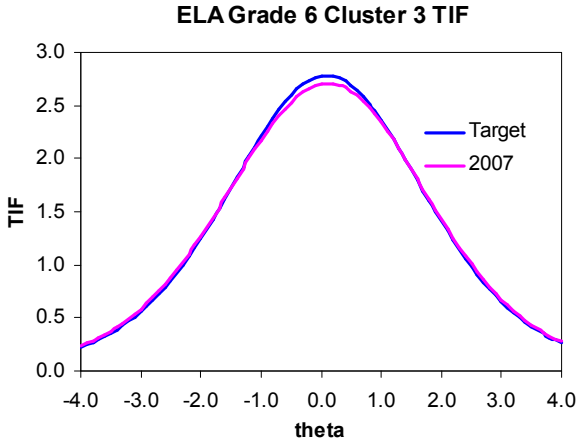
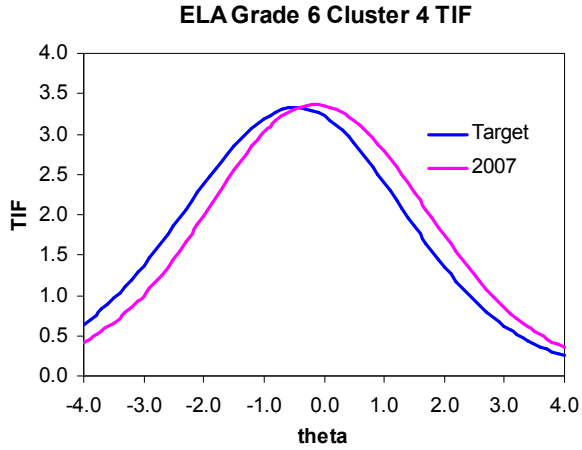


Figure 2.C.5 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for ELA Grade 6









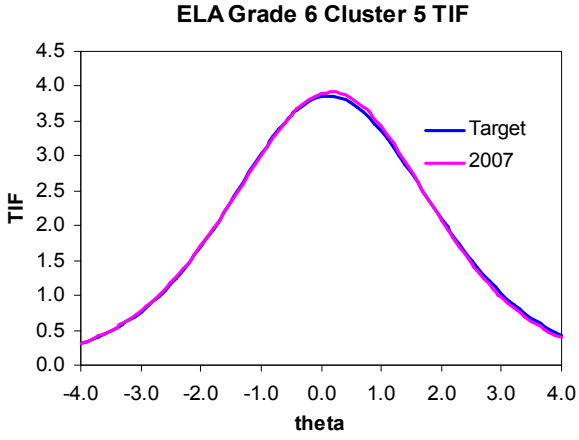


Figure 2.C.6 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for ELA Grade 7

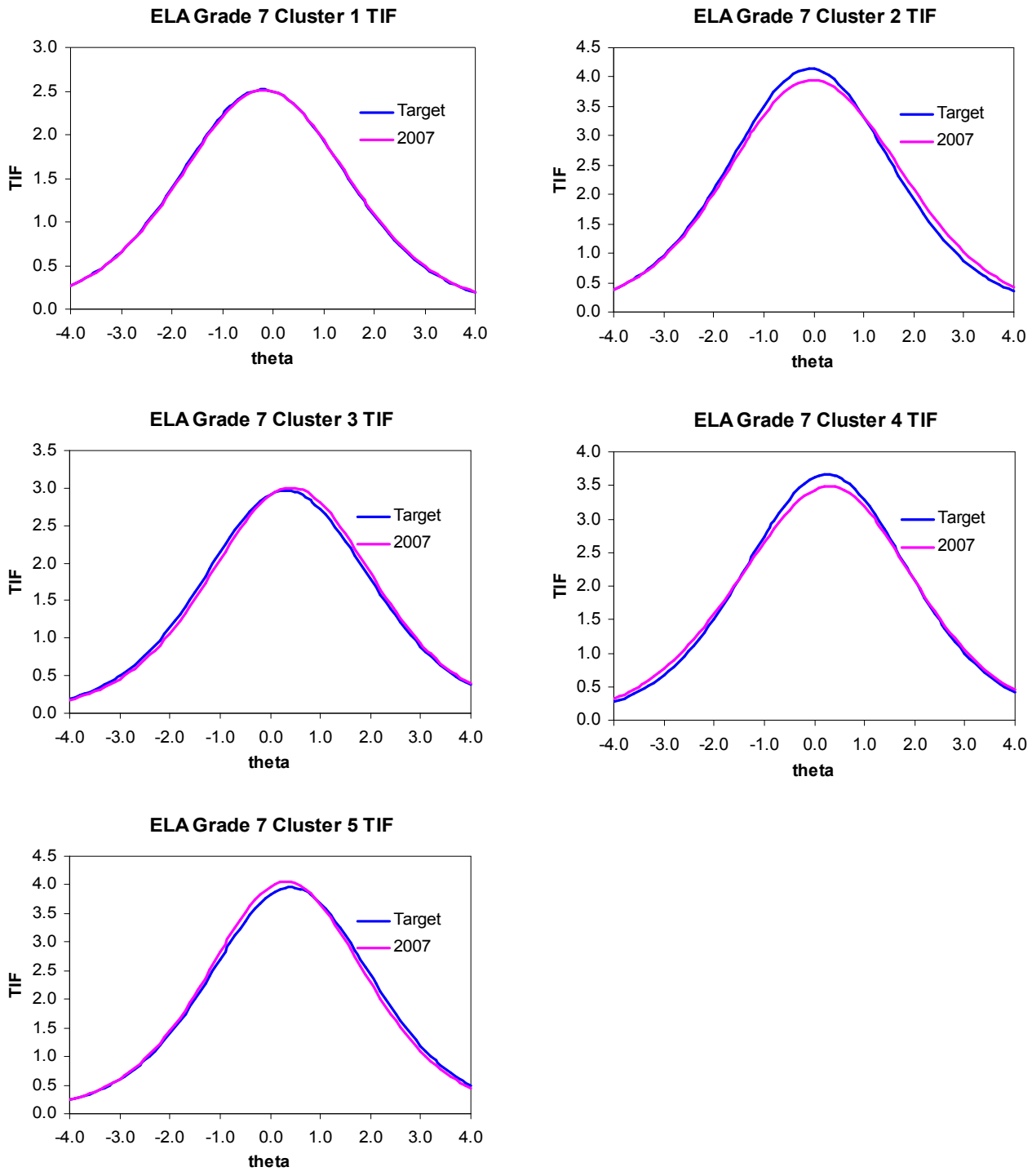
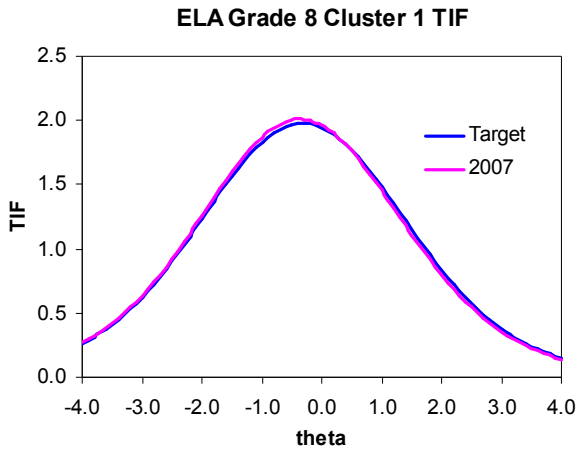
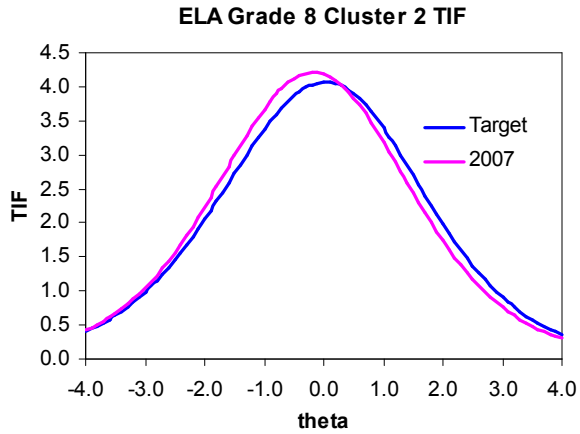
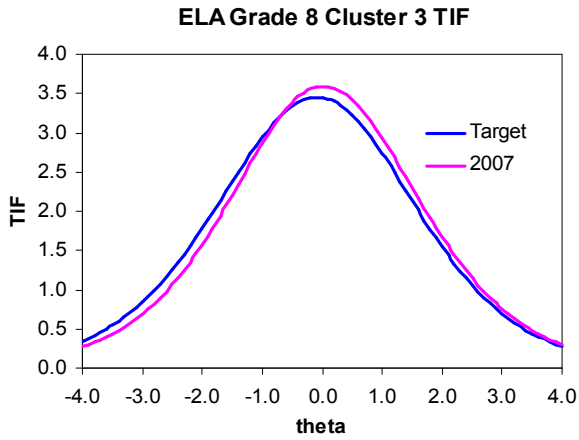
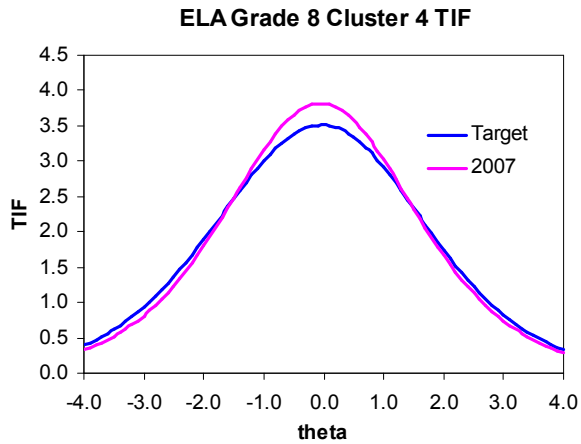


Figure 2.C.7 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for ELA Grade 8









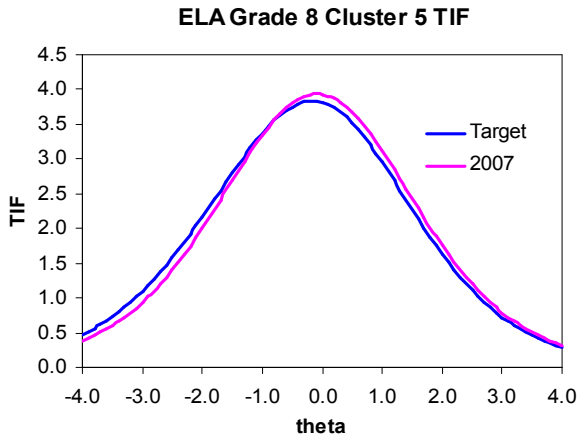


Figure 2.C. 8 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for ELA Grade 9

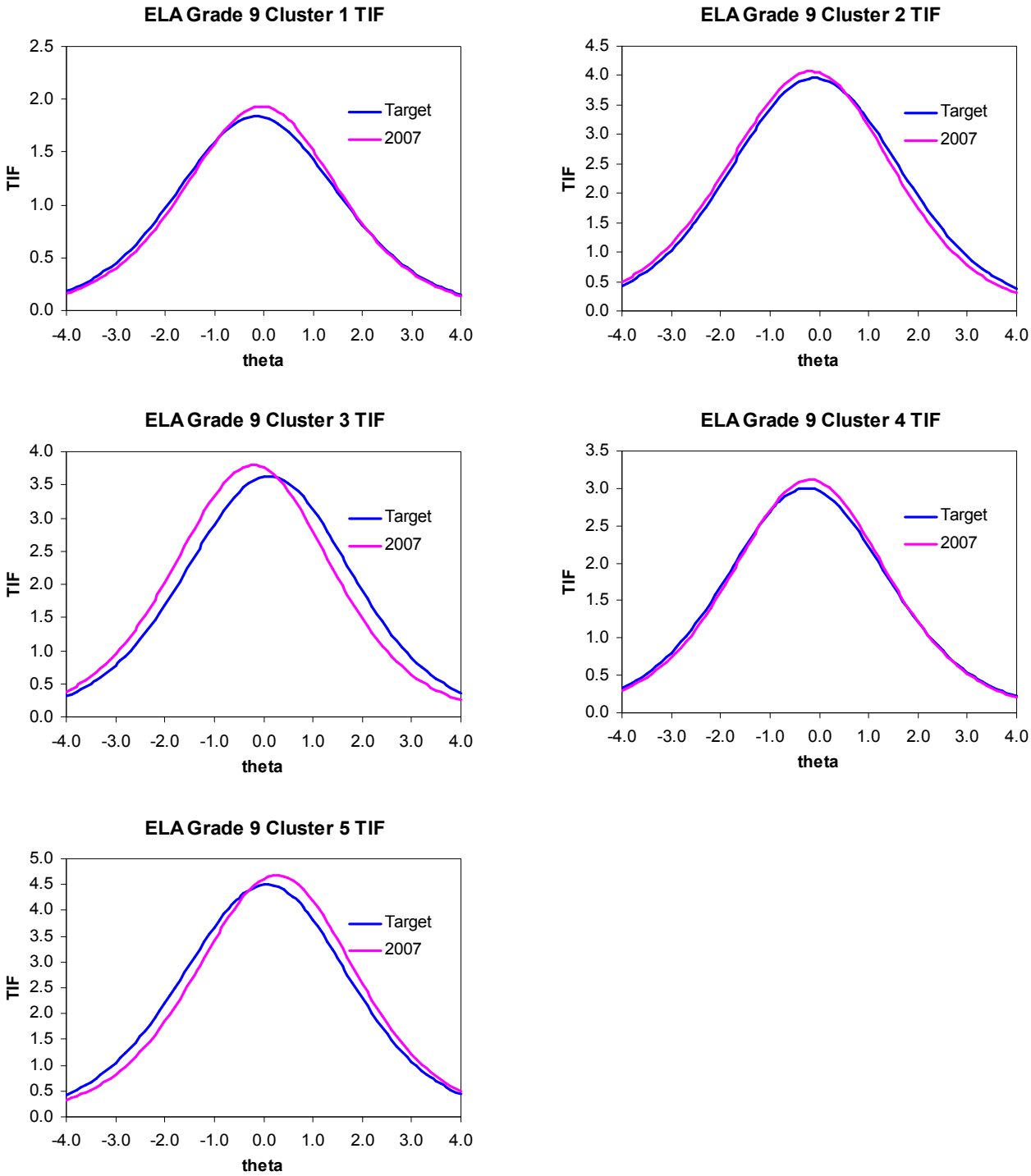


Figure 2.C.9 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for ELA Grade 10

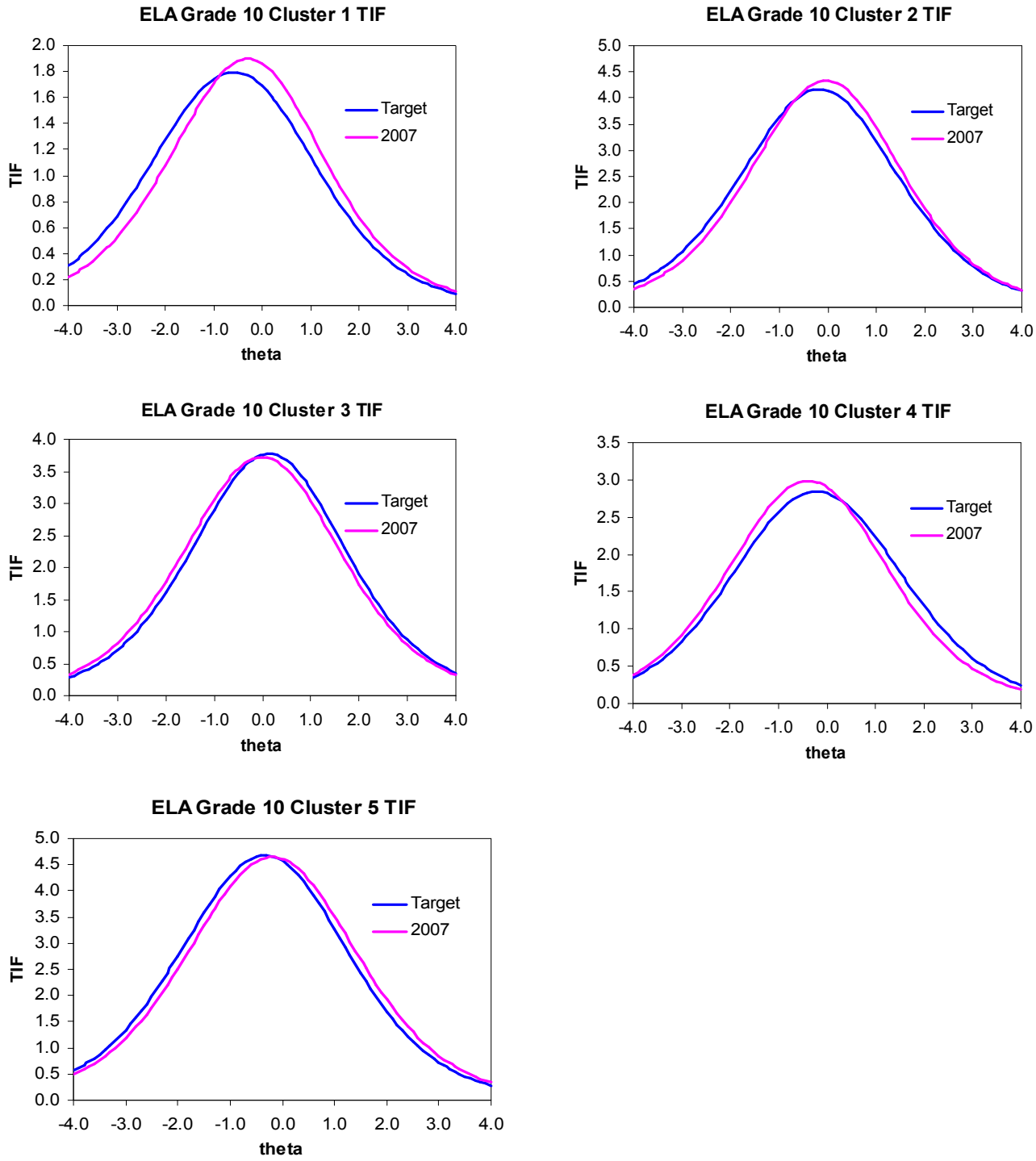


Figure 2.C.10 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for ELA Grade 11

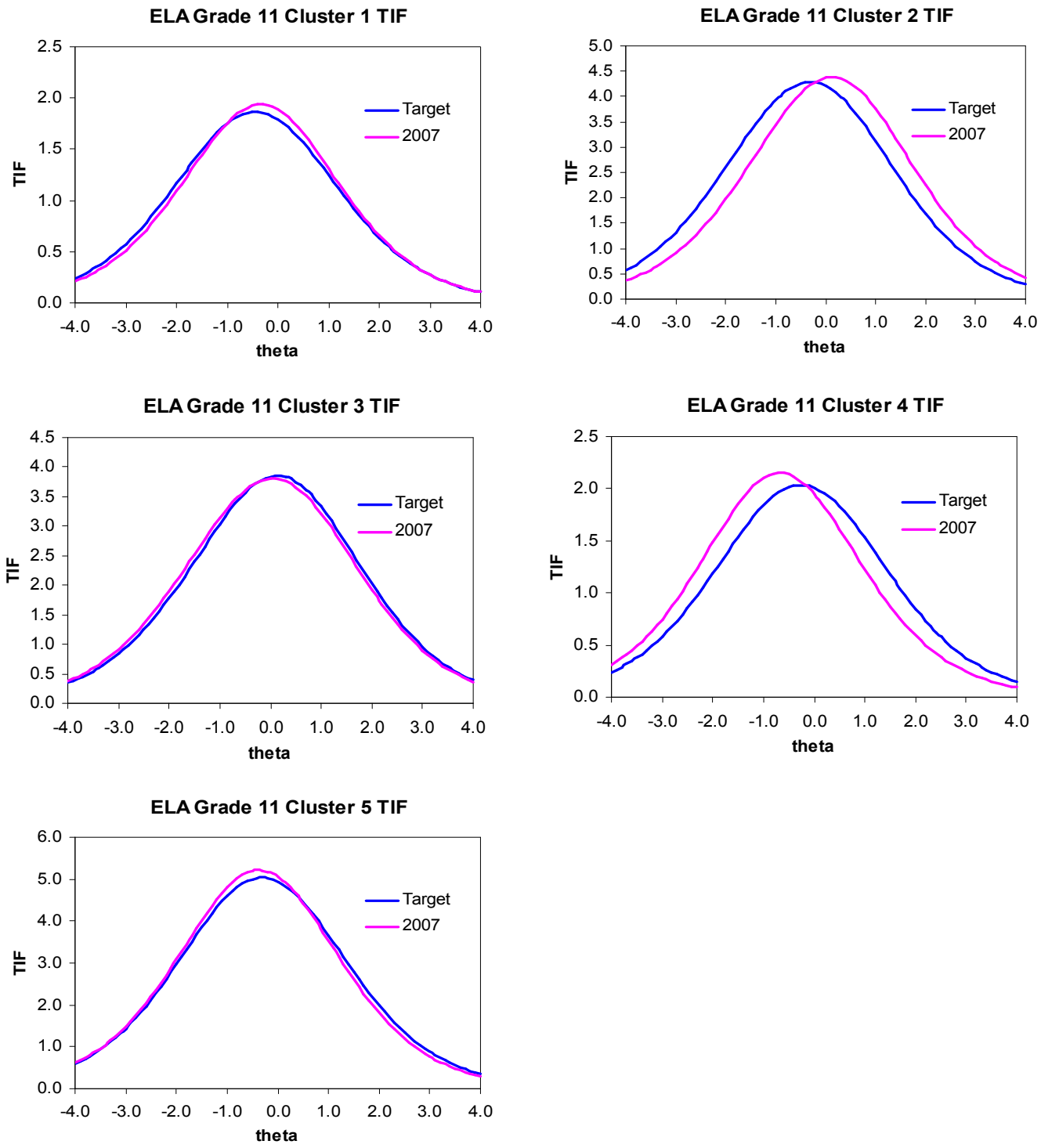
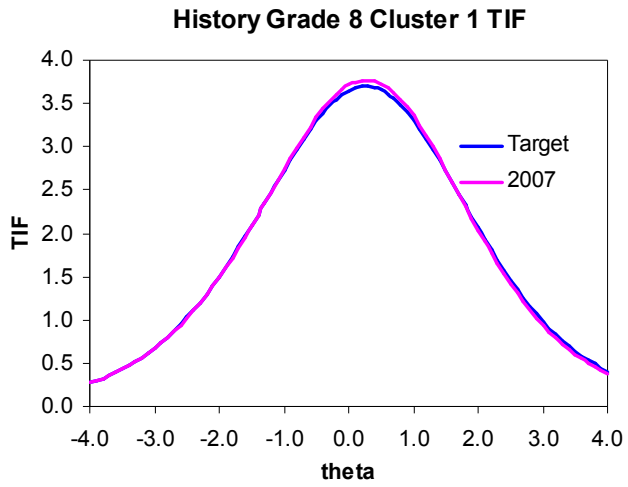
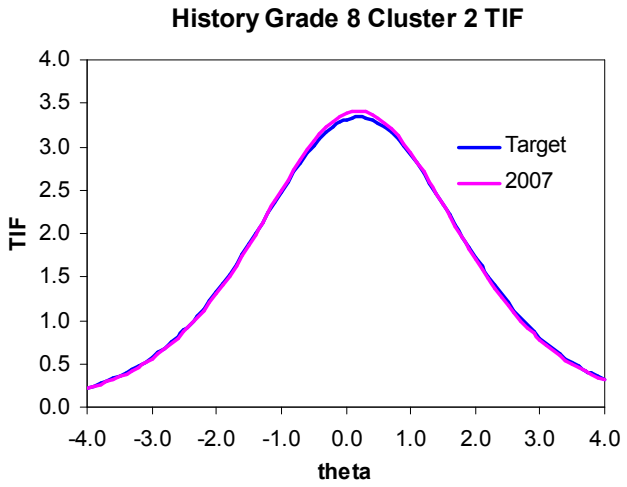
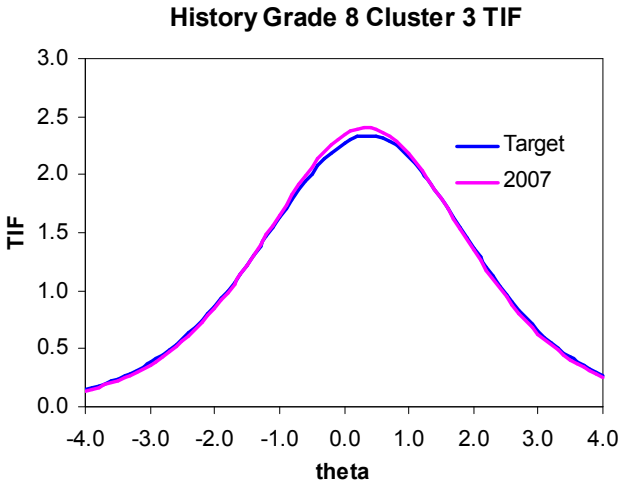
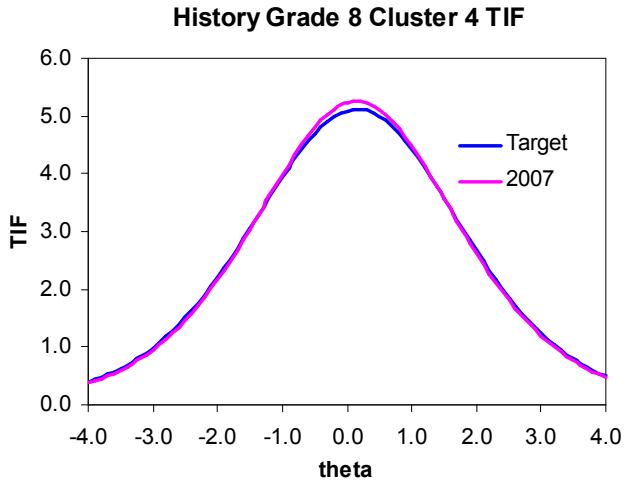


Figure 2.C.11 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for History Grade 8









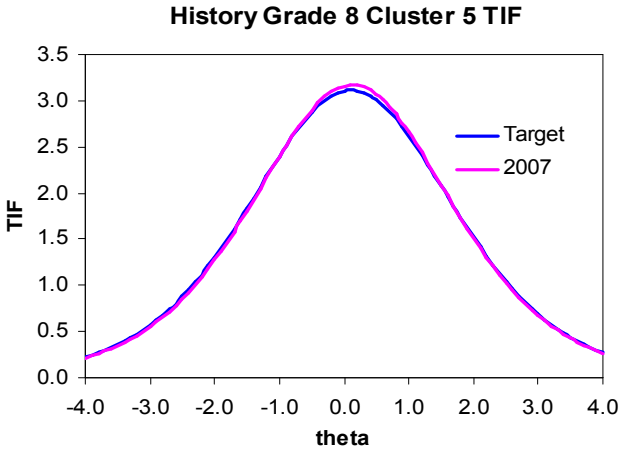


Figure 2.C.12 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for World History

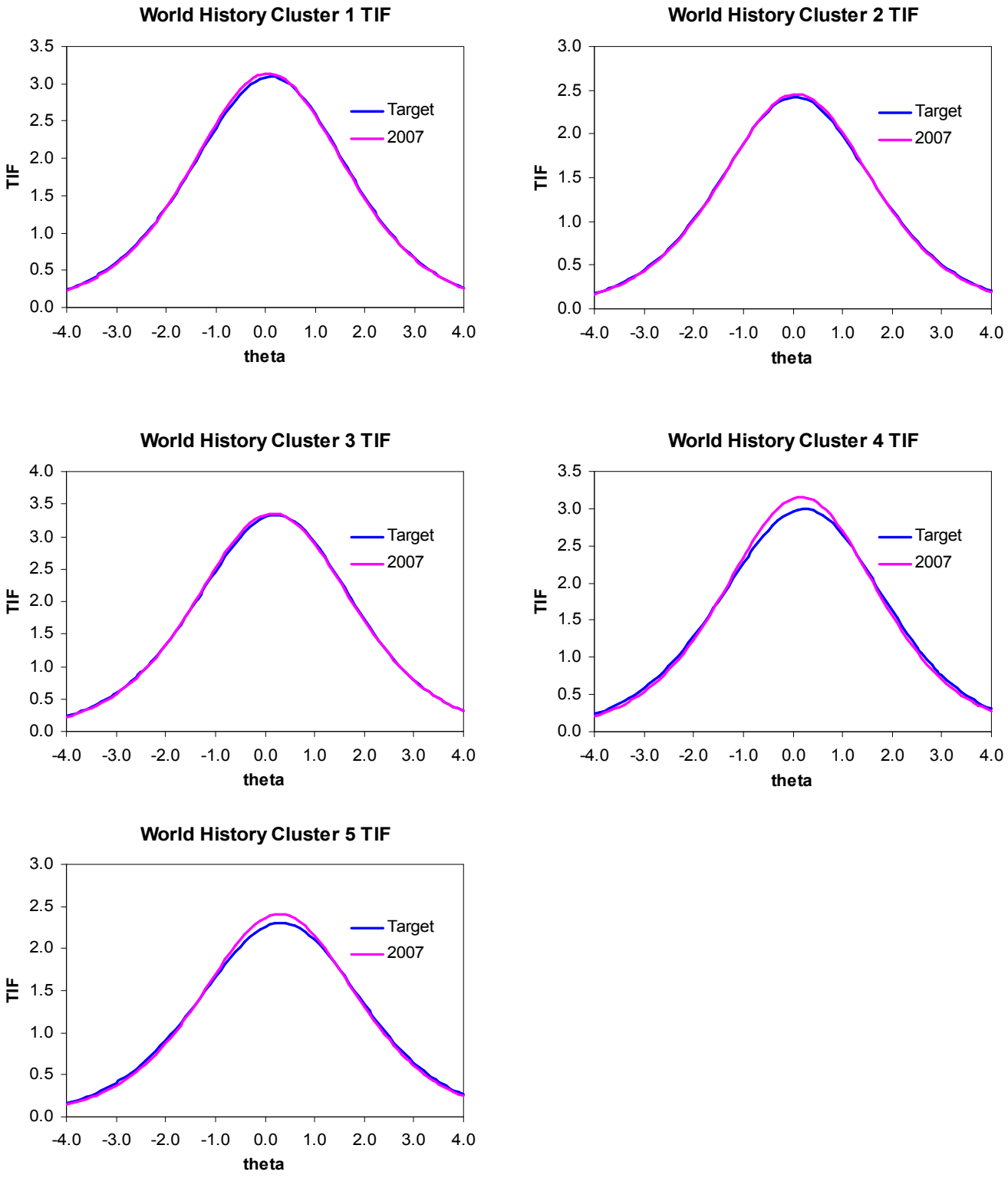
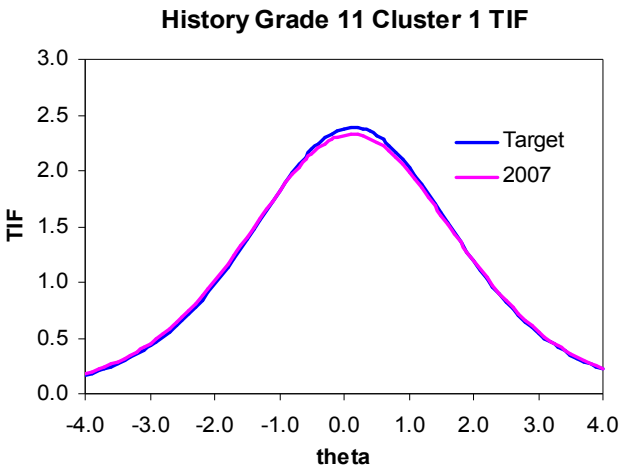
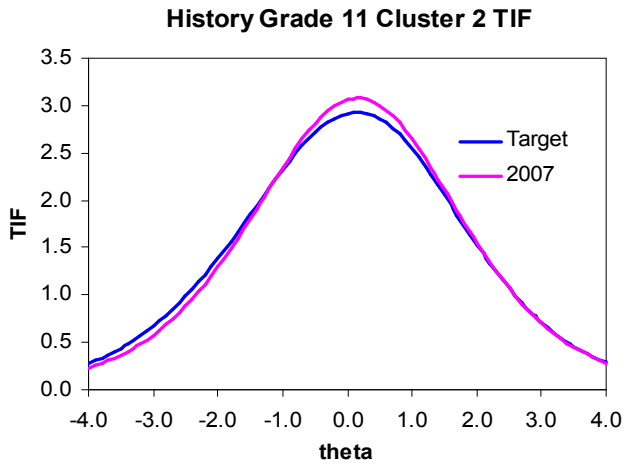
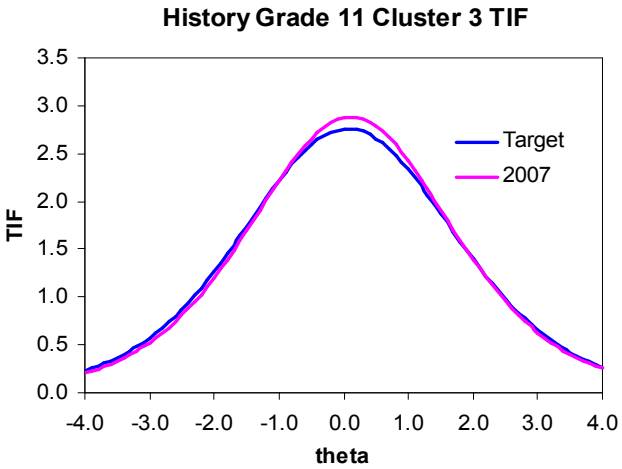
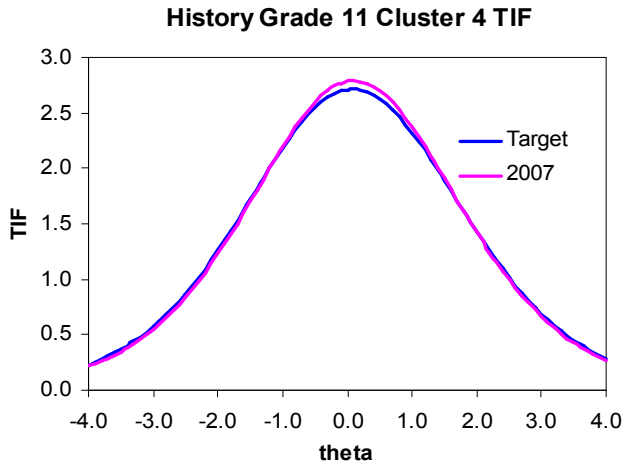


Figure 2.C.13 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for History Grade 11









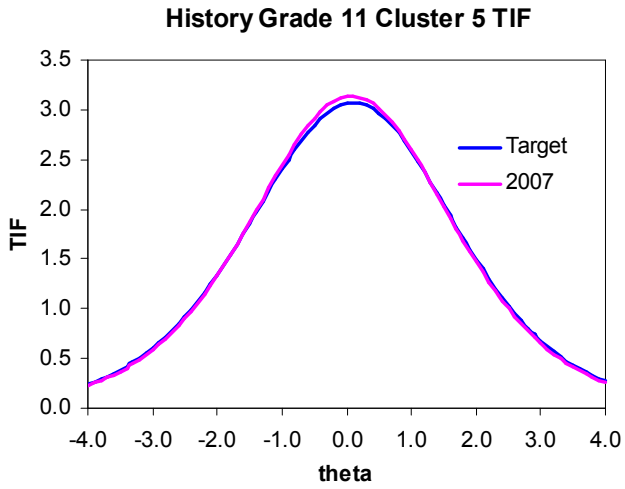


Figure 2.C.14 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Math Grade 2

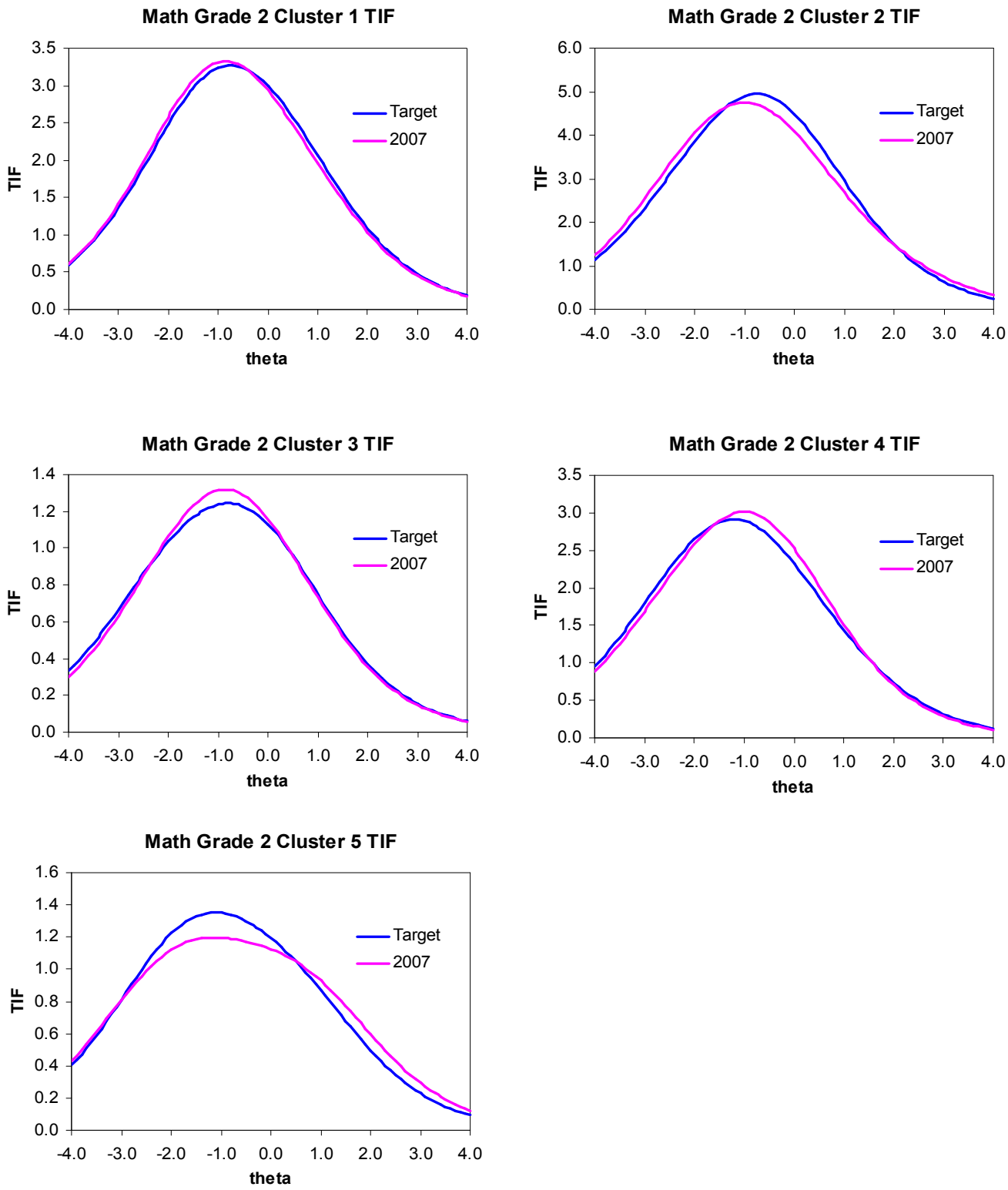


Figure 2.C.15 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Math Grade 3

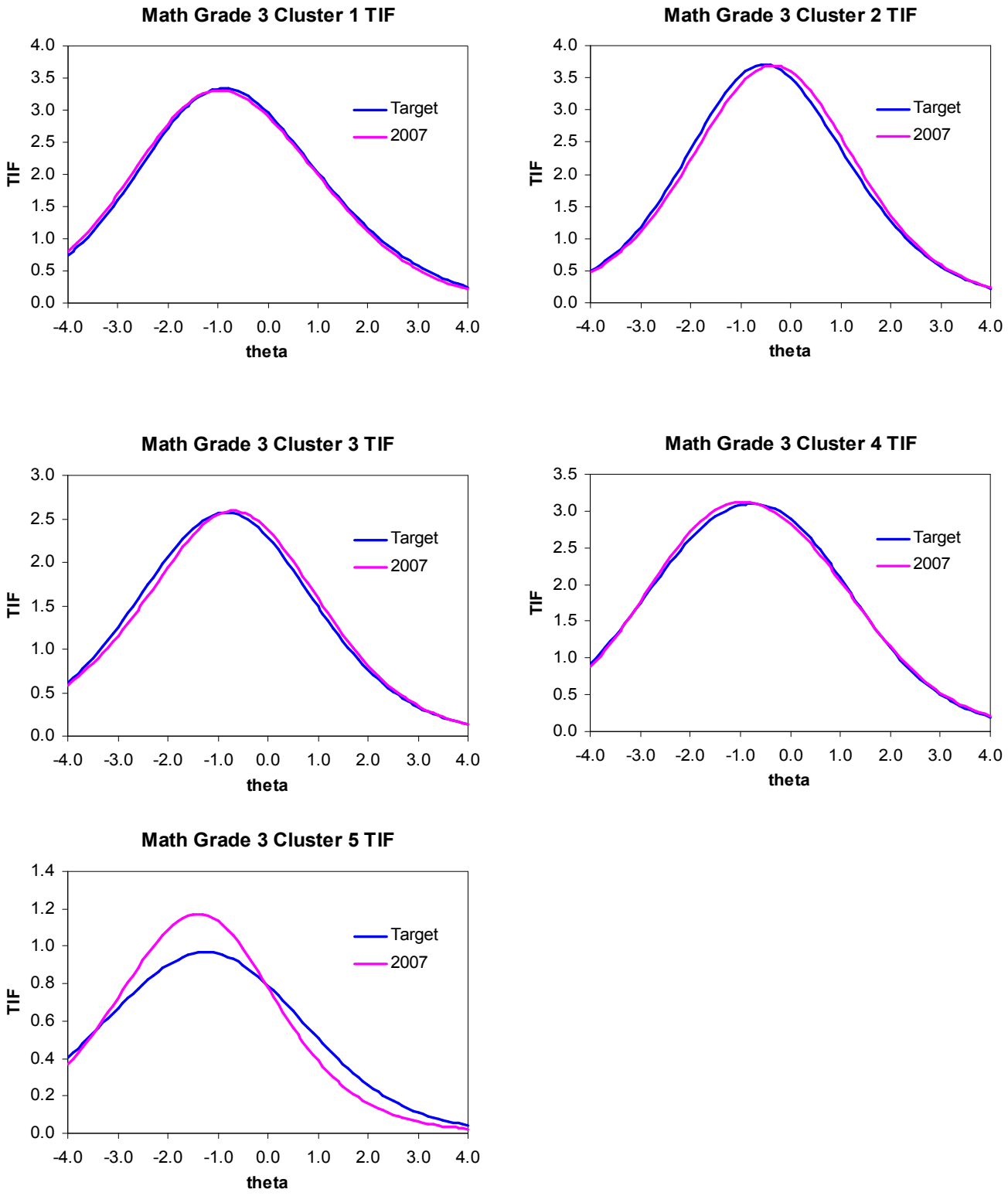


Figure 2.C.16 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Math Grade 4

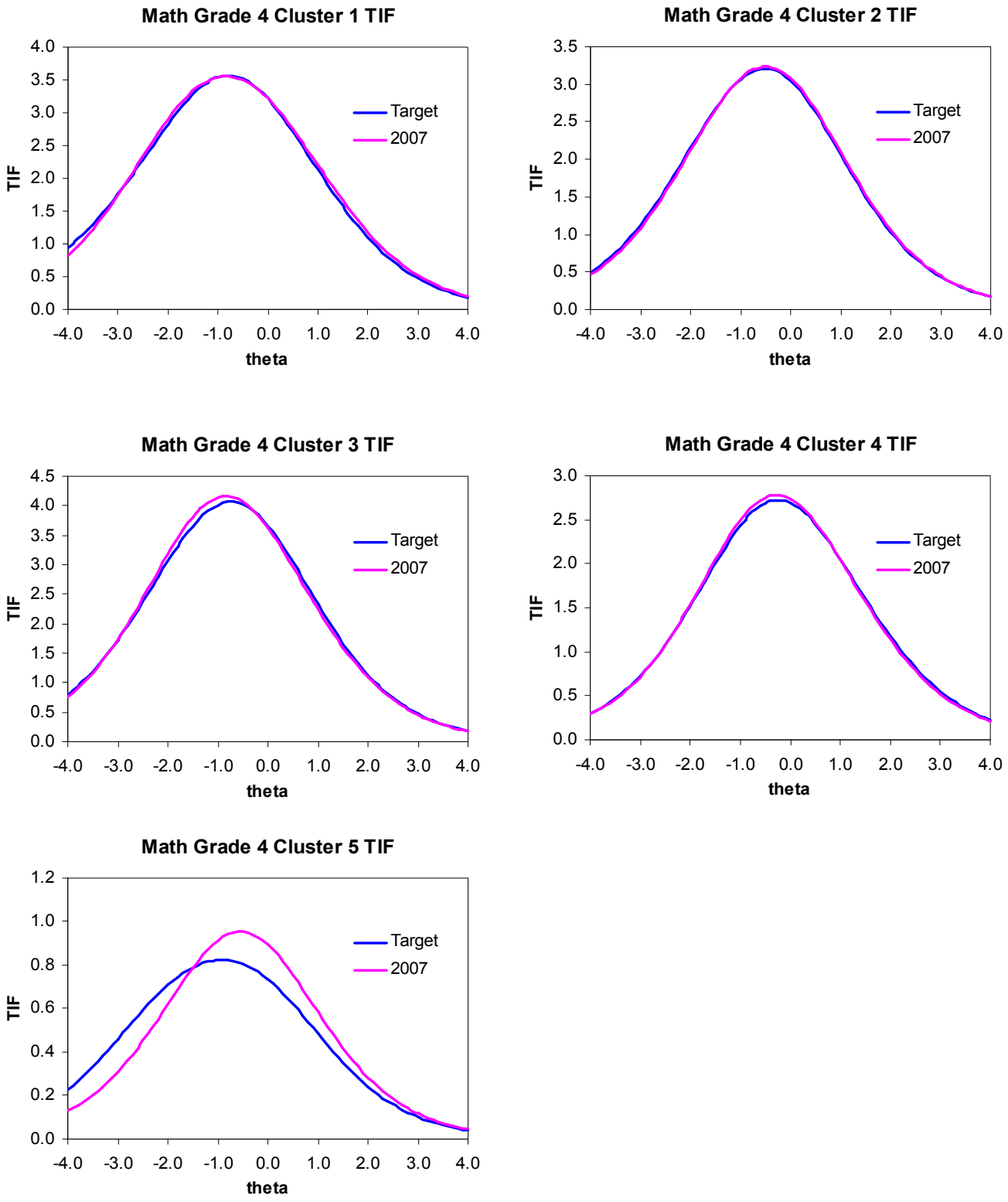
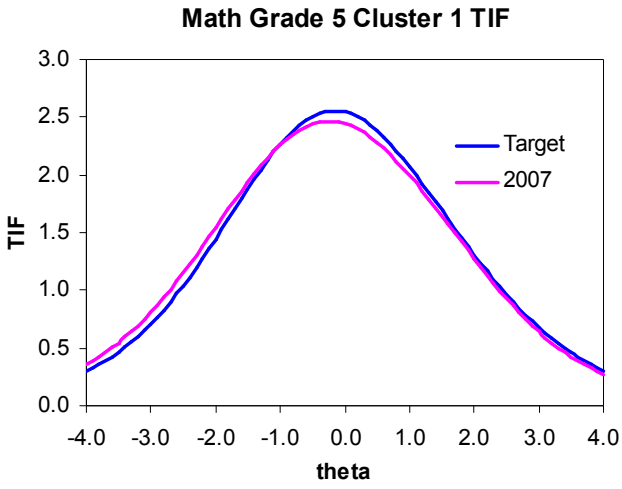
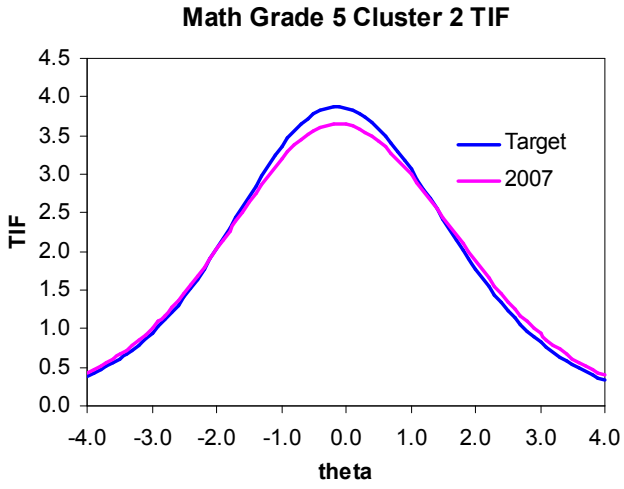
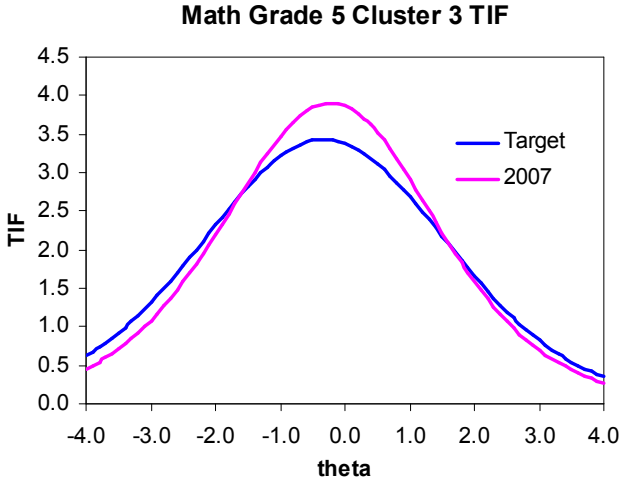
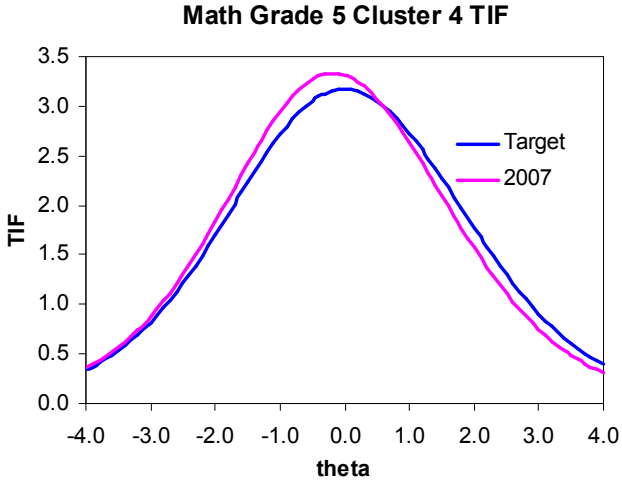


Figure 2.C.17 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Math Grade 5









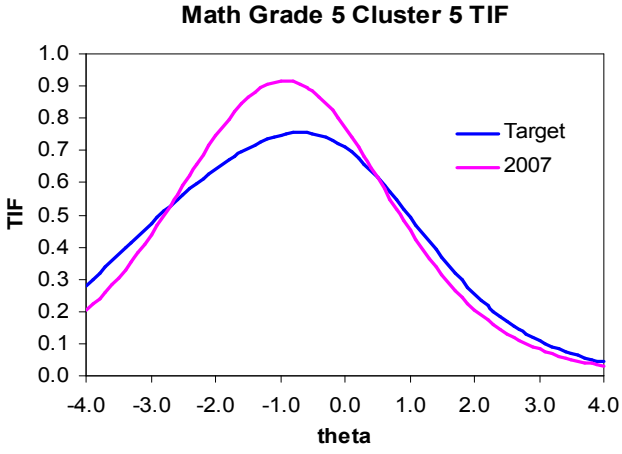
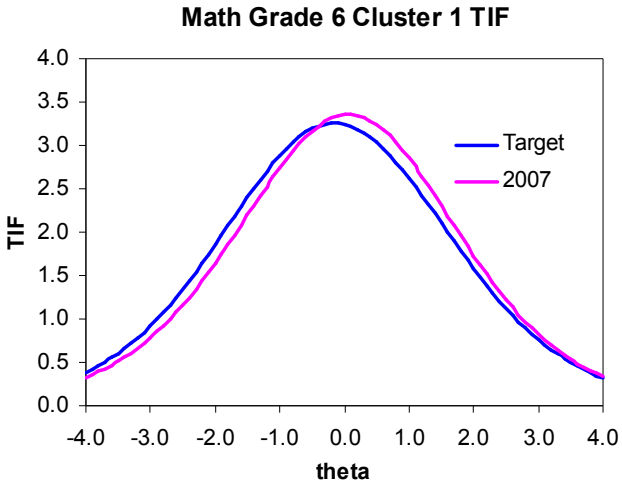
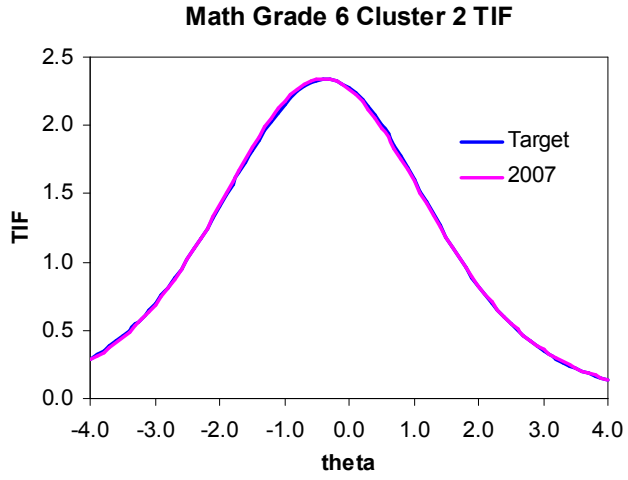
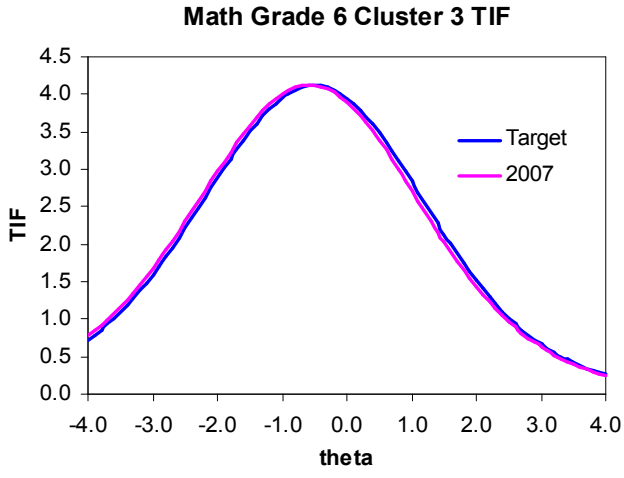
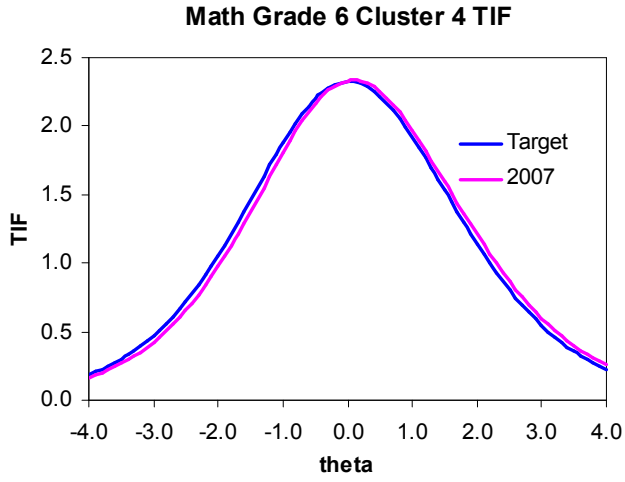


Figure 2.C.18 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Math Grade 6









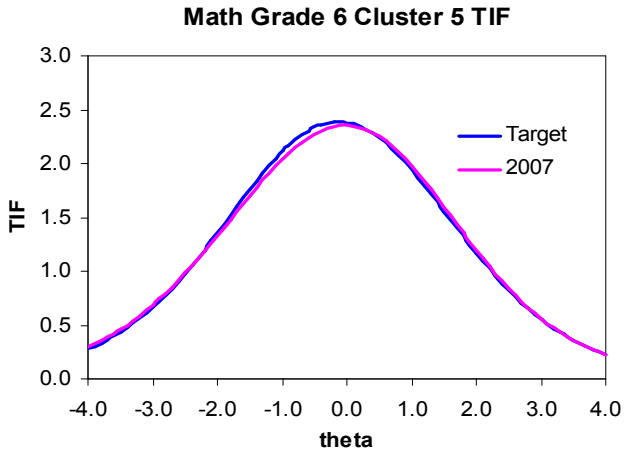


Figure 2.C.19 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Math Grade 7

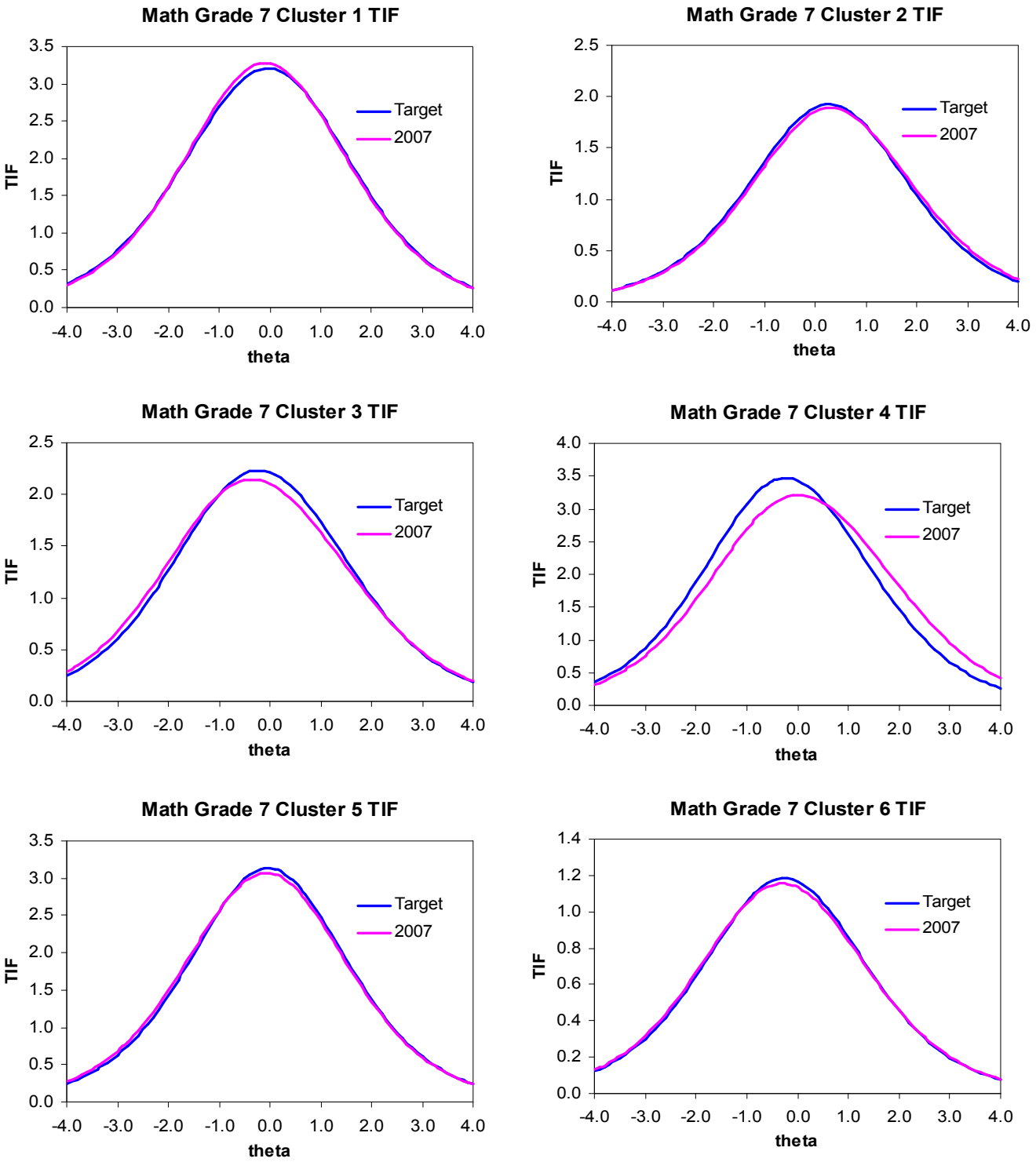
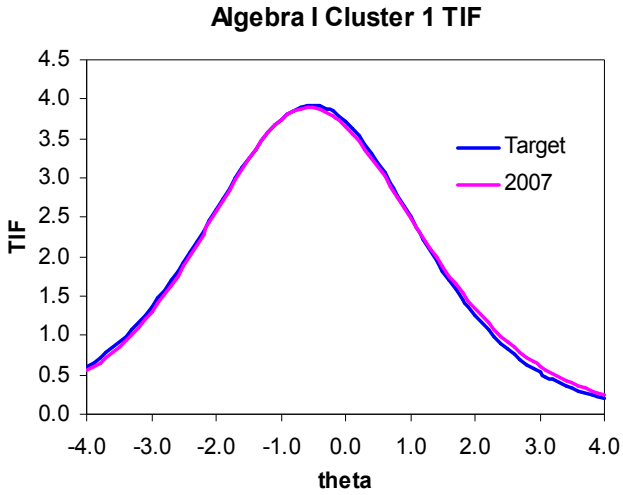
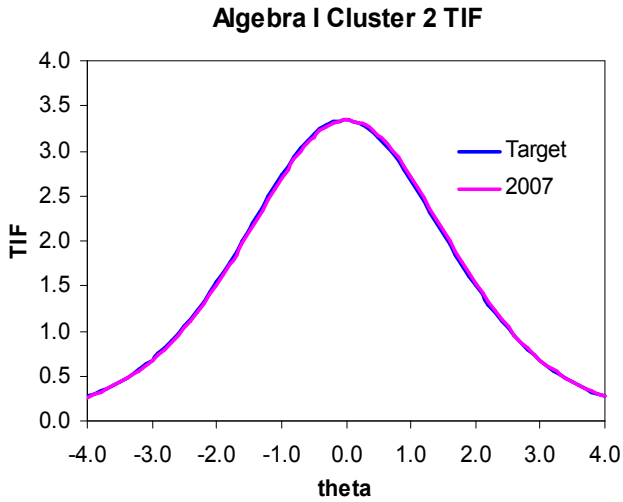
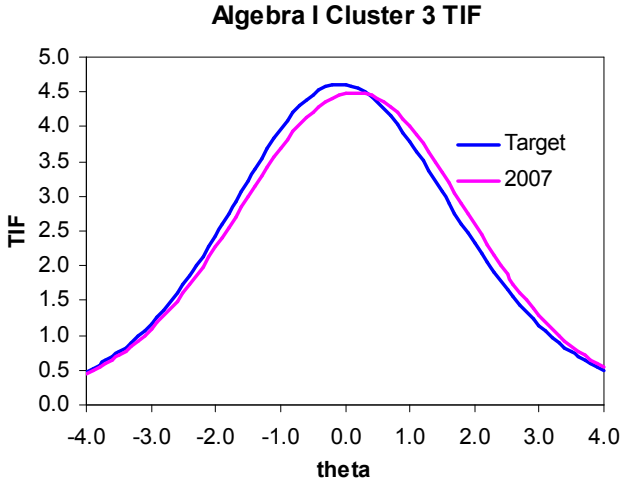


Figure 2.C.20 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Algebra I







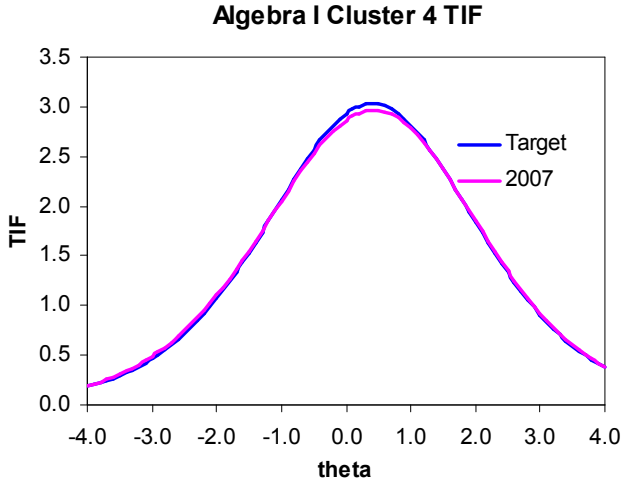


Figure 2.C.21 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Geometry

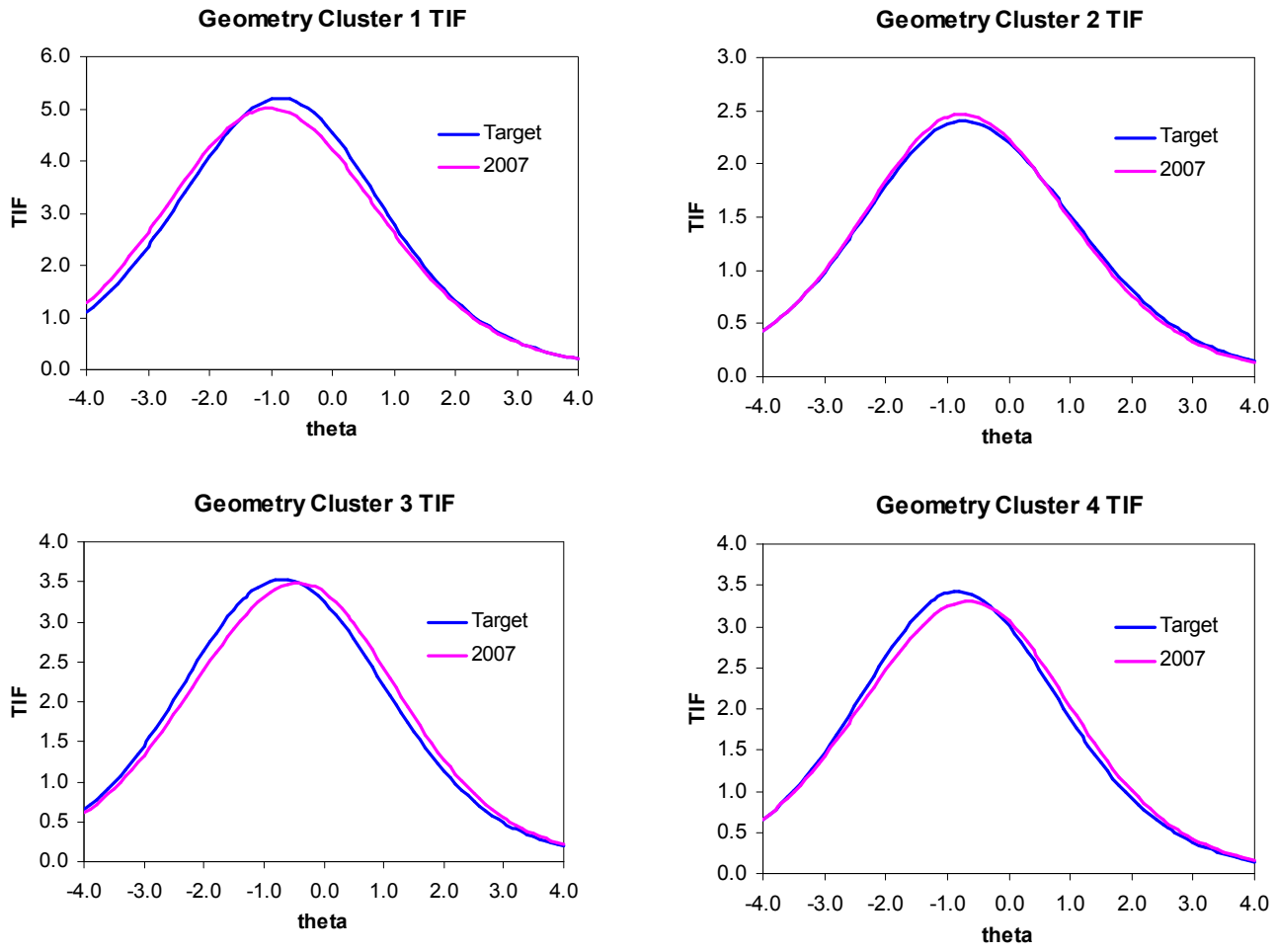


Figure 2.C.22 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Algebra II

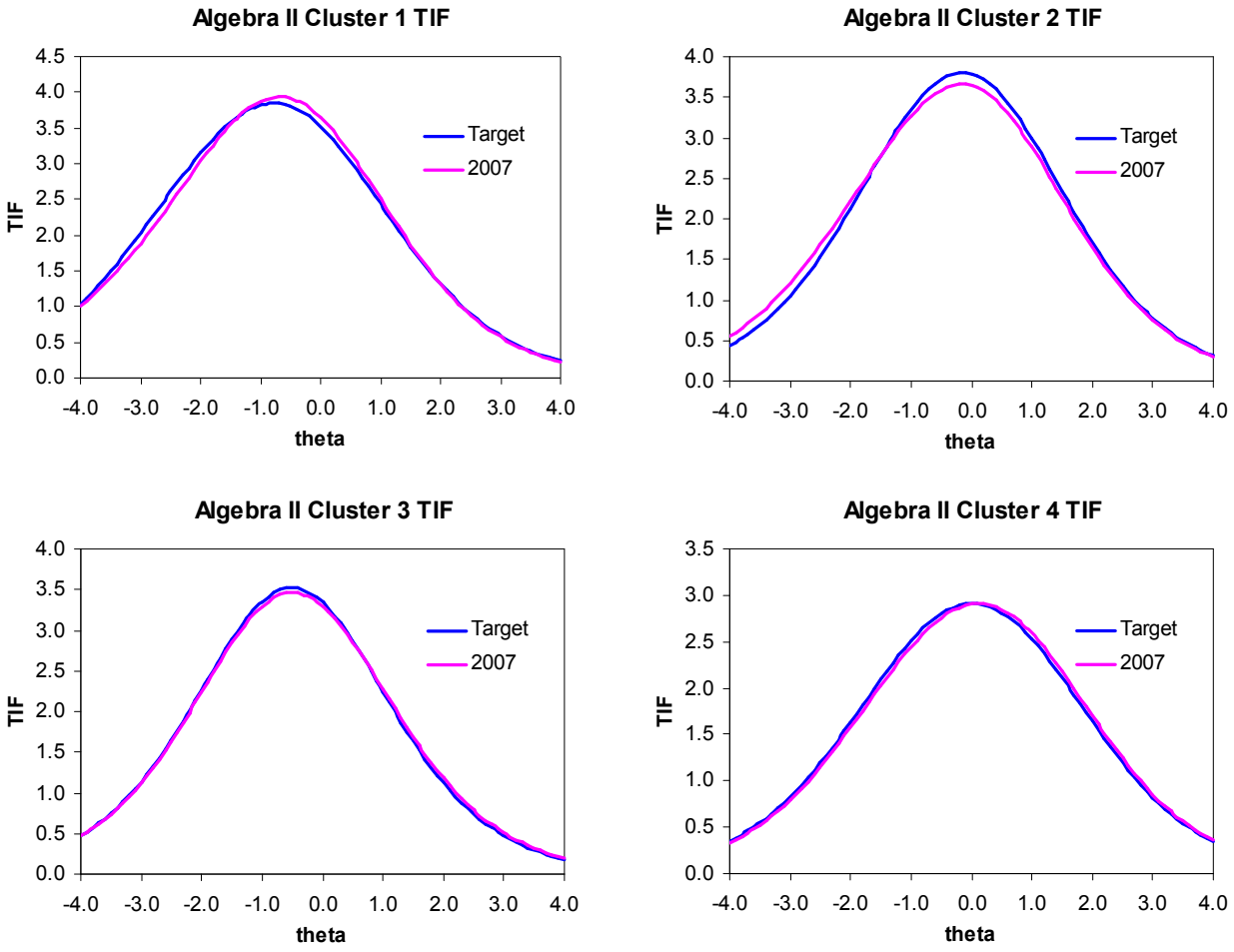


Figure 2.C.23 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Grade 5 Science

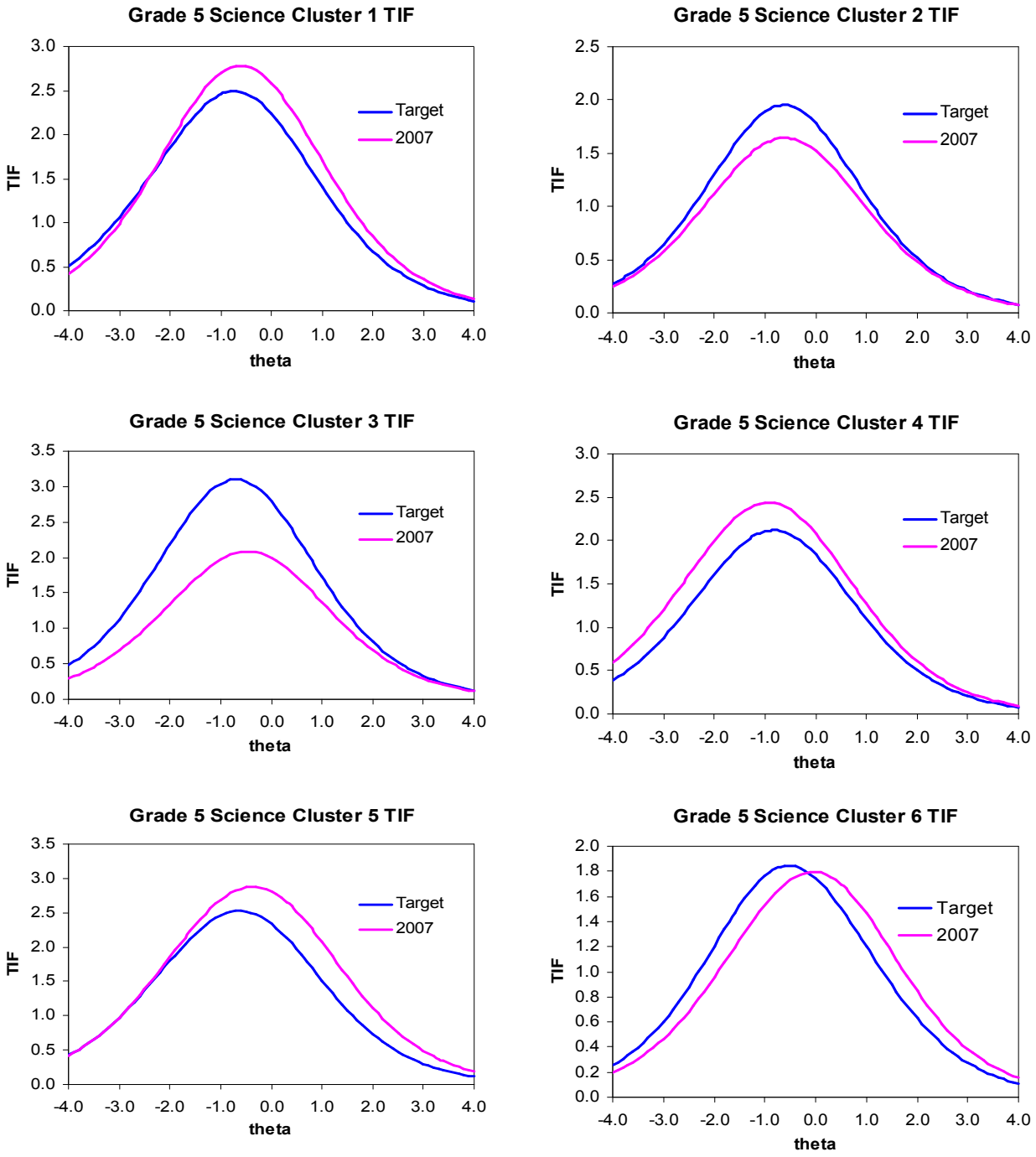


Figure 2.C.24 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Grade 8 Science

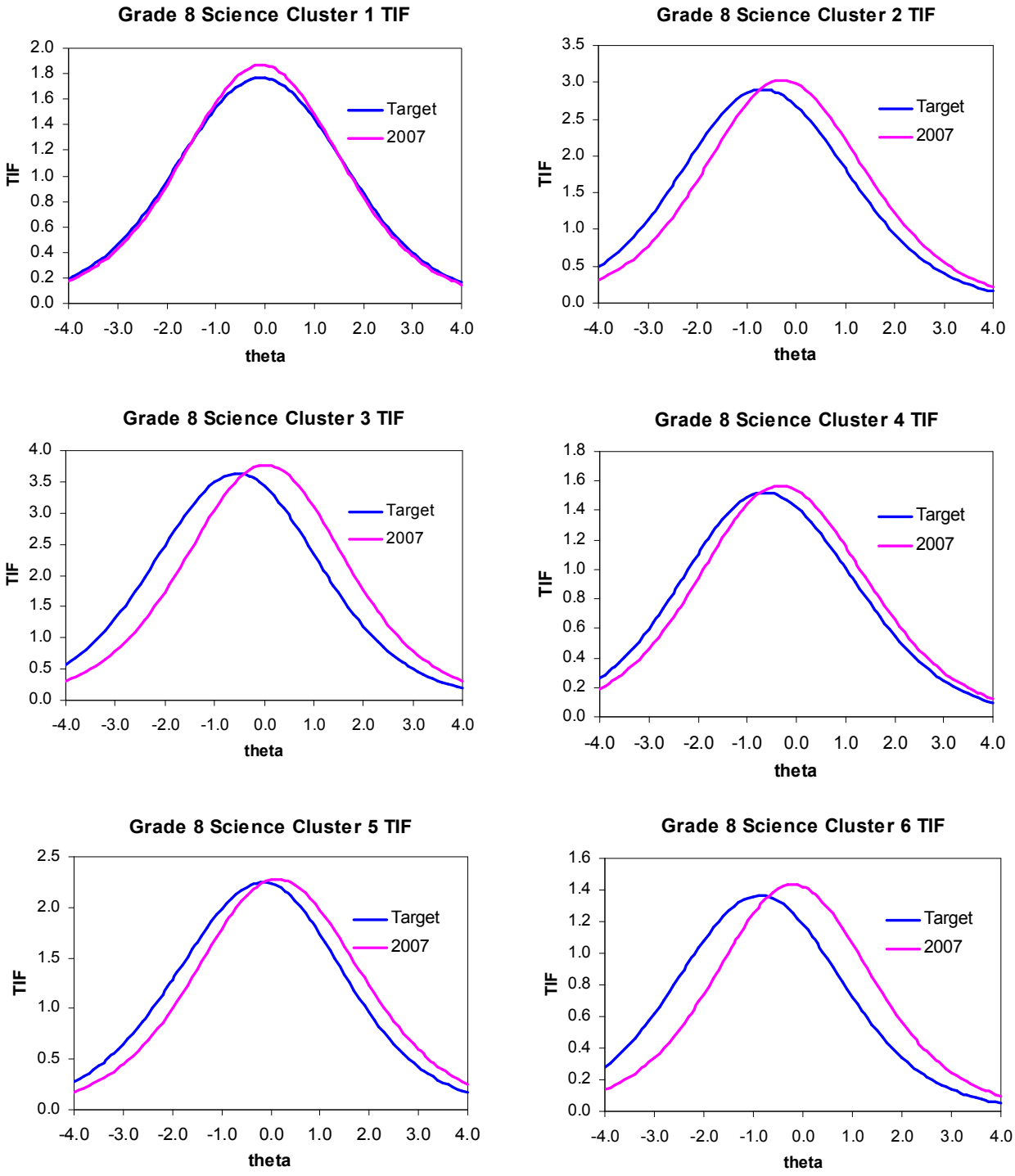


Figure 2.C.25 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Grade 10 Life Science

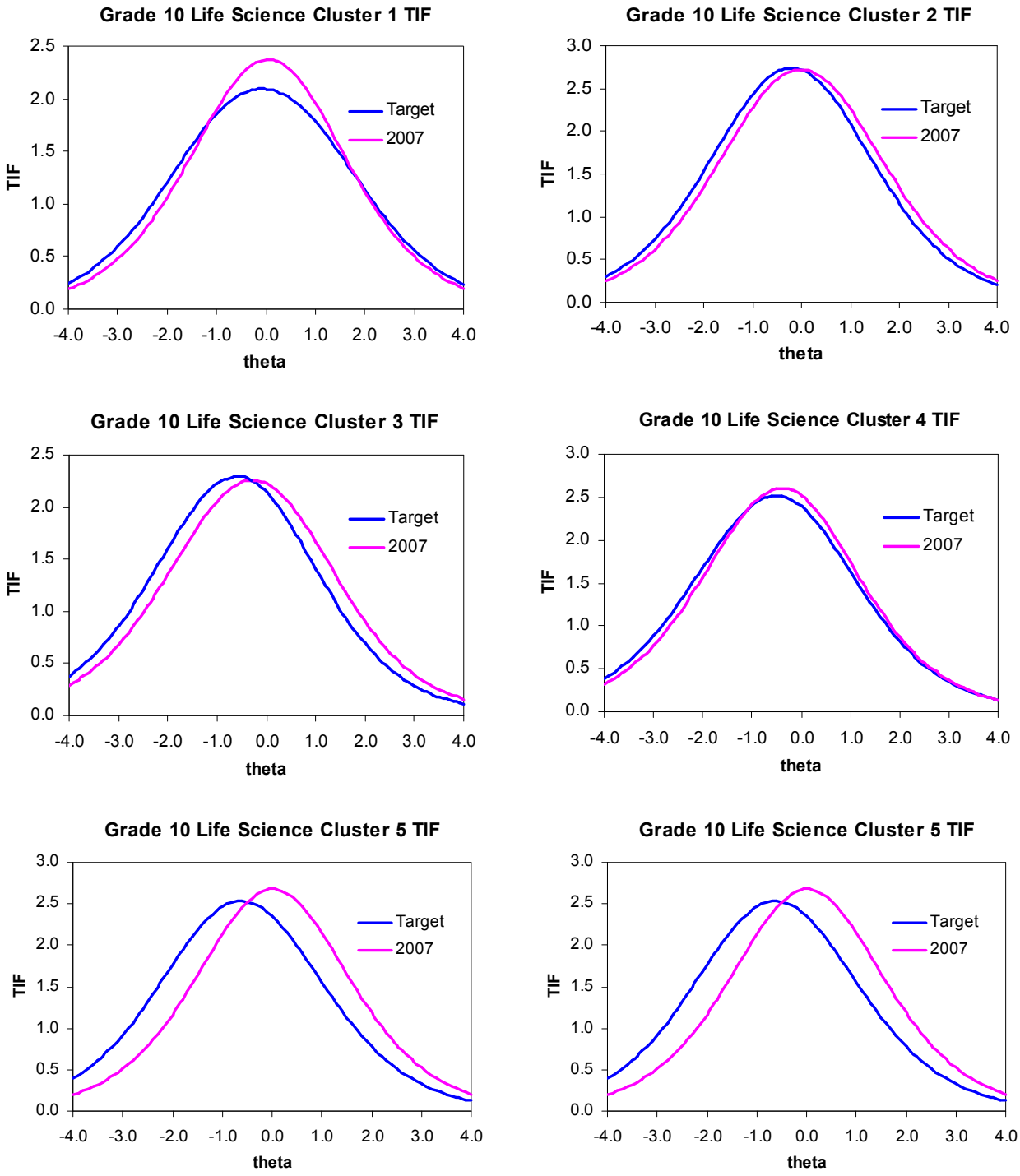


Figure 2.C.26 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Biology

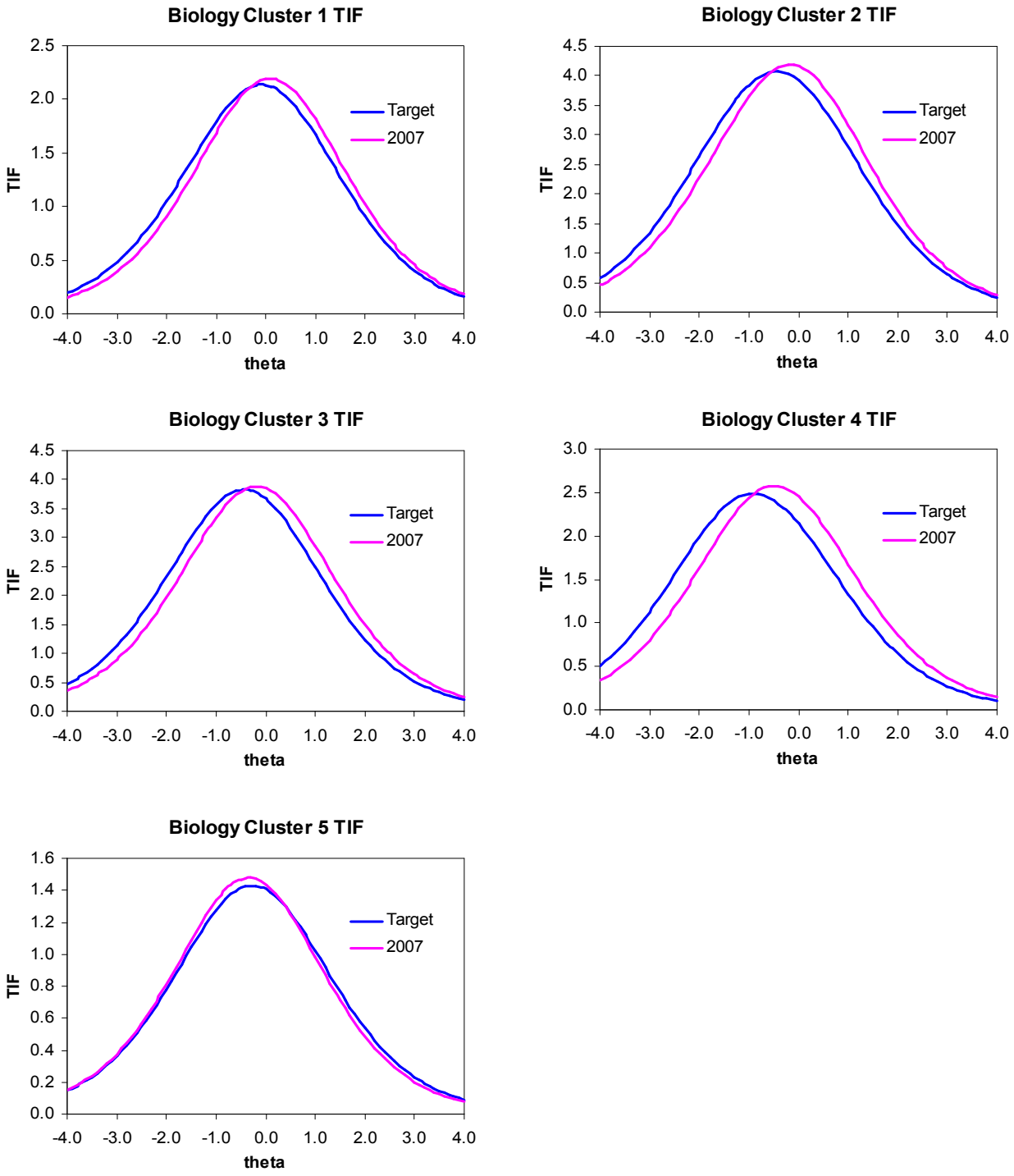


Figure 2.C.27 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Chemistry

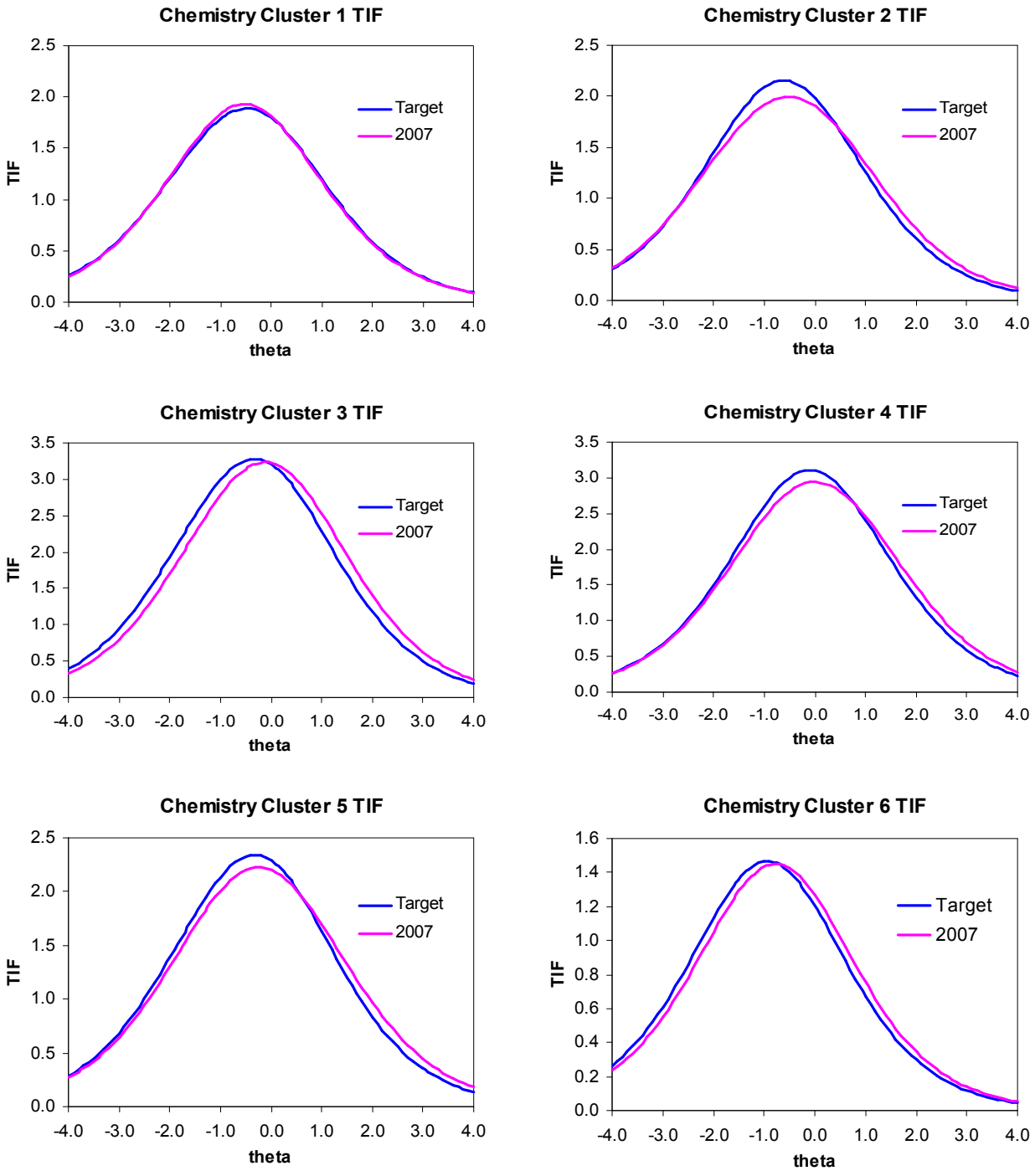


Figure 2.C.28 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Earth Science

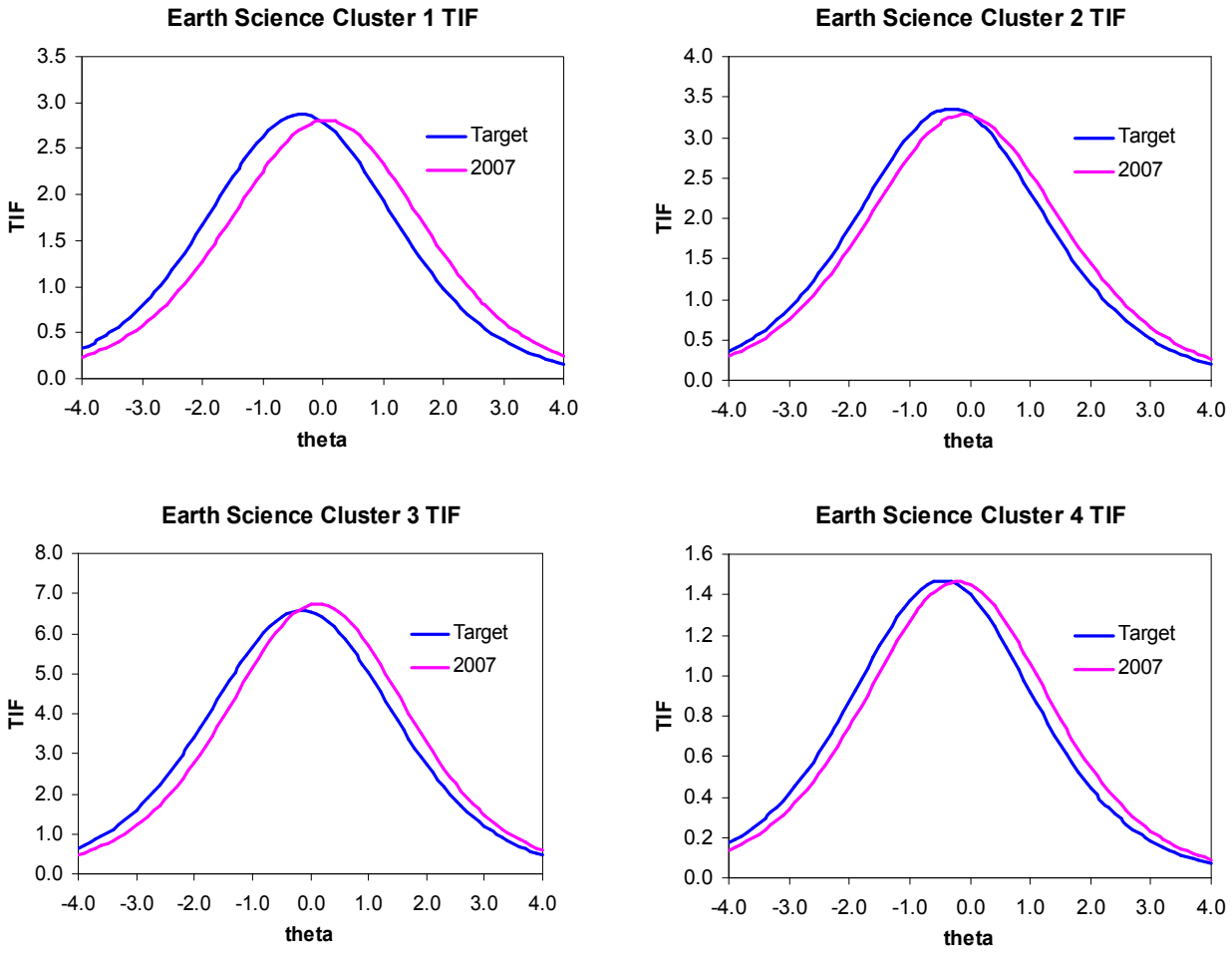
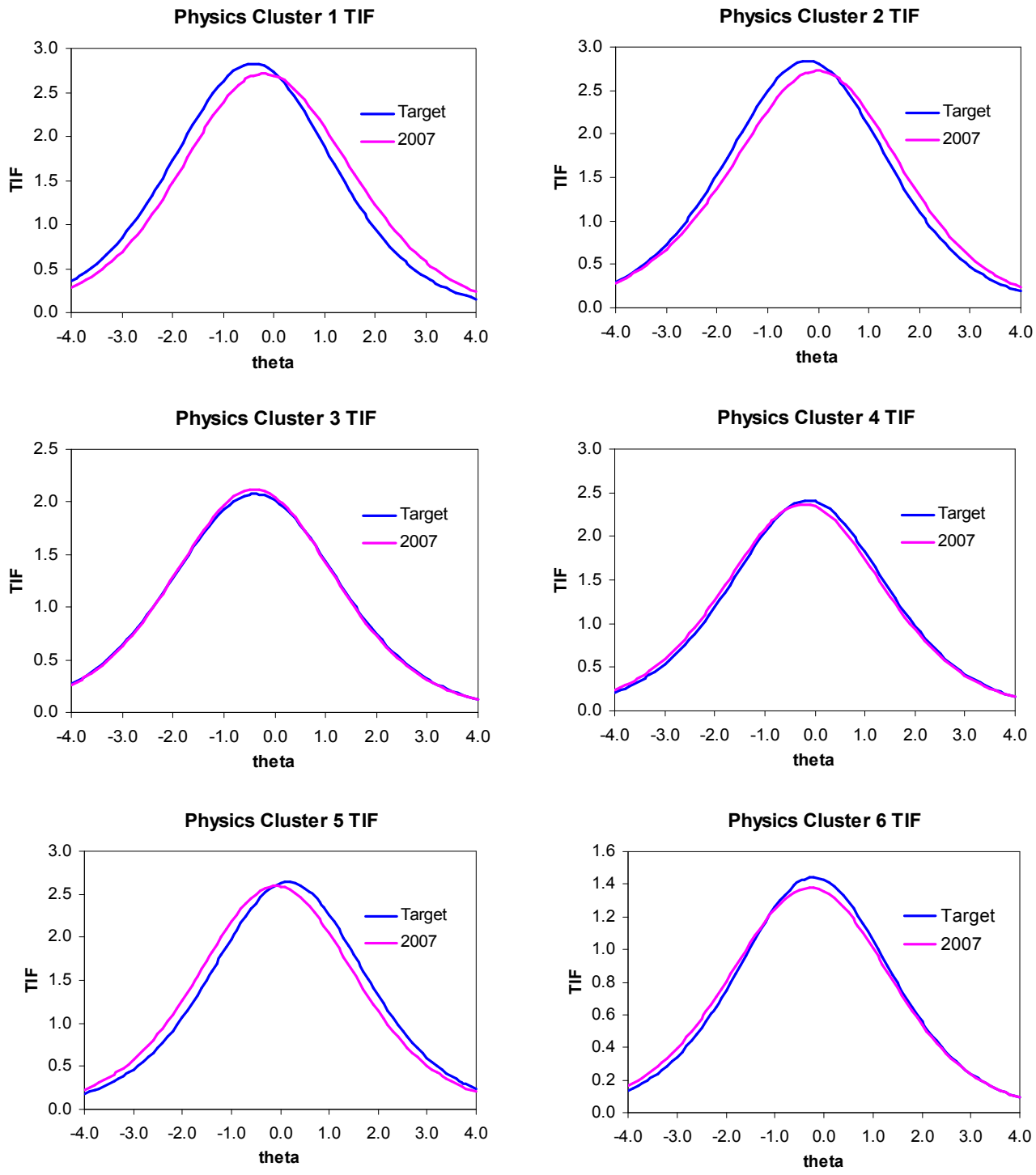


Figure 2.C.29 Comparison Plots for Target Cluster Information Function and Projected Cluster Information for Physics



Chapter 3: CST Equating Procedures

When test forms are created, two primary criteria must be simultaneously satisfied. The first is content-based: Test items must be distributed according to content specifications. The second is statistical: The items must have a specified distribution of difficulty or specified average difficulty and a specified average discrimination (correlation between the item score and the test score). These criteria help assure that all forms of a test are parallel (equally reliable and measure the same construct). However, despite the efforts taken when a test is constructed, forms of a test will still differ in difficulty to a small degree. The equating process is used to adjust for these small differences in difficulty so that test-takers can be fairly compared, regardless of the test form they take.

Test Construction and Review

CSTs are assembled to content and statistical specifications. For the 2007 tests, target test information curves were specified to which the test developers assembled forms (see Figure 2.B.1 through Figure 2.B.4 in Chapter 2 for the relationship between the target and assembled forms). Each form contained some items that were the same as items used in the previous year; these items are called linking or equating items. The statistics for the linking items were obtained from the previous year's operational administration. Nonlinking item statistics were generally based on item statistics based on field-test samples[1].

Post-Administration Operational Equating

The CSTs were equated to a reference form using a common-item nonequivalent groups design and methods based on item response theory. The "base" or "reference" calibrations for the CSTs were established by calibrating samples of data from a specific administration. This established a scale to which subsequent item calibrations could be linked. The 2007 items were placed on scale through a set of linking items from the 2006 forms.

The procedures used for equating the CSTs involved three steps: item calibration, item parameter scaling, and true score equating. ETS utilizes a computer system called the Generalized Analysis System (GENASYS) for the IRT item calibration and equating work. As part of this system, a proprietary version of the PARSCALE computer program (Muraki and 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, and Julian, 2002). The procedures described below were applied to all CSTs except the four CSTs for Integrated Science. Special scaling procedures used for these CSTs will be described later in this section.

Calibration

For the item calibrations, the PARSCALE program 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 is equivalent to the Rasch model for multiple-choice items and the Rasch partial credit model for polytomously scored items (used for the essays in grades 4 and 7 English–language arts). This is in keeping with previous CST equating and scaling procedures carried out using the WINSTEPS program (Linacre, 2000). For the purposes of score equating, only the operational items are calibrated for each test.

[1] For some tests IRT parameter estimates were not available for a small number of items. In these cases, a reduced information function was used as a target. Classical statistics were used to select the remaining items.

The PARSCALE calibrations are 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 are used as starting values for a second PARSCALE run, in which the subject prior distribution is updated after each expectation maximization (EM) cycle with no constraints. For both stages, the metric of the scale is controlled by the constant discrimination parameters.

Scaling

Calibrations of the 2007 forms were scaled to the previously obtained reference scale estimates using the Stocking and Lord (1983) procedure. In the case of one-parameter model calibrations, this procedure is equivalent to setting the mean of the new item parameter estimates for the common items equal to the mean of the previously scaled estimates. As commonly done in this approach, 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 (WRMSD) 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:

$$\text{WRMSD} = \sqrt{\sum_{j=1}^{61} w_j \left[P_n\left(\theta_j\right) - P_r\left(\theta_j\right)\right]^2} \quad , \tag{3.1}$$

where,

θ_j ranges from -3.0 to 3.0 by increments of 0.1,

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 level j, and

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

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

Table 3.1 presents, for each CST content area and grade level, the number of common items between the 2007 (new) and the test form to which it was linked (reference), the numbers of items removed from the common item sets, the correlation between the final set of new and reference difficulty estimates for the linking items, and the average WRMSD statistic (see equation 3.1) across the final set of common items.

The results indicate that the new and old difficulty estimates were highly correlated (almost all .95 or higher) and similar in magnitude (average WRMSD values of 0.04 and lower).

Table 3.1 Evaluation of Common Items between New and Reference Test Forms

Subject	CST	# of Linking Items	Linking Items Removed	Final Correlation	WRMSD*
English–Language Arts	**2**	28		0.97	0.03
	3	25	1	0.99	0.02
	4	30		0.99	0.02
	5	28		0.99	0.02
	6	34		0.99	0.02
	7	33		0.98	0.02
	8	32		0.99	0.02
	9	30		0.96	0.03

Subject	CST	# of Linking Items	Linking Items Removed	Final Correlation	WRMSD*
	10	34		0.96	0.02
	11	28		0.99	0.01
History–Social Science	**8**	36		0.98	0.02
	World History	29		0.96	0.02
	11	27		0.99	0.02
Mathematics	**2**	30		0.98	0.03
	3	27		0.98	0.04
	4	27		0.99	0.02
	5	30		0.97	0.03
	6	28		0.98	0.02
	7	26		0.99	0.02
	General Mathematics	29		0.99	0.02
	Algebra I	29		0.98	0.03
	Geometry	30		0.99	0.02
	Algebra II	26		0.99	0.03
	High School Mathematics	31		0.99	0.02
	Integrated Mathematics 1	32		0.98	0.03
	Integrated Mathematics 2	25		0.96	0.04
	Integrated Mathematics 3	28		0.96	0.04
Science	**Grade 5 Science**	24		0.98	0.02
	Grade 8 Science	25		0.98	0.03
	Grade 10 Life Science	30		0.97	0.02
	Biology	24		0.97	0.02
	Chemistry	30		0.99	0.02
	Earth Sciences	25		0.95	0.02
	Physics	23		0.87	0.04
	Integrated Science 1 [2]	N/A	N/A	N/A	N/A
	Integrated Science 2 [2]	N/A	N/A	N/A	N/A
	Integrated Science 3 [2]	N/A	N/A	N/A	N/A
	Integrated Science 4 [2]	N/A	N/A	N/A	N/A

* Average over retained items

True Score Equating

Once the new item calibrations for each test are transformed to the base scale, IRT true score equating procedures are used to transform the new form number-correct 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. The reference conversions for the 2007 forms were taken from either the 2002, 2003, or 2004 forms[3] (see Table 3.3 on page 70 for specifics).

[2] Special scaling procedures were utilized to determine the proficiency levels and scale scores for the CSTs for Integrated Science, which are discussed later in this chapter

[3] The original intention was to scale all tests back to the 2002 forms. However, for tests that went through significant changes in length, content, or equating sampling criteria between 2002 and 2003, the reference scale is based on the form from 2003 (these tests include all ELA tests, the history–social science grade 8 test, the mathematics grades 2 through 7 tests, and Integrated Mathematics 1, 2, and 3 tests). The remaining equatings are based on the tests from 2002. The exceptions to this are the Grade 5 Science test, which is equated to this test's first operational administration in 2004 and the Grade 8 Science and Grade 10 Life Science tests, which are equated to these test's first operational administration in 2006.

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

$$\xi(\theta) = \sum_{i=1}^{n} P_i(\theta), \tag{3.2}$$

where,

$P_i(\theta)$ is the probability of a correct response to item *i* at ability level θ (defined by the Rasch model),

$\xi(\theta)$ is the corresponding true score, and

the summation is over the *n* items in the test.

For grades 4 and 7 ELA, $\xi(\theta)$ is based on a sum of multiple-choice and constructed response items, the relationship can be defined as:

$$\xi(\theta) = \sum_{i=1}^{nmc} P_i(\theta) + \sum_{j=1}^{ncr} \sum_{x=1}^{m} s_x P_{xj}(\theta), \tag{3.3}$$

where,

s_x is the score value for category x,

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 in each polytomous item, and

$P_{xj}(\theta)$ is the probability of a score in category x at ability θ (defined by the Rasch partial credit model).

For ELA, there are five possible scores: 0, 2, 4, 6, and 8. This is arrived at from a single reading of an essay using a 4-point rubric and doubling the essay score. A score of zero is only assigned for students who refused to write to the prompt, left their essay blank, or wrote to a prompt from an earlier administration.

For each integer score ξ_n on the new form, the true score equating procedure first solves for the corresponding ability level using equations 3.2 (for all CSTs except grades 4 and 7 ELA) or 3.3 (for grades 4 and 7 ELA). Next, the procedure uses that ability level 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 2007 CSTs are presented in Table 3.A.1 to Table 3.A.21 starting on page 75. The raw scores and corresponding unrounded converted scale scores are listed. For all of the 2007 CSTs, scale scores are 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 proficiency level cut points are presented in Table 3.6 on page 73.

Equating the Braille Versions of the CSTs

In some cases items contained in tests may not be braillable. When this occurs the items are dropped from the test and the shortened test is equated to the full-length test using the parameters and IRT equating methods described above to obtain a conversion for the shortened test. When a braille conversion is developed for the braille form the performance levels are based on the operational raw-to-scale score conversions for the shortened tests. In 2007 it was not necessary to drop any items when producing braille forms, and so the full-length conversions were applied to the braille forms.

Equating Samples

This section describes characteristics of the samples used to establish the 2002 reference forms as well as the equating samples used to equate the CSTs in subsequent years (see Table 3.2). To establish the 2002 reference forms, ETS staff drew samples from the 2002 administrations 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 a case that reflects only those schools that tested early, the complete CST data was sorted according to test administration date in the student records. Only those students testing before a selected cutoff date were chosen. For all content areas being assessed except end-of-course mathematics, 10,000 test takers were randomly sampled from the available records. For the CSTs for higher-level mathematics, samples were limited to students in particular grades, as was done in past equatings, noted below. For the CSTs for Integrated Math, all the student results that were available were sampled, which for each test was substantially fewer than 10,000[4].

Table 3.2 Selection of Equating Samples

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

Starting with 2003, equating samples were selected from available student records in a data file obtained near the end of May. As anticipated, these data consisted of only 5 to 10 percent of the total STAR testing data that were available once testing was completed. It was necessary to utilize these partial student samples for equating to meet score reporting deadlines. In addition, for the Integrated Math tests, it was necessary to sample all students with valid scores, regardless of their grades, in order to obtain sufficient sample sizes for equating. This change from the intended sampling procedures was due to unusually small sample sizes for these tests and was approved by the CDE. Only students with valid results on the CSTs were included in the equating samples.

Table 3.3 summarizes the numbers of students, the mean raw scores, and the standard deviation of raw scores for the reference and 2007 CST equating samples.

Table 3.3 Summary Statistics for the Reference Form and 2007 Equating Samples

Subject	CST	Ref. form admin.	Reference form Equating Samples				2007 Equating Samples			
			# of Students	# of Items/Pts	Mean	Std Dev	# of Students	# of Items/Pts	Mean	Std Dev
English–Language Arts	**2**	2003	13,418	65	38.7	13.1	41,920	65	39.1	13.8
	3	2003	13,946	65	40.3	13.0	42,999	65	38.6	12.2
	4*	2003	11,768	83	46.7	15.1	11,547	83	50.0	15.6
	5	2003	14,121	75	40.7	13.4	41,138	75	42.7	14.0
	6	2003	15,387	75	43.5	13.9	36,044	75	40.8	14.5
	7*	2003	13,594	83	47.9	13.8	10,973	83	48.5	15.1
	8	2003	15,339	75	42.4	12.9	30,770	75	43.2	14.4
	9	2003	25,591	75	43.6	14.1	47,004	75	44.2	15.3
	10	2003	23,555	75	41.7	14.8	45,041	75	44.8	16.0
	11	2003	21,742	75	41.7	14.4	41,015	75	43.9	16.3

* ELA Grades 4 and 7 tests each include one eight-point essay item

[4] In general, the early sample means are similar, but not identical, to the means for the state as a whole. Performance similarities also differ by grade and test. Such variation is expected given that only students from districts that completed their STAR testing early could be included in the equating samples.

Subject	CST	Ref. form admin.	Reference form Equating Samples				2007 Equating Samples			
			# of Students	# of Items/Pts	Mean	Std Dev	# of Students	# of Items/Pts	Mean	Std Dev
History–Social Science	**8**	2003	15,314	75	37.0	11.4	17,036	75	34.6	13.5
	World History*	2002	10,000	60	27.7	10.4	39,684	60	29.7	11.8
	11	2002	10,000	60	29.9	10.8	32,862	60	30.5	11.8
	* Administered as Grade 10 History–Social Science in 2002									
Mathematics	**2**	2003	13,491	65	48.5	10.9	28,296	65	45.5	11.9
	3	2003	14,038	65	44.0	11.8	29,092	65	45.5	12.5
	4	2003	14,235	65	43.8	13.1	29,363	65	44.9	13.0
	5	2003	14,178	65	35.9	11.8	29,267	65	37.9	12.8
	6	2003	15,404	65	36.8	12.2	23,374	65	36.1	12.4
	7	2003	16,018	65	34.8	11.8	17,206	65	33.6	12.6
	General Math.	2002	10,000	65	29.8	10.2	12,577	65	28.9	10.0
	Algebra I	2002	10,000	65	35.8	11.5	50,361	65	26.7	9.5
	Geometry	2002	10,000	65	43.2	10.9	27,741	65	32.9	12.8
	Algebra II	2002	10,000	65	37.5	10.8	17,552	65	32.6	11.3
	High School Math.	2002	10,000	65	44.4	11.7	7,991	65	43.9	12.3
	Integrated Math 1	2003	1,668	65	23.6	8.8	1,616	65	25.0	8.9
	Integrated Math 2	2003	1,130	65	31.1	10.6	907	65	26.6	10.7
	Integrated Math 3	2003	1,065	65	31.1	11.6	451	65	27.4	10.6
Science	**Grade 5 Science**	2004	24,963	60	26.2	8.6	29,238	60	33.7	10.1
	Grade 8 Science	2006	42,868	60	28.6	9.6	17,031	60	30.7	10.3
	Life Science	2006	74,981	60	30.6	12.0	35,816	60	32.9	12.5
	Biology	2002	10,000	60	32.4	11.2	37,836	60	32.7	12.3
	Chemistry	2002	10,000	60	32.3	10.4	17,275	60	33.2	11.1
	Earth Sciences	2002	10,000	60	29.1	10.9	16,950	60	32.3	11.4
	Physics	2002	10,000	60	32.9	11.7	6,198	60	34.0	11.4

Scaling the CSTs for Integrated Science

Special scaling procedures were utilized to determine the proficiency levels and scale scores for the CSTs for Integrated Science. Because these tests were restructured for 2003, it was not possible to equate them back to the 2002 CSTs. In subsequent years, the available representative samples for some of these tests were also extremely limited, making the estimation of stable item parameters difficult. Furthermore, it was decided that the performance necessary to reach each proficiency level category should be based on the cut scores of the four content-based CSTs for science (i.e. Earth Science, Biology, Chemistry, and Physics)[5]. To achieve this, the following process was applied.

The composite performance level cut scores for the CSTs for Integrated Science were determined through the following steps:

1. First, as with the other CSTs, each 2007 content-area CST (e.g., Earth Science, Biology, Chemistry, and Physics) was equated to a reference form. Additional equatings were then carried out where each subset of items in each integrated test was equated to the respective full-length 2007 test. This resulted in 16 additional equatings.

[5] These integrated tests are constructed by taking intact blocks of items from the four content-based CSTs in Science.

2. For each equating, the equated number correct was recorded on the subset of items that corresponded to each of the four performance levels cut points on the full content test.
3. For each integrated test, these number correct equivalents were added together across the content areas to determine the total number correct scores that represented the "composite" cut scores between performance levels.

As an illustration, the number correct scores defining each of the proficiency level cut points on the 60-item, content-specific science CSTs are shown below. For example, the minimum number correct score to achieve below basic on the CST for Biology is 18, the minimum number correct score to achieve basic is 24, etc.

Table 3.4 Proficiency Level Cut Points for Science End-of-Course CSTs

Content Cuts	Biology	Chemistry	Earth Science	Physics
Below Basic	18	21	20	19
Basic	24	27	26	25
Proficient	38	41	40	39
Advanced	48	50	50	48
Items in CST	60	60	60	60

For each content-specific test, a subset of the 60 items was also included in the CST for Integrated Science 1. Using just these subsets of items, equated number correct scores were determined as shown below. For example, 12 biology items were included on the CST for Integrated Science 1, and on these items, the minimum number correct score to achieve below basic was 3.7414. The last column of the table shows the sum of the cuts (truncated to achieve an integer value). These defined the proficiency level cut scores for the 2007 CST for Integrated Science 1.

Table 3.5 Computation[6] of Proficiency Level Cut Points on Integrated Science 1

Equated Cuts	Biology	Chemistry	Earth Science	Physics	Int. 1 Cut
Below Basic	3.7414	5.8475	6.5440	4.1787	20
Basic	5.0050	7.4707	8.4125	5.5453	26
Proficient	7.8781	11.1782	12.5529	8.8556	40
Advanced	9.8265	13.4991	15.3290	11.0570	49
N items	12	16	18	14	

For each CST for Integrated Science, the proficiency level cuts were translated to scale scores. For basic and proficient, scale scores of 300 and 350 defined these cuts. For below basic and advanced, arbitrary scale scores[7] at levels similar to those for the other science CSTs were assigned based on scaling functions.

6 Step-by-step computation:

1. The content-based tests are equated in the standard way.
2. The subsections for each test are scaled up to the total test. This allows for the translation of the cut score on the total content-based test to the subsection. The result is a fractional number correct cut on the subscore. The cut for the integrated test is the truncated sum of the fractional cuts for the respective tests, i.e. the number correct cut.
3. The thetas associated with the number correct on the scaled up sections from the respective tests are weighted by the proportional contribution to the total score to form a composite theta associated with each raw score.
4. Scaling constants are applied to the thetas to obtain the scale score values.

7 The arbitrary scale scores are obtained by linear interpolation of thetas corresponding to the raw scores. The source tables with thetas and unrounded scale scores have not been provided in this report for the sake of brevity. This information can be provided upon request.

Table 3.6 Scale Scores Defining the Various Proficiency Level Cut Points

Subject	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
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
	High School 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	**Science Grade 5**	150 – 267	268 – 299	300 – 349	350 – 409	410 – 600
	Science Grade 8	150 – 252	253 – 299	300 – 349	350 – 402	403 – 600
	Grade 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
	Integrated Science 1	150 – 276	277 – 299	300 – 349	350 – 389	390 – 600
	Integrated Science 2	150 – 277	278 – 299	300 – 349	350 – 390	391 – 600
	Integrated Science 3	150 – 275	276 – 299	300 – 349	350 – 390	391 – 600
	Integrated Science 4	150 – 275	276 – 299	300 – 349	350 – 396	397 – 600

References

Linacre, J.M. *WINSTEPS: Rasch measurement* (Version 3.23). Chicago, IL: MESA Press, 2000.

Lord, F.M. *Applications of Item Response Theory to Practical Testing Problems*. New Jersey: Lawrence Erlbaum Associates, Publishers, 1980.

Muraki, E. and Bock, R. D. *PARSCALE: Parameter scaling of rating data* (Version 2.2). Chicago, IL: Scientific Software, Inc., 1995.

Stocking, M.L., and Lord, F.M. "Developing a common metric in item response theory," *Applied Psychological Measurement*, Vol. 7, pp. 201–210, 1983.

Way, W. D., Kubiak, A. T., Henderson, D., and Julian, M. W. (2002, April). "Accuracy and stability of calibrations for mixed-item-format tests using the one-parameter and generalized partial credit models." Paper presented at the annual meeting of the National Council on Measurement in Education, New Orleans, LA, April, 2002.

Appendix 3.A—New Form Conversion Tables

Table 3.A.1 2007 New Conversions for English–Language Arts Grades 2 and 3

Grade 2								Grade 3							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	8.0009	150	**41**	0.4370	334.2261	334	**0**	N/A	-12.3991	150	**41**	0.2757	324.6865	325
1	-4.5665	79.7217	150	**42**	0.5109	337.9658	338	**1**	-4.8571	48.0781	150	**42**	0.3512	328.8026	329
2	-3.8483	117.6204	150	**43**	0.5862	341.8665	342	**2**	-4.1343	86.5934	150	**43**	0.4280	332.7939	333
3	-3.4174	140.2750	150	**44**	0.6631	345.7371	346	**3**	-3.6990	111.2614	150	**44**	0.5063	337.0986	337
4	-3.1043	155.9047	156	**45**	0.7418	349.5829	350	**4**	-3.3814	128.8242	150	**45**	0.5863	341.2740	341
5	-2.8556	168.4578	168	**46**	0.8225	353.5193	354	**5**	-3.1283	142.6305	150	**46**	0.6682	345.4937	345
6	-2.6475	179.1494	179	**47**	0.9056	357.8426	358	**6**	-2.9159	154.1232	154	**47**	0.7525	350.1755	350
7	-2.4676	188.2917	188	**48**	0.9915	362.1550	362	**7**	-2.7317	163.9745	164	**48**	0.8393	354.9256	355
8	-2.3080	196.2101	196	**49**	1.0804	366.6191	367	**8**	-2.5679	172.6355	173	**49**	0.9292	359.7613	360
9	-2.1641	203.4027	203	**50**	1.1730	371.3613	371	**9**	-2.4198	180.5779	181	**50**	1.0226	364.7370	365
10	-2.0324	210.0063	210	**51**	1.2697	376.1032	376	**10**	-2.2840	187.9294	188	**51**	1.1200	369.7224	370
11	-1.9105	216.1729	216	**52**	1.3713	381.0675	381	**11**	-2.1580	194.6801	195	**52**	1.2222	375.2373	375
12	-1.7967	222.0026	222	**53**	1.4785	386.5094	387	**12**	-2.0402	200.9180	201	**53**	1.3300	381.1031	381
13	-1.6896	227.3507	227	**54**	1.5925	392.3681	392	**13**	-1.9292	206.8217	207	**54**	1.4443	387.1218	387
14	-1.5881	232.4402	232	**55**	1.7147	398.4739	398	**14**	-1.8239	212.4644	212	**55**	1.5667	393.6045	394
15	-1.4915	237.2664	237	**56**	1.8467	405.0280	405	**15**	-1.7234	217.9672	218	**56**	1.6988	400.6040	401
16	-1.3991	241.9996	242	**57**	1.9911	412.2306	412	**16**	-1.6272	223.2731	223	**57**	1.8431	408.4277	408
17	-1.3102	246.5341	247	**58**	2.1512	420.3611	420	**17**	-1.5347	228.2578	228	**58**	2.0028	416.9966	417
18	-1.2243	250.6857	251	**59**	2.3318	429.5479	430	**18**	-1.4453	232.9006	233	**59**	2.1831	426.5758	427
19	-1.1412	254.9272	255	**60**	2.5406	440.0637	440	**19**	-1.3587	237.3968	237	**60**	2.3911	437.8667	438
20	-1.0605	259.0102	259	**61**	2.7903	452.8716	453	**20**	-1.2745	241.9301	242	**61**	2.6398	451.4818	451
21	-0.9818	262.8759	263	**62**	3.1047	469.1803	469	**21**	-1.1924	246.2146	246	**62**	2.9529	468.5204	469
22	-0.9050	266.8970	267	**63**	3.5370	492.4382	492	**22**	-1.1123	250.5702	251	**63**	3.3835	492.0897	492
23	-0.8297	270.6886	271	**64**	4.2571	527.6543	528	**23**	-1.0338	254.6590	255	**64**	4.1014	530.2919	530
24	-0.7557	274.3885	274	**65**	N/A	578.9992	600	**24**	-0.9568	258.9433	259	**65**	N/A	594.9791	600
25	-0.6830	278.0736	278					**25**	-0.8810	262.9053	263				
26	-0.6112	281.7380	282					**26**	-0.8063	266.7654	267				
27	-0.5403	285.2768	285					**27**	-0.7325	270.9214	271				
28	-0.4701	288.5368	289					**28**	-0.6595	275.0359	275				
29	-0.4005	292.1595	292					**29**	-0.5872	278.9047	279				
30	-0.3313	295.7655	296					**30**	-0.5154	282.2771	282				
31	-0.2624	299.2773	299					**31**	-0.4440	286.1662	286				
32	-0.1937	302.4252	302					**32**	-0.3729	290.0572	290				
33	-0.1250	305.9778	306					**33**	-0.3019	293.9487	294				
34	-0.0563	309.5117	310					**34**	-0.2309	297.8395	298				
35	0.0126	313.0259	313					**35**	-0.1598	301.5748	302				
36	0.0818	316.5208	317					**36**	-0.0886	305.0845	305				
37	0.1514	319.9952	320					**37**	-0.0170	308.9654	309				
38	0.2216	323.4486	323					**38**	0.0552	312.8426	313				
39	0.2925	326.9096	327					**39**	0.1279	316.7127	317				
40	0.3717	330.9320	331					**40**	0.1638	318.6070	319				

Table 3.A.2 2007 New Conversions for English–Language Arts Grade 4 (with and without essay)

Grade 4								Grade 4 (without essay)							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	0.0014	150	**41**	-0.0171	318.7244	319	**0**	N/A	0.0014	150	**41**	0.2155	329.8048	330
1	-5.2001	50.9288	150	**42**	0.0418	321.6876	322	**1**	-4.6085	79.8433	150	**42**	0.2763	332.9413	333
2	-4.4294	93.9038	150	**43**	0.1008	324.6117	325	**2**	-3.8910	120.4715	150	**43**	0.3374	336.0650	336
3	-3.9548	120.2858	150	**44**	0.1599	327.4581	327	**3**	-3.4610	144.0661	150	**44**	0.3990	339.1755	339
4	-3.6054	137.3409	150	**45**	0.2191	330.4099	330	**4**	-3.1489	160.4522	160	**45**	0.4610	342.2720	342
5	-3.3268	151.3810	151	**46**	0.2785	333.4841	333	**5**	-2.9013	173.1695	173	**46**	0.5236	345.3539	345
6	-3.0940	163.2807	163	**47**	0.3382	336.6331	337	**6**	-2.6946	183.7284	184	**47**	0.5869	348.4206	348
7	-2.8934	173.6117	174	**48**	0.3983	339.4923	339	**7**	-2.5161	192.7992	193	**48**	0.6509	351.9661	352
8	-2.7167	182.6987	183	**49**	0.4589	342.5070	343	**8**	-2.3581	200.6455	201	**49**	0.7159	355.0099	355
9	-2.5582	190.7999	191	**50**	0.5200	345.6527	346	**9**	-2.2158	207.7229	208	**50**	0.7819	358.2318	358
10	-2.4143	198.0076	198	**51**	0.5817	348.7834	349	**10**	-2.0859	214.4414	214	**51**	0.8491	361.8116	362
11	-2.2821	204.5807	205	**52**	0.6440	351.8985	352	**11**	-1.9659	220.2856	220	**52**	0.9176	365.0488	365
12	-2.1596	210.6411	211	**53**	0.7072	354.9996	355	**12**	-1.8542	225.8849	226	**53**	0.9876	368.5282	369
13	-2.0452	216.3940	216	**54**	0.7714	358.0865	358	**13**	-1.7492	231.2412	231	**54**	1.0593	372.5102	373
14	-1.9376	221.8972	222	**55**	0.8365	361.5024	362	**14**	-1.6501	236.3071	236	**55**	1.1328	376.0481	376
15	-1.8360	226.8920	227	**56**	0.9028	364.7053	365	**15**	-1.5560	240.8642	241	**56**	1.2086	379.7675	380
16	-1.7394	231.9558	232	**57**	0.9704	368.2472	368	**16**	-1.4661	245.3089	245	**57**	1.2867	383.8134	384
17	-1.6472	236.6308	237	**58**	1.0395	371.4196	371	**17**	-1.3799	249.7621	250	**58**	1.3677	387.8329	388
18	-1.5589	241.1422	241	**59**	1.1101	375.0229	375	**18**	-1.2970	253.8608	254	**59**	1.4518	391.9256	392
19	-1.4741	245.2607	245	**60**	1.1826	378.6479	379	**19**	-1.2170	258.0617	258	**60**	1.5395	396.3241	396
20	-1.3922	249.3543	249	**61**	1.2570	382.5396	383	**20**	-1.1395	262.0344	262	**61**	1.6313	400.9739	401
21	-1.3131	253.2910	253	**62**	1.3337	386.3023	386	**21**	-1.0643	265.5441	266	**62**	1.7280	405.9366	406
22	-1.2364	257.0705	257	**63**	1.4129	390.3360	390	**22**	-0.9911	269.2620	269	**63**	1.8303	411.1309	411
23	-1.1618	260.8752	261	**64**	1.4949	394.4313	394	**23**	-0.9197	272.9234	273	**64**	1.9394	416.6370	417
24	-1.0892	264.6565	265	**65**	1.5801	398.7178	399	**24**	-0.8498	276.2609	276	**65**	2.0564	422.3978	422
25	-1.0184	268.1847	268	**66**	1.6689	403.2896	403	**25**	-0.7814	279.8381	280	**66**	2.1834	428.7460	429
26	-0.9491	271.6898	272	**67**	1.7618	407.9112	408	**26**	-0.7143	283.2306	283	**67**	2.3225	435.8986	436
27	-0.8812	275.0120	275	**68**	1.8594	412.7680	413	**27**	-0.6483	286.4667	286	**68**	2.4771	443.8178	444
28	-0.8146	278.6621	279	**69**	1.9623	417.8871	418	**28**	-0.5833	289.7023	290	**69**	2.6521	452.6016	453
29	-0.7491	282.0270	282	**70**	2.0714	423.3863	423	**29**	-0.5191	292.9373	293	**70**	2.8549	462.6112	463
30	-0.6847	285.2984	285	**71**	2.1876	429.1920	429	**30**	-0.4558	296.1686	296	**71**	3.0985	474.9632	475
31	-0.6212	288.1478	288	**72**	2.3125	435.4021	435	**31**	-0.3931	299.3965	299	**72**	3.4064	490.8969	491
32	-0.5585	291.3618	291	**73**	2.4473	442.4142	442	**32**	-0.3310	302.5506	303	**73**	3.8314	512.8527	513
33	-0.4965	294.6441	295	**74**	2.5943	450.1058	450	**33**	-0.2694	305.4431	305	**74**	4.5442	548.5378	549
34	-0.4352	297.5719	298	**75**	2.7560	458.3979	458	**34**	-0.2083	308.5518	309	**75**	N/A	607.4990	600
35	-0.3744	300.7101	301	**76**	2.9362	468.0337	468	**35**	-0.1474	311.7576	312				
36	-0.3141	303.8397	304	**77**	3.1402	479.5190	480	**36**	-0.0868	314.8553	315				
37	-0.2542	306.7191	307	**78**	3.3758	493.4383	493	**37**	-0.0263	317.7214	318				
38	-0.1946	309.6702	310	**79**	3.6559	511.0931	511	**38**	0.0341	320.8272	321				
39	-0.1353	312.6964	313	**80**	4.0040	534.1445	534	**39**	0.0945	323.9920	324				
40	-0.0762	315.6033	316	**81**	4.4740	565.2363	565	**40**	0.1549	326.7330	327				
				82	5.2344	606.2388	600								
				83	N/A	643.4993	600								

Table 3.A.3 2007 New Conversions for English–Language Arts Grades 5 and 6

Grade 5								Grade 6							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	25.0010	150	**41**	0.1029	325.0844	325	**0**	N/A	0.0011	150	**41**	0.2358	328.6971	329
1	-4.7819	76.4066	150	**42**	0.1655	328.2741	328	**1**	-4.4791	83.8356	150	**42**	0.2950	332.0424	332
2	-4.0619	112.3417	150	**43**	0.2283	331.4624	331	**2**	-3.7666	123.5782	150	**43**	0.3546	334.8966	335
3	-3.6298	136.5630	150	**44**	0.2916	334.6503	335	**3**	-3.3415	145.9771	150	**44**	0.4146	338.0002	338
4	-3.3156	153.2690	153	**45**	0.3554	337.8366	338	**4**	-3.0339	162.1511	162	**45**	0.4751	341.0098	341
5	-3.0661	166.3131	166	**46**	0.4198	341.0207	341	**5**	-2.7906	174.6236	175	**46**	0.5362	344.1992	344
6	-2.8575	176.5543	177	**47**	0.4850	344.2031	344	**6**	-2.5880	185.1945	185	**47**	0.5980	347.1535	347
7	-2.6773	185.6986	186	**48**	0.5509	347.5228	348	**7**	-2.4134	193.9068	194	**48**	0.6606	350.2777	350
8	-2.5177	193.8182	194	**49**	0.6179	351.0534	351	**8**	-2.2592	201.6375	202	**49**	0.7242	353.5508	354
9	-2.3738	201.0363	201	**50**	0.6859	354.3420	354	**9**	-2.1205	208.7029	209	**50**	0.7888	356.9285	357
10	-2.2424	207.6556	208	**51**	0.7551	357.7834	358	**10**	-1.9940	215.1683	215	**51**	0.8546	360.3935	360
11	-2.1210	213.9148	214	**52**	0.8257	361.2928	361	**11**	-1.8774	221.1979	221	**52**	0.9218	363.8575	364
12	-2.0078	219.5491	220	**53**	0.8978	365.0334	365	**12**	-1.7689	226.7449	227	**53**	0.9905	367.3361	367
13	-1.9015	224.8697	225	**54**	0.9717	368.8054	369	**13**	-1.6671	231.9347	232	**54**	1.0609	370.6560	371
14	-1.8010	229.9934	230	**55**	1.0475	372.5677	373	**14**	-1.5710	236.9820	237	**55**	1.1332	374.3281	374
15	-1.7054	234.7149	235	**56**	1.1256	376.3192	376	**15**	-1.4798	241.5030	242	**56**	1.2076	378.3978	378
16	-1.6142	239.1475	239	**57**	1.2061	380.4253	380	**16**	-1.3928	245.8139	246	**57**	1.2845	382.0635	382
17	-1.5267	243.6746	244	**58**	1.2895	384.7497	385	**17**	-1.3094	250.0819	250	**58**	1.3642	386.2345	386
18	-1.4425	247.9416	248	**59**	1.3761	389.0851	389	**18**	-1.2292	254.3086	254	**59**	1.4471	390.6487	391
19	-1.3612	251.8924	252	**60**	1.4663	393.4149	393	**19**	-1.1518	258.0552	258	**60**	1.5336	394.8189	395
20	-1.2824	255.7415	256	**61**	1.5608	398.0091	398	**20**	-1.0769	261.9753	262	**61**	1.6242	399.3619	399
21	-1.2059	259.5219	260	**62**	1.6602	402.9826	403	**21**	-1.0042	265.7702	266	**62**	1.7197	404.3470	404
22	-1.1313	263.2850	263	**63**	1.7653	408.2915	408	**22**	-0.9334	269.3461	269	**63**	1.8208	409.6555	410
23	-1.0586	267.0235	267	**64**	1.8773	413.9327	414	**23**	-0.8644	272.7283	273	**64**	1.9287	415.0996	415
24	-0.9874	270.5003	271	**65**	1.9973	419.8815	420	**24**	-0.7969	276.3513	276	**65**	2.0446	420.9425	421
25	-0.9177	274.1111	274	**66**	2.1273	426.5548	427	**25**	-0.7307	279.8460	280	**66**	2.1703	427.4811	427
26	-0.8492	277.3773	277	**67**	2.2695	433.6790	434	**26**	-0.6658	283.1486	283	**67**	2.3083	434.5573	435
27	-0.7818	280.8410	281	**68**	2.4274	441.3422	441	**27**	-0.6020	286.3952	286	**68**	2.4617	442.3238	442
28	-0.7154	284.3434	284	**69**	2.6057	450.2929	450	**28**	-0.5391	289.6151	290	**69**	2.6355	451.2343	451
29	-0.6499	287.5410	288	**70**	2.8120	460.7469	461	**29**	-0.4770	292.7334	293	**70**	2.8371	461.6830	462
30	-0.5852	290.6794	291	**71**	3.0592	473.4043	473	**30**	-0.4157	295.5910	296	**71**	3.0796	474.2511	474
31	-0.5211	293.8267	294	**72**	3.3707	489.5468	490	**31**	-0.3551	298.6026	299	**72**	3.3862	490.6125	491
32	-0.4576	296.9808	297	**73**	3.7997	511.9285	512	**32**	-0.2949	301.7169	302	**73**	3.8101	514.1484	514
33	-0.3945	300.1417	300	**74**	4.5165	548.5699	549	**33**	-0.2352	304.8060	305	**74**	4.5217	549.6484	550
34	-0.3318	303.3087	303	**75**	N/A	611.4990	600	**34**	-0.1759	307.8704	308	**75**	N/A	602.2691	600
35	-0.2695	306.4810	306					**35**	-0.1169	310.9103	311				
36	-0.2073	309.6577	310					**36**	-0.0580	313.9260	314				
37	-0.1453	312.8382	313					**37**	0.0007	316.9180	317				
38	-0.0833	316.0219	316					**38**	0.0594	319.8874	320				
39	-0.0214	319.1930	319					**39**	0.1180	322.8322	323				
40	0.0407	321.8961	322					**40**	0.1768	325.7552	326				

Table 3.A.4 2007 New Conversions for English–Language Arts Grade 7 (with and without essay)

Grade 7								Grade 7 (without essay)							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	-40.1188	150	**41**	0.1773	311.7709	312	**0**	N/A	0.0006	150	**41**	0.4565	325.2747	325
1	-4.8181	27.8940	150	**42**	0.2333	315.0261	315	**1**	-4.2702	54.4085	150	**42**	0.5160	328.5403	329
2	-4.0764	69.7296	150	**43**	0.2893	318.2596	318	**2**	-3.5563	98.4304	150	**43**	0.5758	331.9176	332
3	-3.6240	96.2271	150	**44**	0.3454	321.4718	321	**3**	-3.1299	122.8454	150	**44**	0.6361	335.4261	335
4	-3.2912	115.3134	150	**45**	0.4016	324.6634	325	**4**	-2.8212	140.4251	150	**45**	0.6969	338.7839	339
5	-3.0248	130.9599	150	**46**	0.4579	327.8350	328	**5**	-2.5769	154.2526	154	**46**	0.7583	342.1873	342
6	-2.8011	143.5596	150	**47**	0.5145	330.9871	331	**6**	-2.3735	165.9247	166	**47**	0.8205	345.6819	346
7	-2.6073	154.2524	154	**48**	0.5713	334.1203	334	**7**	-2.1981	175.7374	176	**48**	0.8835	349.3176	349
8	-2.4358	164.1330	164	**49**	0.6286	337.2351	337	**8**	-2.0432	184.4998	184	**49**	0.9474	352.9268	353
9	-2.2815	172.8197	173	**50**	0.6863	340.4875	340	**9**	-1.9040	192.2142	192	**50**	1.0125	356.5086	357
10	-2.1410	180.5925	181	**51**	0.7445	343.9065	344	**10**	-1.7771	199.5720	200	**51**	1.0788	360.0739	360
11	-2.0117	188.0863	188	**52**	0.8033	347.1821	347	**11**	-1.6601	206.0466	206	**52**	1.1465	363.7646	364
12	-1.8918	194.7746	195	**53**	0.8628	350.6666	351	**12**	-1.5512	212.1245	212	**53**	1.2157	367.8439	368
13	-1.7798	200.8817	201	**54**	0.9231	353.9115	354	**13**	-1.4491	217.9370	218	**54**	1.2866	371.8878	372
14	-1.6746	206.9067	207	**55**	0.9842	357.5272	358	**14**	-1.3528	223.3404	223	**55**	1.3596	375.9044	376
15	-1.5752	212.4527	212	**56**	1.0464	361.1243	361	**15**	-1.2613	228.6036	229	**56**	1.4347	380.1622	380
16	-1.4808	217.8935	218	**57**	1.1097	364.7012	365	**16**	-1.1741	233.5514	234	**57**	1.5123	384.6367	385
17	-1.3908	222.8495	223	**58**	1.1742	368.2589	368	**17**	-1.0906	238.2223	238	**58**	1.5928	389.1096	389
18	-1.3048	227.8154	228	**59**	1.2400	371.7965	372	**18**	-1.0103	242.8002	243	**59**	1.6764	393.8315	394
19	-1.2222	232.4800	232	**60**	1.3074	375.7770	376	**19**	-0.9328	247.0020	247	**60**	1.7637	398.7267	399
20	-1.1427	237.0771	237	**61**	1.3765	379.3698	379	**20**	-0.8578	251.0806	251	**61**	1.8553	403.8940	404
21	-1.0659	241.2240	241	**62**	1.4474	383.3558	383	**21**	-0.7850	255.3289	255	**62**	1.9517	409.2339	409
22	-0.9915	245.5309	246	**63**	1.5205	387.3930	387	**22**	-0.7142	259.3440	259	**63**	2.0538	414.8073	415
23	-0.9194	249.6402	250	**64**	1.5960	391.4084	391	**23**	-0.6451	263.3360	263	**64**	2.1628	420.9844	421
24	-0.8492	253.6231	254	**65**	1.6741	395.5244	396	**24**	-0.5776	267.0573	267	**65**	2.2798	427.6590	428
25	-0.7808	257.3634	257	**66**	1.7551	399.7780	400	**25**	-0.5114	270.6717	271	**66**	2.4067	434.7203	435
26	-0.7140	261.0414	261	**67**	1.8396	404.1641	404	**26**	-0.4465	274.2562	274	**67**	2.5459	442.4924	442
27	-0.6487	264.6909	265	**68**	1.9280	408.7578	409	**27**	-0.3826	277.8115	278	**68**	2.7006	451.2107	451
28	-0.5846	268.3118	268	**69**	2.0207	413.5106	414	**28**	-0.3197	281.3368	281	**69**	2.8757	461.1509	461
29	-0.5218	271.9040	272	**70**	2.1186	418.4799	418	**29**	-0.2576	284.8343	285	**70**	3.0790	472.7865	473
30	-0.4599	275.4675	275	**71**	2.2225	423.8629	424	**30**	-0.1962	288.3044	288	**71**	3.3228	486.9162	487
31	-0.3990	279.0038	279	**72**	2.3333	429.4641	429	**31**	-0.1355	291.7475	292	**72**	3.6311	504.9722	505
32	-0.3390	282.5102	283	**73**	2.4526	435.5224	436	**32**	-0.0753	295.1642	295	**73**	4.0569	530.1075	530
33	-0.2797	285.7417	286	**74**	2.5820	442.3760	442	**33**	-0.0155	298.5554	299	**74**	4.7697	568.0847	568
34	-0.2211	288.9441	289	**75**	2.7240	449.6114	450	**34**	0.0439	301.9195	302	**75**	N/A	625.1589	600
35	-0.1631	292.3064	292	**76**	2.8819	458.0323	458	**35**	0.1030	305.2590	305				
36	-0.1055	295.7056	296	**77**	3.0607	468.0135	468	**36**	0.1619	308.5735	309				
37	-0.0484	298.8724	299	**78**	3.2680	479.8533	480	**37**	0.2208	311.8634	312				
38	0.0084	301.9571	302	**79**	3.5163	494.1401	494	**38**	0.2796	315.1287	315				
39	0.0649	305.1924	305	**80**	3.8295	511.8243	512	**39**	0.3384	318.3699	318				
40	0.1212	308.4932	308	**81**	4.2611	538.7025	539	**40**	0.3974	321.8025	322				
				82	4.9806	577.0464	577								
				83	N/A	628.5192	600								

Table 3.A.5 2007 New Conversions for English–Language Arts Grades 8 and 9

Grade 8								Grade 9							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	0.0007	150	**41**	0.0085	317.3203	317	**0**	N/A	0.0007	150	**41**	0.2093	329.7939	330
1	-4.6627	52.2997	150	**42**	0.0667	320.5564	321	**1**	-4.4843	59.3548	150	**42**	0.2674	333.0229	333
2	-3.9516	94.5922	150	**43**	0.1253	323.9676	324	**2**	-3.7700	103.3909	150	**43**	0.3258	336.2344	336
3	-3.5277	118.9898	150	**44**	0.1843	327.5145	328	**3**	-3.3434	127.7385	150	**44**	0.3847	339.5259	340
4	-3.2214	136.2615	150	**45**	0.2438	330.7148	331	**4**	-3.0347	145.8329	150	**45**	0.4441	342.9722	343
5	-2.9794	149.9452	150	**46**	0.3039	334.0168	334	**5**	-2.7905	159.5929	160	**46**	0.5041	346.3374	346
6	-2.7780	161.0114	161	**47**	0.3647	337.5746	338	**6**	-2.5873	171.1674	171	**47**	0.5648	349.6110	350
7	-2.6045	170.8720	171	**48**	0.4263	340.8611	341	**7**	-2.4122	181.1852	181	**48**	0.6264	353.2631	353
8	-2.4515	179.4397	179	**49**	0.4889	344.2138	344	**8**	-2.2577	189.8299	190	**49**	0.6889	356.8855	357
9	-2.3140	187.1258	187	**50**	0.5525	347.9920	348	**9**	-2.1190	197.6947	198	**50**	0.7524	360.1570	360
10	-2.1887	194.2838	194	**51**	0.6173	351.5564	352	**10**	-1.9926	205.0876	205	**51**	0.8172	363.8574	364
11	-2.0732	200.5648	201	**52**	0.6835	355.0937	355	**11**	-1.8761	211.6259	212	**52**	0.8833	367.5543	368
12	-1.9658	206.7508	207	**53**	0.7512	358.9655	359	**12**	-1.7679	217.7077	218	**53**	0.9509	371.5257	372
13	-1.8652	212.2743	212	**54**	0.8205	363.1894	363	**13**	-1.6665	223.4416	223	**54**	1.0203	375.4142	375
14	-1.7702	217.7328	218	**55**	0.8918	367.0779	367	**14**	-1.5709	228.9604	229	**55**	1.0916	379.4615	379
15	-1.6801	222.8970	223	**56**	0.9653	371.0203	371	**15**	-1.4802	234.1980	234	**56**	1.1650	383.6633	384
16	-1.5941	227.5683	228	**57**	1.0412	375.4572	375	**16**	-1.3938	238.9523	239	**57**	1.2409	387.8574	388
17	-1.5118	232.2027	232	**58**	1.1199	379.8943	380	**17**	-1.3111	243.5526	244	**58**	1.3197	392.5264	393
18	-1.4327	236.6534	237	**59**	1.2017	384.3957	384	**18**	-1.2317	248.1126	248	**59**	1.4016	397.2758	397
19	-1.3564	240.8291	241	**60**	1.2872	389.2130	389	**19**	-1.1551	252.6340	253	**60**	1.4871	402.0877	402
20	-1.2826	244.9839	245	**61**	1.3768	394.2920	394	**20**	-1.0810	256.6433	257	**61**	1.5768	407.2689	407
21	-1.2109	249.0495	249	**62**	1.4712	399.5255	400	**21**	-1.0092	260.8101	261	**62**	1.6714	412.5469	413
22	-1.1412	252.9261	253	**63**	1.5714	405.1261	405	**22**	-0.9393	264.5706	265	**63**	1.7717	418.0678	418
23	-1.0732	256.6348	257	**64**	1.6782	411.0951	411	**23**	-0.8712	268.6719	269	**64**	1.8786	424.2157	424
24	-1.0067	260.3110	260	**65**	1.7931	417.7058	418	**24**	-0.8047	272.4031	272	**65**	1.9936	430.7319	431
25	-0.9417	264.1750	264	**66**	1.9177	424.6902	425	**25**	-0.7396	276.0010	276	**66**	2.1186	437.8456	438
26	-0.8778	267.7896	268	**67**	2.0546	432.1550	432	**26**	-0.6757	279.5678	280	**67**	2.2556	445.8094	446
27	-0.8150	271.4229	271	**68**	2.2070	440.8491	441	**27**	-0.6129	283.1098	283	**68**	2.4082	454.5865	455
28	-0.7531	274.7679	275	**69**	2.3797	450.4617	450	**28**	-0.5511	286.6273	287	**69**	2.5812	464.5048	465
29	-0.6921	278.1010	278	**70**	2.5804	461.7411	462	**29**	-0.4901	290.1194	290	**70**	2.7821	476.1054	476
30	-0.6318	281.4218	281	**71**	2.8215	475.4646	475	**30**	-0.4299	293.5886	294	**71**	3.0238	490.0733	490
31	-0.5722	284.7317	285	**72**	3.1272	493.0725	493	**31**	-0.3703	297.0351	297	**72**	3.3297	507.7960	508
32	-0.5131	288.0310	288	**73**	3.5502	517.5981	518	**32**	-0.3113	300.3837	300	**73**	3.7529	532.9599	533
33	-0.4544	291.3202	291	**74**	4.2606	558.6310	559	**33**	-0.2527	303.4267	303	**74**	4.4638	573.4664	573
34	-0.3961	294.5997	295	**75**	N/A	633.1989	600	**34**	-0.1945	306.6741	307	**75**	N/A	639.4489	600
35	-0.3381	297.8700	298					**35**	-0.1366	310.0352	310				
36	-0.2803	301.1314	301					**36**	-0.0789	313.3754	313				
37	-0.2226	304.3844	304					**37**	-0.0213	316.6971	317				
38	-0.1649	307.6294	308					**38**	0.0362	319.9995	320				
39	-0.1072	310.8669	311					**39**	0.0938	323.2826	323				
40	-0.0495	314.0970	314					**40**	0.1514	326.5473	327				

Table 3.A.6 New Conversions for English–Language Arts Grades 10 and 11

Grade 10								Grade 11							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	0.4011	150	**41**	-0.0500	313.8610	314	**0**	N/A	0.0003	150	**41**	-0.0140	311.2369	311
1	-4.7223	65.3171	150	**42**	0.0080	316.9238	317	**1**	-4.6995	27.2568	150	**42**	0.0448	315.0252	315
2	-4.0110	104.3689	150	**43**	0.0665	320.0038	320	**2**	-3.9878	70.7751	150	**43**	0.1039	318.6975	319
3	-3.5869	128.7080	150	**44**	0.1253	323.0819	323	**3**	-3.5633	97.3292	150	**44**	0.1634	322.1859	322
4	-3.2804	145.3351	150	**45**	0.1847	326.1574	326	**4**	-3.2565	115.8341	150	**45**	0.2236	325.6360	326
5	-3.0382	158.1092	158	**46**	0.2446	329.2310	329	**5**	-3.0140	130.5181	150	**46**	0.2843	329.2540	329
6	-2.8366	168.7884	169	**47**	0.3053	332.3647	332	**6**	-2.8121	143.2140	150	**47**	0.3458	333.0332	333
7	-2.6630	178.0297	178	**48**	0.3667	335.7009	336	**7**	-2.6383	153.5091	154	**48**	0.4081	336.8965	337
8	-2.5098	186.1331	186	**49**	0.4291	338.9619	339	**8**	-2.4848	162.7722	163	**49**	0.4715	340.6120	341
9	-2.3722	193.1534	193	**50**	0.4926	342.2359	342	**9**	-2.3469	171.0557	171	**50**	0.5359	344.5388	345
10	-2.2468	199.6270	200	**51**	0.5572	345.5553	346	**10**	-2.2213	178.5951	179	**51**	0.6015	348.2820	348
11	-2.1312	205.6675	206	**52**	0.6232	349.0058	349	**11**	-2.1054	185.5680	186	**52**	0.6686	352.2634	352
12	-2.0236	211.3394	211	**53**	0.6907	352.6171	353	**12**	-1.9977	192.2686	192	**53**	0.7372	356.4472	356
13	-1.9229	216.6788	217	**54**	0.7599	355.9516	356	**13**	-1.8967	198.3454	198	**54**	0.8076	360.6408	361
14	-1.8278	221.6379	222	**55**	0.8310	359.6435	360	**14**	-1.8014	203.8219	204	**55**	0.8800	365.1682	365
15	-1.7376	226.1651	226	**56**	0.9043	363.6452	364	**15**	-1.7110	209.4122	209	**56**	0.9546	369.6262	370
16	-1.6516	230.5952	231	**57**	0.9801	367.3877	367	**16**	-1.6248	214.7203	215	**57**	1.0317	374.3701	374
17	-1.5692	235.0207	235	**58**	1.0586	371.4133	371	**17**	-1.5422	219.4713	219	**58**	1.1117	378.7991	379
18	-1.4900	239.3685	239	**59**	1.1403	375.7085	376	**18**	-1.4628	224.4905	224	**59**	1.1948	383.7959	384
19	-1.4137	243.2510	243	**60**	1.2255	380.0805	380	**19**	-1.3862	229.1535	229	**60**	1.2818	389.2408	389
20	-1.3398	247.0342	247	**61**	1.3150	384.9405	385	**20**	-1.3121	233.4742	233	**61**	1.3729	394.5652	395
21	-1.2681	250.8139	251	**62**	1.4094	389.8810	390	**21**	-1.2402	237.7792	238	**62**	1.4691	400.3553	400
22	-1.1984	254.4690	254	**63**	1.5094	395.0972	395	**22**	-1.1702	242.0696	242	**63**	1.5709	406.6244	407
23	-1.1304	258.0033	258	**64**	1.6161	400.6583	401	**23**	-1.1019	246.3454	246	**64**	1.6797	413.1630	413
24	-1.0639	261.4222	261	**65**	1.7308	406.3830	406	**24**	-1.0352	250.1559	250	**65**	1.7965	419.9590	420
25	-0.9989	264.6855	265	**66**	1.8553	412.9827	413	**25**	-0.9698	254.1725	254	**66**	1.9233	427.5976	428
26	-0.9350	268.0297	268	**67**	1.9921	420.0041	420	**26**	-0.9057	257.8717	258	**67**	2.0625	436.1613	436
27	-0.8722	271.4175	271	**68**	2.1444	428.0307	428	**27**	-0.8426	261.6472	262	**68**	2.2173	445.3374	445
28	-0.8104	274.5442	275	**69**	2.3171	437.2291	437	**28**	-0.7805	265.4273	265	**69**	2.3927	455.9700	456
29	-0.7495	277.6675	278	**70**	2.5177	447.7157	448	**29**	-0.7192	269.0668	269	**70**	2.5962	468.3382	468
30	-0.6892	280.7867	281	**71**	2.7589	460.3205	460	**30**	-0.6586	272.8277	273	**71**	2.8403	483.0508	483
31	-0.6297	283.9030	284	**72**	3.0645	476.4645	476	**31**	-0.5986	276.6078	277	**72**	3.1493	502.2731	502
32	-0.5706	287.0151	287	**73**	3.4875	499.4763	499	**32**	-0.5392	280.0914	280	**73**	3.5757	529.0610	529
33	-0.5120	290.1239	290	**74**	4.1978	538.2724	538	**33**	-0.4802	283.5690	284	**74**	4.2899	574.2254	574
34	-0.4538	293.2295	293	**75**	N/A	608.7990	600	**34**	-0.4215	287.0411	287	**75**	N/A	661.7838	600
35	-0.3959	296.0430	296					**35**	-0.3631	290.5082	291				
36	-0.3382	298.9465	299					**36**	-0.3049	293.9709	294				
37	-0.2806	302.0071	302					**37**	-0.2468	297.4298	297				
38	-0.2231	305.1002	305					**38**	-0.1888	300.8854	301				
39	-0.1655	308.1904	308					**39**	-0.1306	304.3378	304				
40	-0.1079	311.0176	311					**40**	-0.0724	307.7883	308				

Table 3.A.7 New Conversions for History–Social Science Grade 8 and World History

Grade 8								Grade 10							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	0.0007	150	**41**	0.3672	337.4694	337	**0**	N/A	0.0003	150	**41**	0.9406	372.4415	372
1	-4.2170	50.0437	150	**42**	0.4230	341.2299	341	**1**	-3.9894	56.1008	150	**42**	1.0210	377.5695	378
2	-3.5074	90.6073	150	**43**	0.4791	344.9115	345	**2**	-3.2776	101.6232	150	**43**	1.1040	382.7029	383
3	-3.0851	119.1583	150	**44**	0.5357	348.3925	348	**3**	-2.8529	129.0762	150	**44**	1.1899	388.3414	388
4	-2.7804	138.9771	150	**45**	0.5928	351.8787	352	**4**	-2.5456	148.7943	150	**45**	1.2792	394.1299	394
5	-2.5401	154.5633	155	**46**	0.6505	355.6110	356	**5**	-2.3025	164.0967	164	**46**	1.3724	399.9240	400
6	-2.3405	167.2177	167	**47**	0.7088	359.2696	359	**6**	-2.0999	177.4153	177	**47**	1.4703	406.2363	406
7	-2.1689	177.8760	178	**48**	0.7680	362.8491	363	**7**	-1.9250	188.7748	189	**48**	1.5738	413.2056	413
8	-2.0177	187.5144	188	**49**	0.8281	366.6668	367	**8**	-1.7704	198.2956	198	**49**	1.6837	420.3114	420
9	-1.8822	196.2348	196	**50**	0.8894	370.5570	371	**9**	-1.6312	207.1620	207	**50**	1.8016	427.4251	427
10	-1.7588	204.0720	204	**51**	0.9517	374.4432	374	**10**	-1.5040	215.3803	215	**51**	1.9291	435.6202	436
11	-1.6454	211.2258	211	**52**	1.0154	378.3253	378	**11**	-1.3865	222.9568	223	**52**	2.0687	444.5950	445
12	-1.5400	217.8692	218	**53**	1.0807	382.3112	382	**12**	-1.2768	229.9257	230	**53**	2.2236	454.7902	455
13	-1.4414	224.0412	224	**54**	1.1476	386.5692	387	**13**	-1.1736	236.8645	237	**54**	2.3988	465.7514	466
14	-1.3486	229.9077	230	**55**	1.2165	390.9468	391	**14**	-1.0759	243.1727	243	**55**	2.6019	479.1102	479
15	-1.2606	235.5961	236	**56**	1.2875	395.4823	395	**15**	-0.9829	248.8592	249	**56**	2.8453	494.5402	495
16	-1.1768	240.9700	241	**57**	1.3610	400.3249	400	**16**	-0.8938	254.5427	255	**57**	3.1532	514.3908	514
17	-1.0967	245.8819	246	**58**	1.4372	405.1652	405	**17**	-0.8081	260.2242	260	**58**	3.5782	541.3570	541
18	-1.0198	250.5569	251	**59**	1.5166	410.0355	410	**18**	-0.7253	265.2839	265	**59**	4.2906	587.5807	588
19	-0.9457	255.2175	255	**60**	1.5996	415.0884	415	**19**	-0.6451	270.9439	271	**60**	N/A	666.7195	600
20	-0.8741	259.7377	260	**61**	1.6868	420.5227	421	**20**	-0.5670	275.4183	275				
21	-0.8047	263.9923	264	**62**	1.7788	426.3984	426	**21**	-0.4908	280.4301	280				
22	-0.7373	268.0982	268	**63**	1.8765	432.6124	433	**22**	-0.4162	285.4813	285				
23	-0.6716	272.1923	272	**64**	1.9809	439.1630	439	**23**	-0.3430	289.9558	290				
24	-0.6075	276.2751	276	**65**	2.0934	446.2497	446	**24**	-0.2709	294.3775	294				
25	-0.5447	280.3468	280	**66**	2.2156	454.1293	454	**25**	-0.1998	299.3614	299				
26	-0.4832	284.3238	284	**67**	2.3500	462.5156	463	**26**	-0.1295	303.8673	304				
27	-0.4227	288.0908	288	**68**	2.5000	471.9484	472	**27**	-0.0597	308.2959	308				
28	-0.3632	291.8573	292	**69**	2.6703	482.8226	483	**28**	0.0095	312.7274	313				
29	-0.3046	295.7382	296	**70**	2.8685	495.5475	496	**29**	0.0785	317.1615	317				
30	-0.2467	299.2561	299	**71**	3.1074	510.8327	511	**30**	0.1474	321.5990	322				
31	-0.1894	302.7660	303	**72**	3.4105	530.2569	530	**31**	0.2162	326.0399	326				
32	-0.1327	306.2681	306	**73**	3.8311	559.5214	560	**32**	0.2852	330.4843	330				
33	-0.0764	309.7626	310	**74**	4.5389	602.4508	600	**33**	0.3545	334.9324	335				
34	-0.0205	313.2518	313	**75**	N/A	661.2691	600	**34**	0.4243	339.3844	339				
35	0.0351	316.7293	317					**35**	0.4947	343.8403	344				
36	0.0905	320.2019	320					**36**	0.5659	348.3003	348				
37	0.1458	323.6678	324					**37**	0.6380	352.7645	353				
38	0.2011	327.1272	327					**38**	0.7113	357.7286	358				
39	0.2563	330.5805	331					**39**	0.7861	362.3464	362				
40	0.3117	334.0278	334					**40**	0.8624	367.3189	367				

Table 3.A.8 2007 New Conversion for History–Social Science Grade 11

Grade 11							
Raw Scr.	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Theta**	**Scale Score**	**Rprtd Score**
0	N/A	0.0003	150	**41**	0.8867	378.3474	378
1	-4.1228	55.8053	150	**42**	0.9685	383.8928	384
2	-3.4081	102.6619	150	**43**	1.0528	388.9441	389
3	-2.9806	130.7087	150	**44**	1.1399	394.4284	394
4	-2.6706	150.5813	151	**45**	1.2305	400.4973	400
5	-2.4249	166.4849	166	**46**	1.3250	406.6716	407
6	-2.2196	179.7221	180	**47**	1.4242	412.8295	413
7	-2.0422	191.1168	191	**48**	1.5288	419.4018	419
8	-1.8851	201.0348	201	**49**	1.6400	426.5446	427
9	-1.7434	210.4033	210	**50**	1.7590	434.2532	434
10	-1.6138	218.7820	219	**51**	1.8876	442.5221	443
11	-1.4939	226.2507	226	**52**	2.0283	451.6612	452
12	-1.3819	233.5313	234	**53**	2.1844	461.6458	462
13	-1.2765	240.2502	240	**54**	2.3607	472.9047	473
14	-1.1766	246.8337	247	**55**	2.5648	486.1978	486
15	-1.0814	252.8242	253	**56**	2.8093	501.8166	502
16	-0.9902	258.7215	259	**57**	3.1181	521.9795	522
17	-0.9024	264.0014	264	**58**	3.5442	550.1699	550
18	-0.8176	269.8400	270	**59**	4.2575	594.8381	595
19	-0.7353	275.0731	275	**60**	N/A	667.4795	600
20	-0.6552	279.6351	280				
21	-0.5771	284.8262	285				
22	-0.5006	289.9927	290				
23	-0.4255	294.5199	295				
24	-0.3516	299.0667	299				
25	-0.2787	304.1890	304				
26	-0.2066	308.6917	309				
27	-0.1351	313.1864	313				
28	-0.0641	317.6729	318				
29	0.0066	322.1513	322				
30	0.0770	326.6212	327				
31	0.1475	331.0828	331				
32	0.2181	335.5358	336				
33	0.2890	340.0060	340				
34	0.3603	345.0558	345				
35	0.4322	349.4825	349				
36	0.5049	353.9030	354				
37	0.5785	358.9410	359				
38	0.6533	363.3471	363				
39	0.7294	368.3462	368				
40	0.8071	373.3523	373				

Table 3.A.9 2007 New Conversions for Mathematics Grades 2 and 3

Grade 2								Grade 3							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	0.0000	150	**41**	-0.2593	314.3678	314	**0**	N/A	0.0000	150	**41**	-0.0858	317.1351	317
1	-5.4274	1.5844	150	**42**	-0.1801	319.4445	319	**1**	-5.2454	9.2076	150	**42**	-0.0071	321.8636	322
2	-4.7044	37.1695	150	**43**	-0.0994	324.5254	325	**2**	-4.5249	50.9712	150	**43**	0.0730	326.8854	327
3	-4.2690	64.5628	150	**44**	-0.0170	329.6098	330	**3**	-4.0916	77.6989	150	**44**	0.1547	331.7710	332
4	-3.9515	84.5573	150	**45**	0.0675	334.7118	335	**4**	-3.7759	97.0363	150	**45**	0.2382	336.7858	337
5	-3.6985	100.6392	150	**46**	0.1542	339.9785	340	**5**	-3.5245	112.3239	150	**46**	0.3237	341.6938	342
6	-3.4863	113.6564	150	**47**	0.2434	345.7022	346	**6**	-3.3136	125.0390	150	**47**	0.4117	346.8070	347
7	-3.3023	125.3258	150	**48**	0.3356	351.4499	351	**7**	-3.1307	136.0010	150	**48**	0.5024	352.4022	352
8	-3.1387	135.2120	150	**49**	0.4312	357.3887	357	**8**	-2.9681	145.6465	150	**49**	0.5962	357.9420	358
9	-2.9909	144.4411	150	**50**	0.5306	363.7379	364	**9**	-2.8210	154.5462	155	**50**	0.6937	363.6218	364
10	-2.8553	152.9193	153	**51**	0.6345	370.0804	370	**10**	-2.6860	162.4750	162	**51**	0.7952	369.8514	370
11	-2.7296	160.4429	160	**52**	0.7436	376.7339	377	**11**	-2.5608	169.8207	170	**52**	0.9017	376.3385	376
12	-2.6120	167.8572	168	**53**	0.8588	383.9861	384	**12**	-2.4435	177.0717	177	**53**	1.0138	382.9113	383
13	-2.5012	174.9430	175	**54**	0.9813	391.8457	392	**13**	-2.3329	183.6534	184	**54**	1.1327	390.0869	390
14	-2.3960	181.3107	181	**55**	1.1124	399.9450	400	**14**	-2.2278	189.7239	190	**55**	1.2597	397.8558	398
15	-2.2957	187.4713	187	**56**	1.2541	408.7528	409	**15**	-2.1275	195.7147	196	**56**	1.3965	405.9817	406
16	-2.1995	193.6296	194	**57**	1.4089	418.4539	418	**16**	-2.0313	201.6904	202	**57**	1.5456	414.7728	415
17	-2.1069	199.6197	200	**58**	1.5803	429.2241	429	**17**	-1.9385	207.3390	207	**58**	1.7103	424.5471	425
18	-2.0175	205.1259	205	**59**	1.7735	441.5372	442	**18**	-1.8488	212.4137	212	**59**	1.8955	435.6413	436
19	-1.9307	210.3104	210	**60**	1.9965	455.4689	455	**19**	-1.7617	217.4917	217	**60**	2.1089	448.4927	448
20	-1.8462	215.6173	216	**61**	2.2623	472.7811	473	**20**	-1.6770	222.5042	223	**61**	2.3629	464.1218	464
21	-1.7638	220.6423	221	**62**	2.5953	494.5437	495	**21**	-1.5942	227.5465	228	**62**	2.6814	483.4014	483
22	-1.6832	225.5747	226	**63**	3.0498	525.9345	526	**22**	-1.5132	232.5585	233	**63**	3.1177	510.1943	510
23	-1.6041	230.5097	231	**64**	3.7965	571.4421	571	**23**	-1.4337	237.3012	237	**64**	3.8409	554.3443	554
24	-1.5264	235.4502	235	**65**	N/A	632.1190	600	**24**	-1.3556	241.7544	242	**65**	N/A	633.7990	600
25	-1.4498	240.3954	240					**25**	-1.2785	246.1374	246				
26	-1.3741	245.3170	245					**26**	-1.2025	250.8019	251				
27	-1.2993	249.7240	250					**27**	-1.1272	255.2700	255				
28	-1.2251	254.5833	255					**28**	-1.0526	259.6075	260				
29	-1.1514	258.9900	259					**29**	-0.9786	264.0529	264				
30	-1.0781	263.3486	263					**30**	-0.9049	268.3636	268				
31	-1.0051	267.8237	268					**31**	-0.8315	272.8140	273				
32	-0.9321	272.6149	273					**32**	-0.7583	277.1062	277				
33	-0.8592	277.0884	277					**33**	-0.6851	281.5594	282				
34	-0.7861	281.6135	282					**34**	-0.6118	285.8349	286				
35	-0.7127	286.3954	286					**35**	-0.5383	290.2906	290				
36	-0.6390	290.8954	291					**36**	-0.4645	294.5597	295				
37	-0.5647	295.3058	295					**37**	-0.3902	299.1262	299				
38	-0.4897	299.8856	300					**38**	-0.3153	303.6755	304				
39	-0.4139	304.6898	305					**39**	-0.2397	307.9456	308				
40	-0.3372	309.3660	309					**40**	-0.1633	312.4819	312				

Table 3.A.10 2007 New Conversions for Mathematics Grades 4 and 5

Grade 4

Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	2.3408	150	**41**	0.0001	324.3102	324
1	-4.9889	67.7399	150	**42**	0.0745	327.9184	328
2	-4.2728	104.7200	150	**43**	0.1504	331.8726	332
3	-3.8439	127.3628	150	**44**	0.2278	335.8491	336
4	-3.5325	143.8321	150	**45**	0.3070	339.8171	340
5	-3.2853	156.4919	156	**46**	0.3884	343.8263	344
6	-3.0787	167.0025	167	**47**	0.4722	348.2597	348
7	-2.9000	176.2204	176	**48**	0.5587	352.6980	353
8	-2.7417	184.6025	185	**49**	0.6483	357.1266	357
9	-2.5988	191.9643	192	**50**	0.7415	361.5573	362
10	-2.4680	198.5711	199	**51**	0.8390	366.8466	367
11	-2.3470	204.5877	205	**52**	0.9413	371.8136	372
12	-2.2340	210.4275	210	**53**	1.0493	377.1106	377
13	-2.1275	215.8606	216	**54**	1.1641	383.1923	383
14	-2.0267	221.0872	221	**55**	1.2871	389.5129	390
15	-1.9306	225.9456	226	**56**	1.4200	396.1429	396
16	-1.8386	230.7014	231	**57**	1.5652	403.4902	403
17	-1.7501	235.3055	235	**58**	1.7261	411.7115	412
18	-1.6647	239.5839	240	**59**	1.9076	420.8260	421
19	-1.5818	243.7736	244	**60**	2.1174	431.3892	431
20	-1.5013	247.9517	248	**61**	2.3680	444.2874	444
21	-1.4228	251.9417	252	**62**	2.6831	460.5279	461
22	-1.3461	255.8288	256	**63**	3.1163	483.3280	483
23	-1.2709	259.7209	260	**64**	3.8366	519.1504	519
24	-1.1970	263.4000	263	**65**	N/A	575.5792	600
25	-1.1242	267.2102	267				
26	-1.0524	271.0685	271				
27	-0.9815	274.7182	275				
28	-0.9112	278.3049	278				
29	-0.8414	281.6782	282				
30	-0.7720	284.9977	285				
31	-0.7029	288.5126	289				
32	-0.6339	292.0703	292				
33	-0.5650	295.6210	296				
34	-0.4960	299.1657	299				
35	-0.4268	302.7043	303				
36	-0.3573	306.2365	306				
37	-0.2873	309.7623	310				
38	-0.2167	313.2816	313				
39	-0.1453	316.9477	317				
40	-0.0731	320.7744	321				

Grade 5

Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	0.0000	150	**41**	0.3871	345.8001	346
1	-4.7373	8.6331	150	**42**	0.4635	350.9751	351
2	-4.0121	46.6563	150	**43**	0.5412	356.4136	356
3	-3.5751	78.0304	150	**44**	0.6205	361.6085	362
4	-3.2563	100.3827	150	**45**	0.7017	366.8765	367
5	-3.0024	117.9642	150	**46**	0.7850	372.4419	372
6	-2.7897	132.5567	150	**47**	0.8706	378.1364	378
7	-2.6053	145.1414	150	**48**	0.9590	384.2080	384
8	-2.4417	156.2647	156	**49**	1.0505	390.5349	391
9	-2.2940	166.1929	166	**50**	1.1456	396.8814	397
10	-2.1587	175.2678	175	**51**	1.2448	403.4208	403
11	-2.0335	183.7295	184	**52**	1.3490	410.3523	410
12	-1.9164	191.5859	192	**53**	1.4588	417.6833	418
13	-1.8063	198.8403	199	**54**	1.5753	425.3964	425
14	-1.7019	205.7650	206	**55**	1.6999	433.5262	434
15	-1.6025	212.6903	213	**56**	1.8343	442.6237	443
16	-1.5073	219.2014	219	**57**	1.9810	452.4996	452
17	-1.4157	225.0967	225	**58**	2.1433	463.2915	463
18	-1.3274	231.2299	231	**59**	2.3260	475.5021	476
19	-1.2417	236.9601	237	**60**	2.5367	489.7063	490
20	-1.1586	242.5691	243	**61**	2.7880	506.6734	507
21	-1.0775	247.7618	248	**62**	3.1038	527.7841	528
22	-0.9982	253.3924	253	**63**	3.5371	556.9325	557
23	-0.9206	258.5627	259	**64**	4.2578	605.8642	600
24	-0.8444	263.6785	264	**65**	N/A	691.2489	600
25	-0.7693	268.8109	269				
26	-0.6953	273.4319	273				
27	-0.6222	278.4638	278				
28	-0.5497	283.1507	283				
29	-0.4778	288.1798	288				
30	-0.4064	292.9372	293				
31	-0.3353	297.5367	298				
32	-0.2643	302.5574	303				
33	-0.1934	307.4194	307				
34	-0.1224	312.0689	312				
35	-0.0513	316.7267	317				
36	0.0202	321.4029	321				
37	0.0921	326.1190	326				
38	0.1646	331.1784	331				
39	0.2379	336.2227	336				
40	0.3120	340.9779	341				

Table 3.A.11 2007 New Conversions for Mathematics Grades 6 and 7

Grade 6								Grade 7							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	0.0007	150	**41**	0.3728	346.2895	346	**0**	N/A	0.0007	150	**41**	0.5466	352.2390	352
1	-4.7123	55.4187	150	**42**	0.4483	350.6321	351	**1**	-4.4265	52.3808	150	**42**	0.6201	356.5024	357
2	-3.9893	95.8086	150	**43**	0.5251	354.9419	355	**2**	-3.7094	94.2571	150	**43**	0.6951	361.0275	361
3	-3.5542	121.1212	150	**44**	0.6035	359.5192	360	**3**	-3.2797	120.7972	150	**44**	0.7716	365.6018	366
4	-3.2370	139.2602	150	**45**	0.6837	364.1410	364	**4**	-2.9677	139.7996	150	**45**	0.8500	370.1246	370
5	-2.9846	153.7934	154	**46**	0.7661	368.9521	369	**5**	-2.7200	154.9653	155	**46**	0.9304	374.9855	375
6	-2.7731	166.0031	166	**47**	0.8508	373.8305	374	**6**	-2.5131	167.5535	168	**47**	1.0133	380.0515	380
7	-2.5899	176.5042	177	**48**	0.9383	378.6746	379	**7**	-2.3341	178.1828	178	**48**	1.0988	385.2132	385
8	-2.4274	185.8531	186	**49**	1.0288	383.8306	384	**8**	-2.1756	187.8015	188	**49**	1.1875	390.3280	390
9	-2.2807	194.4782	194	**50**	1.1230	389.2159	389	**9**	-2.0327	196.6884	197	**50**	1.2799	395.9867	396
10	-2.1463	202.1168	202	**51**	1.2214	394.9090	395	**10**	-1.9019	204.6906	205	**51**	1.3764	401.9500	402
11	-2.0220	209.1757	209	**52**	1.3246	400.8250	401	**11**	-1.7810	211.9397	212	**52**	1.4777	407.9635	408
12	-1.9059	215.9801	216	**53**	1.4336	407.0453	407	**12**	-1.6681	218.5921	219	**53**	1.5847	414.3896	414
13	-1.7966	222.0498	222	**54**	1.5492	413.5101	414	**13**	-1.5619	224.7976	225	**54**	1.6985	421.2688	421
14	-1.6931	228.1986	228	**55**	1.6730	420.5338	421	**14**	-1.4614	230.8548	231	**55**	1.8204	428.2896	428
15	-1.5945	233.6746	234	**56**	1.8066	428.2816	428	**15**	-1.3656	236.7655	237	**56**	1.9522	436.3892	436
16	-1.5001	239.2436	239	**57**	1.9525	436.8644	437	**16**	-1.2740	242.3734	242	**57**	2.0962	445.1856	445
17	-1.4094	244.1137	244	**58**	2.1141	446.1570	446	**17**	-1.1859	247.6873	248	**58**	2.2559	454.5725	455
18	-1.3218	249.2226	249	**59**	2.2961	456.4989	456	**18**	-1.1009	252.6874	253	**59**	2.4361	465.5837	466
19	-1.2370	254.0442	254	**60**	2.5061	468.3520	468	**19**	-1.0186	257.5616	258	**60**	2.6443	478.2036	478
20	-1.1546	259.1591	259	**61**	2.7569	482.8778	483	**20**	-0.9387	262.4404	262	**61**	2.8933	493.1269	493
21	-1.0744	263.6974	264	**62**	3.0721	501.1243	501	**21**	-0.8607	267.3233	267	**62**	3.2068	512.5069	513
22	-0.9960	267.9279	268	**63**	3.5050	526.6403	527	**22**	-0.7846	272.0284	272	**63**	3.6379	538.7254	539
23	-0.9192	272.4479	272	**64**	4.2253	566.9128	567	**23**	-0.7100	276.4125	276	**64**	4.3566	581.2987	581
24	-0.8438	276.6891	277	**65**	N/A	630.3291	600	**24**	-0.6368	280.6946	281	**65**	N/A	648.9990	600
25	-0.7696	281.1698	281					**25**	-0.5647	284.9775	285				
26	-0.6964	285.2482	285					**26**	-0.4937	289.2623	289				
27	-0.6241	289.3239	289					**27**	-0.4234	293.5481	294				
28	-0.5525	293.3964	293					**28**	-0.3538	297.8350	298				
29	-0.4815	297.4656	297					**29**	-0.2848	302.1223	302				
30	-0.4109	301.5315	302					**30**	-0.2162	306.1625	306				
31	-0.3406	305.5938	306					**31**	-0.1479	310.1668	310				
32	-0.2705	309.6524	310					**32**	-0.0798	314.3826	314				
33	-0.2005	313.7073	314					**33**	-0.0117	318.3965	318				
34	-0.1304	317.7584	318					**34**	0.0565	322.4060	322				
35	-0.0601	321.8055	322					**35**	0.1249	326.6308	327				
36	0.0104	325.8483	326					**36**	0.1936	330.9088	331				
37	0.0815	329.8875	330					**37**	0.2627	335.1837	335				
38	0.1531	333.9221	334					**38**	0.3325	339.1611	339				
39	0.2254	337.9522	338					**39**	0.4029	343.1420	343				
40	0.2986	342.0247	342					**40**	0.4742	347.6780	348				

Table 3.A.12 2007 New Conversions for General Mathematics and Algebra I

General Mathematics								Algebra I							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	0.0003	150	41	0.8078	353.2681	353	0	N/A	-68.2504	150	41	0.5451	367.5912	368
1	-4.1944	50.3199	150	42	0.8824	357.5911	358	1	-4.4465	18.0583	150	42	0.6200	372.5223	373
2	-3.4779	91.9929	150	43	0.9585	362.3757	362	2	-3.7309	68.5751	150	43	0.6962	377.9422	378
3	-3.0486	118.4892	150	44	1.0361	366.8016	367	3	-3.3025	98.6741	150	44	0.7739	383.5929	384
4	-2.7368	137.4558	150	45	1.1155	371.5826	372	4	-2.9915	120.3493	150	45	0.8536	388.7572	389
5	-2.4893	152.6486	153	46	1.1971	376.4594	376	5	-2.7447	137.7960	150	46	0.9352	394.7191	395
6	-2.2824	165.4395	165	47	1.2809	381.8305	382	6	-2.5385	152.4234	152	47	1.0193	400.5925	401
7	-2.1033	176.0036	176	48	1.3676	386.7546	387	7	-2.3601	164.9511	165	48	1.1060	406.7930	407
8	-1.9446	185.6169	186	49	1.4573	392.0908	392	8	-2.2020	176.0619	176	49	1.1959	412.6623	413
9	-1.8013	194.6922	195	50	1.5506	398.0015	398	9	-2.0593	185.7881	186	50	1.2893	419.4372	419
10	-1.6702	202.7874	203	51	1.6481	403.9600	404	10	-1.9288	194.8073	195	51	1.3869	426.0105	426
11	-1.5489	210.1540	210	52	1.7504	409.8855	410	11	-1.8079	203.1333	203	52	1.4893	432.9917	433
12	-1.4355	216.9497	217	53	1.8584	416.7712	417	12	-1.6950	211.4465	211	53	1.5973	440.7035	441
13	-1.3287	223.1654	223	54	1.9732	423.3124	423	13	-1.5887	218.3656	218	54	1.7121	449.1459	449
14	-1.2275	229.2363	229	55	2.0960	430.6361	431	14	-1.4880	225.9587	226	55	1.8348	457.7157	458
15	-1.1311	235.3296	235	56	2.2288	439.0280	439	15	-1.3919	232.2112	232	56	1.9674	466.9009	467
16	-1.0387	240.9791	241	57	2.3738	447.6228	448	16	-1.2999	239.0809	239	57	2.1122	476.8161	477
17	-0.9499	246.4994	246	58	2.5344	457.2975	457	17	-1.2114	245.3282	245	58	2.2726	488.0938	488
18	-0.8641	251.5435	252	59	2.7156	468.4776	468	18	-1.1259	250.8934	251	59	2.4533	500.8157	501
19	-0.7809	256.4789	256	60	2.9248	481.1055	481	19	-1.0430	256.4055	256	60	2.6621	515.6386	516
20	-0.7001	261.4271	261	61	3.1750	496.4294	496	20	-0.9624	262.5299	263	61	2.9114	532.6111	533
21	-0.6212	266.3870	266	62	3.4897	515.9463	516	21	-0.8838	268.1293	268	62	3.2252	555.1389	555
22	-0.5442	271.3574	271	63	3.9222	542.9091	543	22	-0.8069	273.0525	273	63	3.6564	585.4276	585
23	-0.4686	275.7452	276	64	4.6421	585.0116	585	23	-0.7316	278.4542	278	64	4.3751	635.3539	600
24	-0.3944	280.1106	280	65	N/A	648.9995	600	24	-0.6575	283.4051	283	65	N/A	721.0744	600
25	-0.3213	284.4815	284					25	-0.5845	288.7881	289				
26	-0.2492	288.8581	289					26	-0.5125	293.7664	294				
27	-0.1779	293.2391	293					27	-0.4413	298.6018	299				
28	-0.1072	297.6237	298					28	-0.3707	303.4414	303				
29	-0.0371	302.0107	302					29	-0.3006	308.2855	308				
30	0.0326	306.2279	306					30	-0.2310	313.1346	313				
31	0.1020	310.1880	310					31	-0.1615	317.9891	318				
32	0.1712	314.5762	315					32	-0.0923	322.8492	323				
33	0.2405	318.7110	319					33	-0.0230	327.7150	328				
34	0.3098	322.7466	323					34	0.0464	332.5880	333				
35	0.3793	327.1267	327					35	0.1159	337.4672	337				
36	0.4491	331.5020	332					36	0.1859	342.3532	342				
37	0.5194	335.8714	336					37	0.2563	347.2463	347				
38	0.5903	339.8575	340					38	0.3272	352.1465	352				
39	0.6618	343.9882	344					39	0.3989	357.0540	357				
40	0.7343	348.7524	349					40	0.4715	362.4415	362				

Table 3.A.13 2007 New Conversions for Geometry and Algebra II

Geometry								Algebra II							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	-44.9995	150	41	-0.1578	338.6982	339	0	N/A	-54.8295	150	41	0.2005	349.6428	350
1	-5.2189	34.3717	150	42	-0.0820	343.3037	343	1	-5.0494	5.1315	150	42	0.2778	354.5092	355
2	-4.5006	78.2389	150	43	-0.0049	347.9072	348	2	-4.3126	50.3201	150	43	0.3564	359.6514	360
3	-4.0697	104.3398	150	44	0.0737	352.5102	353	3	-3.8657	82.0447	150	44	0.4366	364.8918	365
4	-3.7562	123.4062	150	45	0.1541	357.2022	357	4	-3.5385	104.4759	150	45	0.5186	370.0998	370
5	-3.5071	138.3337	150	46	0.2366	362.3815	362	5	-3.2773	122.4045	150	46	0.6026	375.6434	376
6	-3.2985	151.0817	151	47	0.3213	367.5626	368	6	-3.0581	136.2467	150	47	0.6889	381.1794	381
7	-3.1178	162.0082	162	48	0.4087	372.7519	373	7	-2.8680	148.7878	150	48	0.7779	387.1617	387
8	-2.9575	171.6785	172	49	0.4992	377.9451	378	8	-2.6993	159.9511	160	49	0.8700	392.8810	393
9	-2.8127	180.2007	180	50	0.5932	383.7183	384	9	-2.5469	170.0431	170	50	0.9656	399.4224	399
10	-2.6800	188.2830	188	51	0.6912	389.5089	390	10	-2.4074	179.1352	179	51	1.0654	405.7410	406
11	-2.5571	195.8501	196	52	0.7940	395.3136	395	11	-2.2782	187.5029	188	52	1.1699	412.4778	412
12	-2.4422	202.7462	203	53	0.9023	401.6487	402	12	-2.1576	195.3635	195	53	1.2801	419.9060	420
13	-2.3339	208.9832	209	54	1.0173	408.5720	409	13	-2.0441	202.9706	203	54	1.3970	427.3925	427
14	-2.2312	215.0798	215	55	1.1403	416.0939	416	14	-1.9366	210.1212	210	55	1.5219	435.4959	435
15	-2.1332	221.1523	221	56	1.2730	423.7585	424	15	-1.8342	216.5656	217	56	1.6566	444.2677	444
16	-2.0393	226.6816	227	57	1.4179	432.3958	432	16	-1.7362	223.0568	223	57	1.8035	453.7224	454
17	-1.9490	232.1074	232	58	1.5782	442.2675	442	17	-1.6420	229.3562	229	58	1.9658	464.4934	464
18	-1.8616	236.9917	237	59	1.7588	452.9424	453	18	-1.5511	235.2738	235	59	2.1488	476.5666	477
19	-1.7770	242.3073	242	60	1.9673	465.2541	465	19	-1.4631	240.9860	241	60	2.3596	490.0362	490
20	-1.6946	247.1631	247	61	2.2164	480.4956	480	20	-1.3776	246.5505	247	61	2.6111	506.7642	507
21	-1.6143	251.9289	252	62	2.5297	499.5486	500	21	-1.2943	252.3065	252	62	2.9269	527.5342	528
22	-1.5357	256.6824	257	63	2.9605	525.3133	525	22	-1.2130	257.4036	257	63	3.3603	556.4038	556
23	-1.4587	261.4243	261	64	3.6783	569.2542	569	23	-1.1334	262.4071	262	64	4.0811	603.7283	600
24	-1.3829	265.6610	266	65	N/A	645.5995	600	24	-1.0552	267.8186	268	65	N/A	681.5695	600
25	-1.3084	270.2753	270					25	-0.9782	272.9231	273				
26	-1.2348	274.5121	275					26	-0.9024	277.6907	278				
27	-1.1620	279.0857	279					27	-0.8275	282.4725	282				
28	-1.0900	283.3297	283					28	-0.7534	287.2674	287				
29	-1.0184	287.4274	287					29	-0.6799	292.0741	292				
30	-0.9473	291.9328	292					30	-0.6069	296.8917	297				
31	-0.8765	296.1987	296					31	-0.5343	301.7190	302				
32	-0.8058	300.2743	300					32	-0.4618	306.5551	307				
33	-0.7352	304.3435	304					33	-0.3895	310.8350	311				
34	-0.6646	308.7489	309					34	-0.3172	315.5916	316				
35	-0.5937	313.0640	313					35	-0.2447	320.4475	320				
36	-0.5226	317.1160	317					36	-0.1720	325.3079	325				
37	-0.4510	321.4419	321					37	-0.0988	330.1718	330				
38	-0.3789	325.8046	326					38	-0.0252	335.0383	335				
39	-0.3061	330.0783	330					39	0.0492	339.9062	340				
40	-0.2324	334.4787	334					40	0.1243	344.7747	345				

Table 3.A.14 2007 New Conversions for Summative High School Mathematics and Integrated Mathematics 1

Summative High School Mathematics								Integrated Mathematics 1							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	-87.7995	150	**41**	-0.1843	315.8243	316	**0**	N/A	-77.6988	150	**41**	0.6194	357.8464	358
1	-5.2358	1.4577	150	**42**	-0.1101	320.3492	320	**1**	-4.2814	1.1181	150	**42**	0.6915	363.1634	363
2	-4.5138	47.9152	150	**43**	-0.0346	324.8715	325	**2**	-3.5675	51.9897	150	**43**	0.7649	368.6942	369
3	-4.0797	75.5602	150	**44**	0.0425	329.3929	329	**3**	-3.1409	85.1176	150	**44**	0.8398	373.9032	374
4	-3.7635	95.3081	150	**45**	0.1213	334.4717	334	**4**	-2.8318	108.2350	150	**45**	0.9165	379.7198	380
5	-3.5119	111.1282	150	**46**	0.2021	339.5611	340	**5**	-2.5869	126.3687	150	**46**	0.9953	385.5208	386
6	-3.3013	123.8079	150	**47**	0.2853	344.6536	345	**6**	-2.3826	141.4614	150	**47**	1.0764	391.1210	391
7	-3.1190	134.9935	150	**48**	0.3712	349.7552	350	**7**	-2.2061	153.8807	154	**48**	1.1602	397.2354	397
8	-2.9572	145.2138	150	**49**	0.4601	355.2056	355	**8**	-2.0500	164.9482	165	**49**	1.2470	403.5350	404
9	-2.8113	153.9921	154	**50**	0.5526	360.8923	361	**9**	-1.9094	174.8809	175	**50**	1.3374	409.8885	410
10	-2.6777	162.2895	162	**51**	0.6491	366.8339	367	**10**	-1.7808	183.9677	184	**51**	1.4319	416.7423	417
11	-2.5541	169.8327	170	**52**	0.7504	373.1224	373	**11**	-1.6620	192.5307	193	**52**	1.5312	424.1434	424
12	-2.4387	177.1680	177	**53**	0.8574	379.5789	380	**12**	-1.5511	200.7260	201	**53**	1.6360	431.5845	432
13	-2.3301	183.8354	184	**54**	0.9710	386.5921	387	**13**	-1.4469	207.9381	208	**54**	1.7476	439.5382	440
14	-2.2273	190.2579	190	**55**	1.0926	394.1739	394	**14**	-1.3482	215.4511	215	**55**	1.8671	448.0129	448
15	-2.1294	196.1288	196	**56**	1.2240	402.3449	402	**15**	-1.2543	222.0112	222	**56**	1.9964	457.5736	458
16	-2.0357	201.9395	202	**57**	1.3676	411.1281	411	**16**	-1.1645	228.5151	229	**57**	2.1379	467.6060	468
17	-1.9456	207.4454	207	**58**	1.5267	420.5561	421	**17**	-1.0781	234.6577	235	**58**	2.2948	479.1819	479
18	-1.8588	212.7739	213	**59**	1.7061	431.7408	432	**18**	-0.9948	240.5247	241	**59**	2.4721	492.0258	492
19	-1.7747	218.1541	218	**60**	1.9134	444.7724	445	**19**	-0.9141	246.4577	246	**60**	2.6774	506.5419	507
20	-1.6930	223.1331	223	**61**	2.1616	459.7665	460	**20**	-0.8358	252.2793	252	**61**	2.9232	523.8358	524
21	-1.6134	227.8027	228	**62**	2.4739	478.9267	479	**21**	-0.7594	257.6155	258	**62**	3.2334	546.8812	547
22	-1.5357	232.3522	232	**63**	2.9037	505.6078	506	**22**	-0.6848	263.0078	263	**63**	3.6609	579.6433	580
23	-1.4596	237.2169	237	**64**	3.6207	550.6100	551	**23**	-0.6117	268.5674	269	**64**	4.3759	631.7391	600
24	-1.3849	241.8149	242	**65**	N/A	630.7795	600	**24**	-0.5399	273.5398	274	**65**	N/A	714.6990	600
25	-1.3115	246.2272	246					**25**	-0.4693	278.9708	279				
26	-1.2390	250.8070	251					**26**	-0.3997	283.9800	284				
27	-1.1675	255.1182	255					**27**	-0.3309	288.8460	289				
28	-1.0967	259.7022	260					**28**	-0.2627	293.7125	294				
29	-1.0265	263.8074	264					**29**	-0.1951	298.5801	299				
30	-0.9568	267.9549	268					**30**	-0.1279	303.4484	303				
31	-0.8873	272.5806	273					**31**	-0.0609	308.3176	308				
32	-0.8181	276.6316	277					**32**	0.0058	313.1876	313				
33	-0.7490	280.6679	281					**33**	0.0726	318.0591	318				
34	-0.6799	285.2021	285					**34**	0.1394	322.9305	323				
35	-0.6106	289.3189	289					**35**	0.2064	327.8035	328				
36	-0.5410	293.7341	294					**36**	0.2737	332.6777	333				
37	-0.4710	297.9260	298					**37**	0.3414	337.6478	338				
38	-0.4005	302.2199	302					**38**	0.4097	342.8570	343				
39	-0.3293	306.7612	307					**39**	0.4787	348.0084	348				
40	-0.2573	311.2955	311					**40**	0.5486	352.8883	353				

Table 3.A.15 2007 New Conversions for Integrated Mathematics 2 and Integrated Mathematics 3

Integrated Mathematics 2								Integrated Mathematics 3							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	-60.2788	150	**41**	0.4016	374.9112	375	**0**	N/A	-100.7238	150	**41**	0.5069	376.2923	376
1	-4.5522	38.4662	150	**42**	0.4737	379.7786	380	**1**	-4.5766	-14.4353	150	**42**	0.5817	382.0259	382
2	-3.8361	90.3697	150	**43**	0.5472	384.6324	385	**2**	-3.8543	40.2468	150	**43**	0.6579	387.9337	388
3	-3.4073	120.6195	150	**44**	0.6221	389.4601	389	**3**	-3.4197	75.0765	150	**44**	0.7355	393.6494	394
4	-3.0959	141.9355	150	**45**	0.6987	394.8107	395	**4**	-3.1030	100.1070	150	**45**	0.8149	399.8172	400
5	-2.8489	158.8766	159	**46**	0.7772	400.1852	400	**5**	-2.8508	119.6236	150	**46**	0.8964	406.1706	406
6	-2.6424	172.9507	173	**47**	0.8581	405.5357	406	**6**	-2.6395	135.8699	150	**47**	0.9801	412.7171	413
7	-2.4639	184.9711	185	**48**	0.9415	411.1536	411	**7**	-2.4564	150.1808	150	**48**	1.0665	419.0328	419
8	-2.3057	195.6174	196	**49**	1.0279	417.0473	417	**8**	-2.2939	162.7057	163	**49**	1.1559	426.0084	426
9	-2.1630	205.1294	205	**50**	1.1178	422.9188	423	**9**	-2.1472	174.0041	174	**50**	1.2488	433.1740	433
10	-2.0325	213.6401	214	**51**	1.2116	428.8899	429	**10**	-2.0127	184.4241	184	**51**	1.3458	440.3672	440
11	-1.9118	221.6177	222	**52**	1.3102	435.7976	436	**11**	-1.8883	193.8009	194	**52**	1.4476	448.3309	448
12	-1.7991	229.3332	229	**53**	1.4143	442.8348	443	**12**	-1.7720	202.7449	203	**53**	1.5549	456.5965	457
13	-1.6930	236.4845	236	**54**	1.5250	450.1754	450	**13**	-1.6625	211.3975	211	**54**	1.6689	465.3948	465
14	-1.5926	243.2364	243	**55**	1.6436	457.9800	458	**14**	-1.5588	219.2637	219	**55**	1.7908	474.7976	475
15	-1.4970	249.3330	249	**56**	1.7718	466.5316	467	**15**	-1.4600	227.0293	227	**56**	1.9225	484.9705	485
16	-1.4054	255.3651	255	**57**	1.9121	476.0998	476	**16**	-1.3653	233.9490	234	**57**	2.0664	496.0345	496
17	-1.3175	261.3313	261	**58**	2.0679	486.6716	487	**17**	-1.2744	241.1652	241	**58**	2.2257	508.1226	508
18	-1.2326	267.2381	267	**59**	2.2439	498.4916	498	**18**	-1.1866	247.7951	248	**59**	2.4053	521.8732	522
19	-1.1504	272.5335	273	**60**	2.4477	512.5672	513	**19**	-1.1016	254.4008	254	**60**	2.6129	538.3709	538
20	-1.0706	277.6189	278	**61**	2.6919	529.5087	530	**20**	-1.0190	260.6996	261	**61**	2.8609	558.1408	558
21	-0.9928	282.6374	283	**62**	3.0004	550.6903	551	**21**	-0.9385	266.5112	267	**62**	3.1734	583.4661	583
22	-0.9169	287.6093	288	**63**	3.4263	581.9801	582	**22**	-0.8599	272.3214	272	**63**	3.6033	619.5288	600
23	-0.8425	292.5359	293	**64**	4.1393	631.2142	600	**23**	-0.7829	278.1277	278	**64**	4.3205	673.4508	600
24	-0.7695	297.4194	297	**65**	N/A	699.9591	600	**24**	-0.7073	283.9286	284	**65**	N/A	753.3237	600
25	-0.6977	302.2592	302					**25**	-0.6329	289.7225	290				
26	-0.6269	307.0573	307					**26**	-0.5597	295.5059	296				
27	-0.5570	311.8143	312					**27**	-0.4872	301.2066	301				
28	-0.4879	316.3655	316					**28**	-0.4156	306.3225	306				
29	-0.4193	320.6806	321					**29**	-0.3445	311.9266	312				
30	-0.3512	325.1738	325					**30**	-0.2739	316.9593	317				
31	-0.2835	329.7796	330					**31**	-0.2037	322.5341	323				
32	-0.2159	334.3503	334					**32**	-0.1337	327.5914	328				
33	-0.1485	338.8872	339					**33**	-0.0638	333.2485	333				
34	-0.0811	343.3886	343					**34**	0.0062	338.6839	339				
35	-0.0135	347.8583	348					**35**	0.0762	343.7457	344				
36	0.0543	352.2975	352					**36**	0.1466	349.0981	349				
37	0.1225	356.7056	357					**37**	0.2173	354.1827	354				
38	0.1912	361.0898	361					**38**	0.2886	359.7385	360				
39	0.2605	365.7310	366					**39**	0.3605	365.2677	365				
40	0.3306	370.4302	370					**40**	0.4332	370.7699	371				

Table 3.A.16 2007 New Conversions for Grade 5 and Grade 8 Science

Grade 5								Grade 8							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	47.3185	150	41	0.3113	353.6233	354	0	N/A	-96.6361	150	41	0.7413	384.9469	385
1	-4.8697	68.6553	150	42	0.3978	358.6105	359	1	-4.3089	-36.0645	150	42	0.8250	391.9761	392
2	-4.1515	93.0628	150	43	0.4868	363.7468	364	2	-3.5942	18.1659	150	43	0.9114	399.2228	399
3	-3.7204	120.9618	150	44	0.5787	369.0519	369	3	-3.1666	55.6725	150	44	1.0007	406.7177	407
4	-3.4067	138.2110	150	45	0.6740	374.5525	375	4	-2.8565	82.3159	150	45	1.0935	414.5003	415
5	-3.1572	153.0250	153	46	0.7732	380.2808	380	5	-2.6104	103.2809	150	46	1.1902	422.6145	423
6	-2.9482	165.5375	166	47	0.8771	386.2655	386	6	-2.4049	120.7252	150	47	1.2917	431.1277	431
7	-2.7670	175.8776	176	48	0.9865	392.5671	393	7	-2.2272	135.7669	150	48	1.3987	440.0918	440
8	-2.6060	185.1427	185	49	1.1024	399.2703	399	8	-2.0697	149.0703	150	49	1.5123	449.6128	450
9	-2.4604	193.6352	194	50	1.2261	406.4226	406	9	-1.9276	161.0668	161	50	1.6339	459.8384	460
10	-2.3269	201.4594	201	51	1.3596	414.1246	414	10	-1.7975	171.9403	172	51	1.7652	470.8890	471
11	-2.2030	208.5493	209	52	1.5051	422.4866	422	11	-1.6771	182.0210	182	52	1.9085	482.9481	483
12	-2.0869	215.2219	215	53	1.6659	431.7894	432	12	-1.5645	191.4544	191	53	2.0674	496.3085	496
13	-1.9775	221.5541	222	54	1.8469	442.2966	442	13	-1.4585	200.3513	200	54	2.2466	511.3453	511
14	-1.8734	227.5853	228	55	2.0558	454.3861	454	14	-1.3579	208.7957	209	55	2.4536	528.6499	529
15	-1.7741	233.3525	233	56	2.3052	468.7051	469	15	-1.2619	216.8527	217	56	2.7012	549.5137	550
16	-1.6787	238.8377	239	57	2.6187	486.9887	487	16	-1.1699	224.5816	225	57	3.0132	576.2044	576
17	-1.5866	244.1334	244	58	3.0496	512.6740	513	17	-1.0813	232.0274	232	58	3.4426	613.2228	600
18	-1.4976	249.2711	249	59	3.7673	556.0131	556	18	-0.9956	239.2212	239	59	4.1593	675.7521	600
19	-1.4110	254.2676	254	60	N/A	624.0193	600	19	-0.9125	246.2082	246	60	N/A	742.1487	600
20	-1.3266	259.1398	259					20	-0.8315	253.0129	253				
21	-1.2441	263.9030	264					21	-0.7523	259.6516	260				
22	-1.1632	268.5758	269					22	-0.6747	266.1528	266				
23	-1.0837	273.1652	273					23	-0.5986	272.5374	273				
24	-1.0053	277.6914	278					24	-0.5235	278.8340	279				
25	-0.9280	282.1504	282					25	-0.4494	285.0519	285				
26	-0.8514	286.5705	287					26	-0.3761	291.2032	291				
27	-0.7754	290.9498	291					27	-0.3033	297.3066	297				
28	-0.6999	295.3049	295					28	-0.2310	303.3703	303				
29	-0.6246	299.6446	300					29	-0.1590	309.4113	309				
30	-0.5496	303.9705	304					30	-0.0871	315.4444	315				
31	-0.4745	308.3033	308					31	-0.0152	321.4806	321				
32	-0.3993	312.6369	313					32	0.0569	327.5319	328				
33	-0.3238	316.9919	317					33	0.1293	333.6062	334				
34	-0.2479	321.3745	321					34	0.2023	339.7250	340				
35	-0.1713	325.7875	326					35	0.2758	345.8959	346				
36	-0.0940	330.2506	330					36	0.3502	352.1345	352				
37	-0.0157	334.7627	335					37	0.4255	358.4571	358				
38	0.0637	339.3470	339					38	0.5021	364.8830	365				
39	0.1446	344.0110	344					39	0.5801	371.4249	371				
40	0.2270	348.7640	349					40	0.6597	378.1030	378				

Table 3.A.17 2007 New Conversion for Grade 10 Life Science

Grade 10 Life Science							
Raw Scr.	**Theta**	**Scale Score**	**Rprtd Score**	**Raw Scr.**	**Theta**	**Scale Score**	**Rprtd Score**
0	N/A	44.7476	150	**41**	0.6469	359.6230	360
1	-4.4124	79.2977	150	**42**	0.7295	364.2345	364
2	-3.6949	116.0023	150	**43**	0.8147	368.9812	369
3	-3.2648	140.7518	150	**44**	0.9027	373.8973	374
4	-2.9523	158.4640	158	**45**	0.9942	379.0025	379
5	-2.7043	172.4444	172	**46**	1.0897	384.3280	384
6	-2.4970	184.0958	184	**47**	1.1897	389.9129	390
7	-2.3176	194.1546	194	**48**	1.2953	395.8081	396
8	-2.1587	203.0559	203	**49**	1.4074	402.0688	402
9	-2.0154	211.0805	211	**50**	1.5274	408.7699	409
10	-1.8842	218.4203	218	**51**	1.6571	416.0085	416
11	-1.7628	225.2070	225	**52**	1.7988	423.9172	424
12	-1.6494	231.5446	232	**53**	1.9558	432.6703	433
13	-1.5426	237.5053	238	**54**	2.1332	442.5505	443
14	-1.4415	243.1583	243	**55**	2.3384	453.9441	454
15	-1.3451	248.5443	249	**56**	2.5841	467.8146	468
16	-1.2527	253.6995	254	**57**	2.8940	485.4064	485
17	-1.1638	258.6485	259	**58**	3.3213	509.8840	510
18	-1.0779	263.4363	263	**59**	4.0358	551.3816	551
19	-0.9946	268.0823	268	**60**	N/A	602.3473	600
20	-0.9135	272.6007	273				
21	-0.8344	277.0139	277				
22	-0.7569	281.3349	281				
23	-0.6809	285.5750	286				
24	-0.6060	289.7470	290				
25	-0.5322	293.8636	294				
26	-0.4592	297.9337	298				
27	-0.3869	301.9679	302				
28	-0.3150	305.9763	306				
29	-0.2435	309.9665	310				
30	-0.1722	313.9470	314				
31	-0.1009	317.9235	318				
32	-0.0294	321.9064	322				
33	0.0423	325.9097	326				
34	0.1145	329.9330	330				
35	0.1872	333.9879	334				
36	0.2607	338.0870	338				
37	0.3352	342.2436	342				
38	0.4108	346.4585	346				
39	0.4878	350.7539	351				
40	0.5664	355.1366	355				

Table 3.A.18 New Conversions for Biology and Earth Science

Biology								Earth Science							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	0.0007	150	**41**	0.5913	363.3367	363	**0**	N/A	51.0104	150	**41**	0.8335	354.6010	355
1	-4.4398	112.6456	150	**42**	0.6729	367.3643	367	**1**	-4.1768	107.3202	150	**42**	0.9154	358.6250	359
2	-3.7224	148.6459	150	**43**	0.7569	371.5776	372	**2**	-3.4618	141.6188	150	**43**	0.9998	362.6487	363
3	-3.2925	170.0808	170	**44**	0.8439	375.9513	376	**3**	-3.0341	163.1267	163	**44**	1.0871	367.0517	367
4	-2.9803	185.9930	186	**45**	0.9343	380.2004	380	**4**	-2.7238	178.5294	179	**45**	1.1778	371.5753	372
5	-2.7325	198.4247	198	**46**	1.0286	384.9791	385	**5**	-2.4778	190.8327	191	**46**	1.2725	376.0972	376
6	-2.5255	208.3780	208	**47**	1.1275	390.0838	390	**6**	-2.2724	201.1797	201	**47**	1.3719	381.0326	381
7	-2.3465	217.2798	217	**48**	1.2319	395.2021	395	**7**	-2.0949	209.7680	210	**48**	1.4767	386.0481	386
8	-2.1879	225.2061	225	**49**	1.3429	400.5748	401	**8**	-1.9377	217.4738	217	**49**	1.5881	391.4978	391
9	-2.0450	232.6025	233	**50**	1.4617	406.4920	406	**9**	-1.7959	224.4708	224	**50**	1.7074	397.4513	397
10	-1.9142	239.0825	239	**51**	1.5902	412.9614	413	**10**	-1.6663	230.8392	231	**51**	1.8363	403.9050	404
11	-1.7933	245.0189	245	**52**	1.7307	419.9884	420	**11**	-1.5464	236.7681	237	**52**	1.9773	410.8538	411
12	-1.6804	250.8798	251	**53**	1.8866	427.8824	428	**12**	-1.4344	242.4886	242	**53**	2.1337	418.2999	418
13	-1.5741	255.9475	256	**54**	2.0628	436.5680	437	**13**	-1.3290	247.7788	248	**54**	2.3104	427.1953	427
14	-1.4735	260.8260	261	**55**	2.2667	446.8826	447	**14**	-1.2291	252.5749	253	**55**	2.5149	437.0855	437
15	-1.3777	265.7027	266	**56**	2.5112	459.0580	459	**15**	-1.1339	257.3854	257	**56**	2.7598	449.4256	449
16	-1.2859	270.2202	270	**57**	2.8196	474.5531	475	**16**	-1.0428	262.0125	262	**57**	3.0691	464.2502	464
17	-1.1977	274.6078	275	**58**	3.2458	496.1987	496	**17**	-0.9550	266.1758	266	**58**	3.4957	485.4721	485
18	-1.1125	278.9945	279	**59**	3.9590	532.1184	532	**18**	-0.8703	270.2426	270	**59**	4.2096	520.3430	520
19	-1.0298	283.0617	283	**60**	N/A	595.4996	600	**19**	-0.7881	274.4381	274	**60**	N/A	579.7196	600
20	-0.9495	286.9625	287					**20**	-0.7081	278.3395	278				
21	-0.8711	290.8646	291					**21**	-0.6300	282.2508	282				
22	-0.7944	294.7688	295					**22**	-0.5536	285.9926	286				
23	-0.7192	298.4025	298					**23**	-0.4785	289.6119	290				
24	-0.6452	302.0827	302					**24**	-0.4047	293.3677	293				
25	-0.5722	305.7449	306					**25**	-0.3318	296.8214	297				
26	-0.5001	309.1705	309					**26**	-0.2598	300.4725	300				
27	-0.4286	312.8280	313					**27**	-0.1884	304.2397	304				
28	-0.3576	316.5323	317					**28**	-0.1175	307.7136	308				
29	-0.2870	319.9692	320					**29**	-0.0468	311.1936	311				
30	-0.2166	323.4106	323					**30**	0.0236	314.6794	315				
31	-0.1462	326.8569	327					**31**	0.0940	318.1701	318				
32	-0.0758	330.3085	330					**32**	0.1646	321.6660	322				
33	-0.0050	333.7657	334					**33**	0.2355	325.1663	325				
34	0.0662	337.2289	337					**34**	0.3068	328.6708	329				
35	0.1379	340.8697	341					**35**	0.3787	332.1788	332				
36	0.2104	344.6748	345					**36**	0.4514	335.6901	336				
37	0.2839	348.1581	348					**37**	0.5251	339.2041	339				
38	0.3584	351.8127	352					**38**	0.5999	343.0229	343				
39	0.4344	355.6465	356					**39**	0.6761	346.7293	347				
40	0.5119	359.3193	359					**40**	0.7539	350.5774	351				

Table 3.A.19 2007 New Conversions for Chemistry and Physics

Chemistry

Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	51.9904	150	**41**	0.5195	352.1179	352
1	-4.5609	103.0877	150	**42**	0.6042	356.2991	356
2	-3.8456	136.9618	150	**43**	0.6915	360.4957	360
3	-3.4175	158.9449	159	**44**	0.7817	364.9643	365
4	-3.1067	174.6328	175	**45**	0.8755	369.4224	369
5	-2.8601	187.0738	187	**46**	0.9732	374.3308	374
6	-2.6540	197.1120	197	**47**	1.0757	379.2673	379
7	-2.4756	206.0808	206	**48**	1.1837	384.4799	384
8	-2.3175	213.9163	214	**49**	1.2983	390.2830	390
9	-2.1747	220.5275	221	**50**	1.4209	396.1864	396
10	-2.0440	227.1330	227	**51**	1.5531	402.6821	403
11	-1.9229	233.1245	233	**52**	1.6976	409.7705	410
12	-1.8096	238.6342	239	**53**	1.8574	417.6084	418
13	-1.7029	243.7719	244	**54**	2.0376	426.4209	426
14	-1.6016	248.7309	249	**55**	2.2457	436.5832	437
15	-1.5050	253.5548	254	**56**	2.4944	448.7882	449
16	-1.4123	257.9859	258	**57**	2.8072	464.1403	464
17	-1.3229	262.1159	262	**58**	3.2378	485.5748	486
18	-1.2365	266.2708	266	**59**	3.9555	521.5363	522
19	-1.1526	270.4493	270	**60**	N/A	584.6196	600
20	-1.0708	274.6302	275				
21	-0.9909	278.3886	278				
22	-0.9126	282.1691	282				
23	-0.8357	285.9715	286				
24	-0.7598	289.7957	290				
25	-0.6849	293.2027	293				
26	-0.6108	297.0194	297				
27	-0.5373	300.4802	300				
28	-0.4642	303.9022	304				
29	-0.3913	307.7719	308				
30	-0.3186	311.2923	311				
31	-0.2458	314.7700	315				
32	-0.1729	318.2658	318				
33	-0.0996	321.7796	322				
34	-0.0258	325.3110	325				
35	0.0486	328.8625	329				
36	0.1238	332.9154	333				
37	0.2001	336.4977	336				
38	0.2776	340.1640	340				
39	0.3564	344.1999	344				
40	0.4370	347.9530	348				

Physics

Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	51.4129	150	**41**	0.6665	360.7996	361
1	-4.4600	109.4946	150	**42**	0.7517	365.1096	365
2	-3.7418	144.5155	150	**43**	0.8395	369.5494	370
3	-3.3110	165.7760	166	**44**	0.9303	373.9734	374
4	-2.9978	181.0641	181	**45**	1.0246	378.3800	378
5	-2.7488	193.3671	193	**46**	1.1228	383.1304	383
6	-2.5405	203.7150	204	**47**	1.2258	388.3411	388
7	-2.3601	212.6006	213	**48**	1.3343	393.6508	394
8	-2.2001	220.0444	220	**49**	1.4494	399.2762	399
9	-2.0555	227.3969	227	**50**	1.5725	405.3338	405
10	-1.9231	233.8498	234	**51**	1.7053	411.8110	412
11	-1.8004	239.7882	240	**52**	1.8502	418.9985	419
12	-1.6856	245.2400	245	**53**	2.0105	427.0184	427
13	-1.5775	250.6786	251	**54**	2.1913	435.8522	436
14	-1.4749	255.6427	256	**55**	2.3999	446.1406	446
15	-1.3770	260.5988	261	**56**	2.6491	458.6155	459
16	-1.2831	265.0712	265	**57**	2.9625	474.1786	474
17	-1.1927	269.5506	270	**58**	3.3934	495.9924	496
18	-1.1052	273.9996	274	**59**	4.1116	530.2732	530
19	-1.0203	277.9917	278	**60**	N/A	582.7871	600
20	-0.9375	281.9885	282				
21	-0.8567	285.9898	286				
22	-0.7775	289.9955	290				
23	-0.6998	293.9052	294				
24	-0.6232	297.5287	298				
25	-0.5475	301.4164	301				
26	-0.4727	304.9316	305				
27	-0.3984	308.6053	309				
28	-0.3246	312.4539	312				
29	-0.2511	315.9725	316				
30	-0.1778	319.4914	319				
31	-0.1044	323.0099	323				
32	-0.0308	326.5273	327				
33	0.0430	330.2904	330				
34	0.1174	334.0442	334				
35	0.1924	337.5547	338				
36	0.2682	341.3504	341				
37	0.3450	345.0507	345				
38	0.4230	348.8605	349				
39	0.5024	352.8497	353				
40	0.5835	356.8295	357				

Table 3.A.20 2007 New Conversions for Integrated Science 1 and 2

Integrated Science 1								Integrated Science 2							
Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	0.0000	150	**41**	0.6624	353.9291	354	**0**	N/A	0.0000	150	**41**	0.6714	353.9278	354
1	-4.3979	108.8491	150	**42**	0.7457	357.9663	358	**1**	-4.3925	108.5730	150	**42**	0.7547	357.9635	358
2	-3.6816	143.5414	150	**43**	0.8316	362.1260	362	**2**	-3.6758	143.3005	150	**43**	0.8405	362.1213	362
3	-3.2526	164.3174	164	**44**	0.9204	366.4282	366	**3**	-3.2464	164.1042	164	**44**	0.9293	366.4225	366
4	-2.9411	179.4035	179	**45**	1.0127	370.8988	371	**4**	-2.9346	179.2133	179	**45**	1.0215	370.8913	371
5	-2.6939	191.3770	191	**46**	1.1090	375.5598	376	**5**	-2.6870	191.2080	191	**46**	1.1177	375.5504	376
6	-2.4873	201.3823	201	**47**	1.2099	380.4498	380	**6**	-2.4801	201.2320	201	**47**	1.2185	380.4382	380
7	-2.3086	210.0379	210	**48**	1.3164	385.6048	386	**7**	-2.3012	209.9041	210	**48**	1.3249	385.5912	386
8	-2.1502	217.7083	218	**49**	1.4151	390.3871	390	**8**	-2.1425	217.5898	218	**49**	1.4378	391.0639	391
9	-2.0073	224.6312	225	**50**	1.5504	396.9381	397	**9**	-1.9994	224.5261	225	**50**	1.5587	396.9204	397
10	-1.8765	230.9655	231	**51**	1.6810	403.2638	403	**10**	-1.8684	230.8733	231	**51**	1.6892	403.2450	403
11	-1.7554	236.8293	237	**52**	1.8237	410.1772	410	**11**	-1.7471	236.7485	237	**52**	1.8319	410.1558	410
12	-1.6423	242.3109	242	**53**	1.9819	417.8352	418	**12**	-1.6338	242.2403	242	**53**	1.9899	417.8121	418
13	-1.5357	247.4717	247	**54**	2.1603	426.4798	426	**13**	-1.5270	247.4108	247	**54**	2.1683	426.4558	426
14	-1.4347	252.3654	252	**55**	2.3666	436.4713	436	**14**	-1.4259	252.3128	252	**55**	2.3745	436.4459	436
15	-1.3383	257.0306	257	**56**	2.6135	448.4261	448	**15**	-1.3294	256.9857	257	**56**	2.6212	448.4005	448
16	-1.2460	261.5019	262	**57**	2.9245	463.4890	463	**16**	-1.2370	261.4643	261	**57**	2.9321	463.4637	463
17	-1.1571	265.8081	266	**58**	3.3531	484.2466	484	**17**	-1.1480	265.7758	266	**58**	3.3606	484.2232	484
18	-1.0712	269.9688	270	**59**	4.0689	518.9133	519	**18**	-1.0620	269.9423	270	**59**	4.0762	518.8977	519
19	-0.9977	273.5288	274	**60**	N/A	1290.4945	600	**19**	-0.9786	273.9861	274	**60**	N/A	1290.4282	600
20	-0.9248	277.0614	277					**20**	-0.8973	277.9229	278				
21	-0.8356	281.3781	281					**21**	-0.8180	281.7661	282				
22	-0.7497	285.5381	286					**22**	-0.7403	285.5292	286				
23	-0.6735	289.2290	289					**23**	-0.6641	289.2228	289				
24	-0.5985	292.8640	293					**24**	-0.5890	292.8599	293				
25	-0.5244	296.4531	296					**25**	-0.5149	296.4514	296				
26	-0.4511	300.0000	300					**26**	-0.4416	300.0000	300				
27	-0.3785	303.5189	304					**27**	-0.3690	303.5211	304				
28	-0.3063	307.0149	307					**28**	-0.2968	307.0187	307				
29	-0.2344	310.4982	310					**29**	-0.2249	310.5023	311				
30	-0.1627	313.9703	314					**30**	-0.1532	313.9750	314				
31	-0.0909	317.4448	317					**31**	-0.0815	317.4500	317				
32	-0.0191	320.9258	321					**32**	-0.0096	320.9314	321				
33	0.0531	324.4224	324					**33**	0.0625	324.4276	324				
34	0.1258	327.9420	328					**34**	0.1352	327.9471	328				
35	0.1990	331.4897	331					**35**	0.2084	331.4944	331				
36	0.2731	335.0761	335					**36**	0.2824	335.0805	335				
37	0.3482	338.7122	339					**37**	0.3574	338.7156	339				
38	0.4244	342.4031	342					**38**	0.4336	342.4051	342				
39	0.5020	346.1614	346					**39**	0.5111	346.1630	346				
40	0.5812	350.0000	350					**40**	0.5903	350.0000	350				

Table 3.A.21 2007 New Conversions for Integrated Science 3 and 4

Integrated Science 3

Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	0.0000	150	**41**	0.5968	368.4389	368
1	-4.4538	121.8567	150	**42**	0.6717	372.0948	372
2	-3.7376	156.8271	157	**43**	0.7473	375.7877	376
3	-3.3086	177.7695	178	**44**	0.8241	379.5331	380
4	-2.9971	192.9766	193	**45**	0.9023	383.3522	383
5	-2.7499	205.0458	205	**46**	0.9823	387.2588	387
6	-2.5433	215.1314	215	**47**	1.0647	391.2837	391
7	-2.3646	223.8576	224	**48**	1.1754	396.6877	397
8	-2.2062	231.5906	232	**49**	1.2944	402.4987	402
9	-2.0633	238.5696	239	**50**	1.4233	408.7878	409
10	-1.9324	244.9564	245	**51**	1.5638	415.6472	416
11	-1.8113	250.8689	251	**52**	1.7187	423.2099	423
12	-1.6981	256.3963	256	**53**	1.8915	431.6470	432
13	-1.5915	261.6008	262	**54**	2.0876	441.2232	441
14	-1.4904	266.5360	267	**55**	2.3152	452.3317	452
15	-1.3941	271.2404	271	**56**	2.5622	464.3915	464
16	-1.3017	275.7508	276	**57**	2.8733	479.5808	480
17	-1.2127	280.0945	280	**58**	3.3021	500.5156	501
18	-1.1267	284.2917	284	**59**	4.0180	535.4686	535
19	-1.0433	288.3662	288	**60**	N/A	1315.7383	600
20	-0.9620	292.3332	292				
21	-0.8827	296.2067	296				
22	-0.8050	300.0000	300				
23	-0.7287	303.7236	304				
24	-0.6536	307.3926	307				
25	-0.5794	311.0143	311				
26	-0.5061	314.5941	315				
27	-0.4333	318.1453	318				
28	-0.3611	321.6741	322				
29	-0.2890	325.1897	325				
30	-0.2173	328.6948	329				
31	-0.1454	332.2026	332				
32	-0.0734	335.7155	336				
33	-0.0011	339.2456	339				
34	0.0716	342.7988	343				
35	0.1450	346.3799	346				
36	0.2191	350.0000	350				
37	0.2943	353.6710	354				
38	0.3706	357.3971	357				
39	0.4484	361.1909	361				
40	0.5225	364.8085	365				

Integrated Science 4

Raw Scr.	Theta	Scale Score	Rprtd Score	Raw Scr.	Theta	Scale Score	Rprtd Score
0	N/A	0.0000	150	**41**	0.6681	353.9282	354
1	-4.3932	108.6088	150	**42**	0.7589	358.3287	358
2	-3.6766	143.3405	150	**43**	0.8539	362.9345	363
3	-3.2474	164.1438	164	**44**	0.9537	367.7709	368
4	-2.9358	179.2513	179	**45**	1.0588	372.8680	373
5	-2.6883	191.2433	191	**46**	1.1700	378.2545	378
6	-2.4816	201.2644	201	**47**	1.2880	383.9767	384
7	-2.3027	209.9338	210	**48**	1.4139	390.0805	390
8	-2.1442	217.6167	218	**49**	1.5491	396.6329	397
9	-2.0012	224.5504	225	**50**	1.6641	402.2056	402
10	-1.8703	230.8949	231	**51**	1.7869	408.1571	408
11	-1.7491	236.7676	237	**52**	1.9198	414.5985	415
12	-1.6359	242.2572	242	**53**	2.0658	421.6771	422
13	-1.5292	247.4254	247	**54**	2.2297	429.6197	430
14	-1.4281	252.3256	252	**55**	2.4183	438.7634	439
15	-1.3318	256.9967	257	**56**	2.6438	449.6920	450
16	-1.2394	261.4735	261	**57**	2.9285	463.4915	463
17	-1.1620	265.2263	265	**58**	3.3570	484.2585	484
18	-1.0858	268.9169	269	**59**	4.0726	518.9455	519
19	-1.0106	272.5647	273	**60**	N/A	1290.9449	600
20	-0.9359	276.1823	276				
21	-0.8453	280.5759	281				
22	-0.7579	284.8110	285				
23	-0.6735	288.9011	289				
24	-0.5918	292.8610	293				
25	-0.5178	296.4518	296				
26	-0.4445	300.0000	300				
27	-0.3719	303.5204	304				
28	-0.2998	307.0176	307				
29	-0.2279	310.5012	311				
30	-0.1563	313.9737	314				
31	-0.0846	317.4485	317				
32	-0.0127	320.9297	321				
33	0.0594	324.4262	324				
34	0.1320	327.9456	328				
35	0.2052	331.4930	331				
36	0.2792	335.0791	335				
37	0.3542	338.7146	339				
38	0.4303	342.4044	342				
39	0.5078	346.1625	346				
40	0.5870	350.0000	350				

Chapter 4: Validity

This chapter summarizes evidence supporting the content and convergent validity of the California Standardized Tests. The content validity evidence is based on the spring 2007 test assembly process. The convergent validity is based on a study relating the CAT/6 Survey tests and the CSTs using the 2004 data when a full complement of CAT/6 Survey tests were administered. Other validity studies have been conducted by the CDE and local districts throughout California. Those studies are not included here.

Validity Evidence Based on Test Content

Content validity refers to the degree to which the content of a test is congruent with the purpose of testing, as determined by subject matter experts. CST items were developed to align with the content standards that are representative of the broader content domains: English–language arts, mathematics, history–social science, and science. Thus, the content-related evidence of validity concerns the extent to which the test items represent these specified content domains and cognitive dimensions.

Content validity also provides information about how well an item measures its intended construct. Such validity is determined by a critical review of the items by experts in the field. For the CST, these reviews are conducted by experts in their designated areas from both the CDE and ETS. For these reviews, ETS senior content staff worked directly with CDE content consultants.

The CDE content consultants each have extensive experience in K–12 assessments, particularly in their subject of expertise, and many are former teachers. At minimum, each CDE content consultant holds a bachelor's degree; most have advanced degrees in their area of expertise. All ETS content and test development staff have extensive experience with K–12 assessments, experience in teaching students with a broad range of abilities, and an understanding of the California standards. They each hold, at minimum, bachelor's degrees; most have advanced degrees within their areas of expertise.

The next section presents the expertise of the content experts who constructed the CSTs.

After the CST items had been written by ETS-trained item writers, a series of reviews, including reviews by ETS content assessment specialists and the external ARPs, were conducted to ensure that each item was measuring the appropriate California Content Standard and was matched to the item specifications. A description of the CST reporting clusters and the standards associated with each reporting cluster is provided in Appendix 2.B in Chapter 2. Detailed information on the item and content evaluation process can also be found in Chapter 2.

CST Assessment Review Panel

In addition to the thorough content reviews completed by ETS content-area experts and the content staff at the CDE, all CST items are reviewed by a content-area ARP. The ARPs are advisory panels to ETS on areas related to item development for the CSTs. Their credentials are presented later in this chapter.

Purpose

As described in Chapter 2, ETS is responsible for working with ARPs as items are developed for the CST tests. For the 2007 development cycle, 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 item content, clarity of phrasing, and item quality. ETS provided the ARPs with the opportunity to review the items with the applicable field-test statistics and to make recommendations for the use of items in subsequent test forms. The ARPs may raise concerns in their examination of test items related to age/grade appropriateness and to gender, racial/ethnic, and socioeconomic bias.

Since the ARPs are responsible for reviewing the newly developed items for alignment to the California content standards, they determine if the items are:

- Measuring the California standards as appropriate for the CST testing population
- Free from bias
- Interesting and appropriate to students tested at a particular grade/course level

Composition

The ARPs are comprised of current and former teachers, resource specialists, administrators, curricular experts, and other education professionals. Current school staff members must meet 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 content areas (English–language arts, mathematics, history–social science or science);
- Bachelor's or higher degree in a grade or subject area related to English–language arts, mathematics, history–social science or science; and
- Knowledge and experience with the California content standards in English–language arts, mathematics, history–social science, or science.

School administrators, district/county content/program specialists, or university educators serving on the CST ARPs must meet 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 English–language arts, mathematics, history–social science, or science;
- Bachelor's or higher degree in a grade-specific or subject area related to English–language arts, mathematics, history–social science, or science; and
- Knowledge of and experience with the California content standards in English–language arts, mathematics, history–social science, or science.

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

Current ARP members were recruited through an application process. Recommendations were solicited from districts and county offices of education in addition to CDE and SBE staff. Applications were received and reviewed throughout the year. ARP 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 the CDE and SBE staff for review and final approval. Upon approval, the applicant was notified that he or she had been selected to serve on the ARP committee. Table 4.1 shows the educational qualifications, present occupation, and credentials of the current CST ARP members.

Table 4.1 CST ARP Member Qualifications, by subject and total

	ELA	Math	Science	HSS	Total
Total	**28**	**24**	**34**	**17**	**103**
Occupation (Members may teach multiple levels)					
Teacher or Program Specialist, Elementary/Middle School	12	5	13	3	33
Teacher or Program Specialist, High School	3	7	14	8	32
Teacher or Program Specialist, K–12	4	3	0	2	9
University Personnel	3	5	6	2	16
Other District Personnel (e.g., Director of Special Services, etc.)	7	5	0	2	14
Highest Degree Earned					
Bachelor's Degree	23	24	34	17	98

	ELA	Math	Science	HSS	Total
Master's Degree	17	12	16	11	56
Doctorate	3	4	11	1	19
Credential (Members may hold multiple credentials)					
Elementary Teaching (Multiple Subjects)	14	4	9	2	65
Secondary Teaching (Single Subject)	8	6	20	8	42
Special Education	0	0	0	0	0
Reading Specialist	1	0	0	1	2
English Learner (CLAD,BCLAD)	3	1	4	4	12
Administrative	6	2	0	1	9
Other	0	0	0	0	0
None (teaching at university level)	2	5	3	2	12

Currently, there are no term limits for ARP members. While most members participate in the ARP meetings for only one STAR testing program, some members serve on more than one panel to encourage consistency in decisions among the STAR testing programs. ETS and CDE annually review the ARP membership for active participation. Members who have not attended a meeting within the last two years are notified that their invitation to participate may be withdrawn due to lack of attendance at meetings. In addition, ETS and CDE regularly review concerns about members whose conduct may be unprofessional and not conducive to the purpose of the ARP. If the concerns are determined to be valid, membership is revoked immediately.

CST Item Writers

The items selected for each CST test are written by special panels of item writers with expertise in 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. Thus, the participants were particularly experienced in writing to the standards assessed on CST. All item writers met the following minimum qualifications:

- Bachelor's or master's degree in a specified content area being tested
- Three or more years of general education teaching experience in the content areas (English–language arts, mathematics, science, or history–social science)
- Knowledge about the capabilities of the students taking these tests
- Knowledge and experience with California content standards in English–language arts, math, science, or history–social science.

Participants attended a general CST item development training session, and then were given specific subject-area training. After viewing multiple examples of previously written CST items, participants were given item writing assignments. ETS facilitators provided feedback, and peer review methods were employed.

Additional information about the item writing process is described in Chapter 2.

CST Development Procedures

The CST exams were constructed to measure the California content standards as well as to meet psychometric criteria for difficulty and reliability. The psychometric criteria were evaluated using projections based on item statistics from field-testing or previous operational administrations.

Test Assembly

Test blueprints for the components of the STAR Program (which includes CST) were proposed by ETS, reviewed and approved by the respective ARPs, 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 CST tests. For each test, the California content standards were used as the basis for choosing items.

Additional technical targets (e.g., difficulty and discrimination) for test construction were established based on past characteristics of the tests, with the goal of maintaining parallel forms to the greatest extent possible.

Test Specifications

Statistical Specifications

The primary statistical targets used for CST test assembly in 2007 were the test information functions based on the IRT item parameters (one-parameter model) and average biserial correlation. When Rasch IRT estimates are used, the target information function makes it possible to choose items to produce a test that has the desired level of difficulty. The biserial correlation is a measure of how well the items discriminate among test takers and is related to the overall reliability of the test.

These specifications were developed from the analyses of test forms administered in the years from 2002 to 2006; the target values and ranges for the specifications are presented in Table 2.1 on page 7. The minimum target value for a proportion-correct value (indicator of item difficulty) was set at 0.20 and maximum was set at 0.95; the minimum item point biserial was set at 0.14 for each test. The target mean and standard deviation of item b-values consistent with the information curves were also provided to test development staff to help with the test construction process.

Content Specifications

ETS developed all CST test items to conform to the SBE-approved content standards and test blueprints. The content blueprints for the CST can be found on the CDE Web site, at www.cde.ca.gov/ta/tg/sr/blueprints.asp.

Item Development

ETS senior content staff led the item writers in the item development and review process. In addition, experienced ETS content specialists and assessment editors reviewed each item during the forms construction process. The lead assessment specialist for each content area worked directly with the other ETS assessment specialists to carefully review and edit each item for technical characteristics like quality (for example, one right answer, clearly stated stem, absence of clueing, plausibility of, distractors), match to standard, and conformity with California-approved item-writing practices.

ETS has maintained item specifications for each CST test. ETS followed the SBE-approved Item Utilization Plan to guide the development of the quantity of items for each subject area.

Item specification documents included the constructs to be measured and the California content standards included in the test blueprints. The item specifications help ensure that the CST tests consistently match the content standards from year to year. Item writing emphasis is determined in consultation with the CDE. The item specifications also provide specific and important guidance to item writers, and ensure that items are consistent in approach and written to measure the standards. The item specifications describe the general characteristics of the items within each content standard, indicate item types or content to be avoided, and define the content limits for the items. In summary, the specifications included the following:

- A statement of the strand or topic for the standard
- A full statement of the academic content standard, as found in each CST blueprint
- The expected cognitive level(s) of items written for the standard (Acquire, Integrate, or Extend), as defined by ETS and approved by CDE
- The construct(s) appropriately measured by the standard
- A description of the kinds of stems appropriate for multiple-choice items for the standard.
- A description of the kinds of distracters appropriate for multiple-choice items for the standard.

- A description of specific kinds of items to be avoided, if any (e.g., no ELA items about insignificant details)
- A description of appropriate stimuli (e.g., charts, tables, graphs, or other artwork) for mathematics, science, and history–social science items
- The content limits for the standard (e.g., 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 observable behaviors for science

Internal Reviews

After the items were written, ETS employed a series of internal reviews. The reviews established the criteria used to judge the content validity of the items, making sure that each item was measuring 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 CDE and the ARPs. Because of the complexities involved in producing defensible items for high-stakes programs such as the STAR Program, it is essential that many experienced individuals review each item before it is brought to CDE and the ARP and SPAR panels.

The ETS review process for the CST included the following:

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

Throughout this multi-step review process, the lead content area assessment specialists and development team members continually evaluated the relevance of the information being assessed, its relevance to the California content standards, its match to the test and item specifications, and its appropriateness to the population being assessed. Items that are only peripherally related to the test and item specifications, that do not measure core outcomes reflected in the California content standards, or that are not developmentally appropriate were eliminated early in this rigorous review process.

1. Internal Content Review

CST items and materials received two reviews from the content area assessment specialists. These assessment specialists made sure that the items and related materials were in compliance with ETS's written guidelines for clarity, style, accuracy, and appropriateness for California students, and in compliance with the approved item specifications. Assessment specialists reviewed each item following the criteria below:

- Relevance of each item as the item relates to the purpose of the test
- Match of each item to the item specifications, including cognitive level
- Match of each item to the principles of quality item development
- Match of each item to the identified standard (or standards, for history–social science)
- 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 artwork, graphs, figures, etc.

The assessment specialists also checked all items against their cluster classification codes, both to evaluate the correctness of the classification and to ensure that a given task is of a type appropriate to the outcome it was intended to measure. The reviewers accepted the item and classification as

written, suggested revisions, or recommended that the items be discarded. These steps occurred prior to CDE 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 CDE and the ARPs. The editors checked questions for clarity, correctness of language, appropriateness of language, 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 it was prepared for CDE and ARP review. In addition, the review process promoted 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 groups, individuals with disabilities, and women) to the history and culture of the United States and the achievements of individuals within these groups

ARP Meetings for Review of CST Items

The 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 steps:

- An overview of the purpose and scope of the CST
- An overview of CST test design specifications and blueprints
- An analysis of CST item specifications
- An overview of criteria for reviewing constructed-response tasks
- Review and evaluation of items for bias and sensitivity issues

The criteria for evaluating constructed-response tasks included:

- 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(s)
- plausibility of the distracters
- bias and sensitivity factors

The committee was also trained on how to make recommendations for revising items. Guidelines for reviewing items were provided by ETS and approved by CDE. The guidelines for reviewing items are summarized below:

Item Guidelines: Does the item…

- Measure the content standard?
- Match the test item specifications?
- Align with the construct being measured?
- Test worthwhile concepts or information?
- Include administrator directions that give the student a full sense of what the item is asking?
- Avoid unnecessary wordiness?
- Reflect content that is free from bias against any person or group?

Stimulus Guidelines: 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, panel 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. These recommendations were recorded in a master item review booklet. Item review binders and other item evaluation materials also identified potential bias and sensitivity factors the ARP considers as part of its item reviews.

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 a single achievement test to be used statewide for the testing of students in California public schools, grades 2–11. 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 *Education Code* Section 60614. The constructed-response tasks were also presented for review. If the SPAR panel rejected specific items and/or constructed-response tasks, the items and/or tasks were replaced. For the SPAR panel meeting, the item development coordinator or an ETS content specialist who had been requested in advance by CDE attended the opening session and remained at a nearby location or near a telephone to be available to respond to any questions during the course of the meeting.

Validity Evidence Based on Relations to Other Variables

Analyses of the relationship of test scores to variables external to the test provide an important source of validity evidence, which address questions about the degree to which these relationships are consistent with the construct underlying the proposed test interpretations. Relationships between test scores and other measures intended to measure similar constructs provide convergent validity evidence. For CSTs for English–language arts, mathematics, history–social science, and science, the convergent evidence can be collected through examining the relationship between CSTs and their CAT/6 Survey counterparts.

CAT/6 Survey tests assess students on reading, language, spelling, mathematics, and science, and compare California student achievement to a national norm. The CSTs are expected to relate closely to CAT/6 Survey programs as they are intended to measure similar constructs. Three groups of correlations were examined:

- Correlations between CSTs for ELA and CAT/6 Survey Reading, Language, and Spelling tests;
- Correlations between CSTs for math, including grade-specific and end-of-course CSTs, and CAT/6 Survey Math tests;
- Correlations between CSTs for end-of-course science and CAT/6 Survey Science tests.

Table 4.A.1 through Table 4.A.4 starting on page 106 present correlations between 2004 CST and CAT/6 Survey test scores based on the entire population of examinees at each grade, for grades 2 through 11. The analysis was based on 2004 data because 2004 was the last year when CAT/6 Survey tests were administered at all grades. For each correlation index, the sample size is provided immediately before the correlation in the tables.

CST for ELA versus CAT/6 Survey Reading/Language/Spelling

In 2004, students from grades 2 through 11 were required to take CSTs for ELA and the two CAT/6 Survey subject tests: Reading and Language. Examinees in grades 2 through 8 were also required to take CAT/6 Survey Spelling test. The specifications for the CAT/6 Survey test do not parallel those of the CST for ELA. However, CAT/6 Survey Reading, Language, and Spelling tests measure relevant aspects of the CST for ELA construct. Consequently, we might expect moderate to high correlations between the CAT/6 Survey tests and CST for ELA. The results showed that CST for ELA scores correlated highly with both CAT/6 Survey Reading and Language test scores across all grades, with correlations ranging from 0.75 to 0.80. The correlation coefficients between CST for ELA and CAT/6 Survey Spelling tests were moderately high and ranged from 0.62 to 0.70. It must be noted that the CAT/6 Survey Spelling tests tended to correlate highly with the CST for ELA for examinees at lower grade levels. This can be attributed to spelling's being an integral part of the language learning process for examinees at lower grade levels.

CST for Math versus CAT/6 Survey Math

CSTs for Math include grade-specific math tests as well as end-of-course subject tests, while CAT/6 Survey Math tests consist of grade-specific tests only. For grades 2 to 7, grade-specific CST and CAT/6 Survey math tests were administered. For grades 8 and up, students took a CAT/6 Survey grade-specific math test, but took one of the end-of-course math CSTs. The end-of-course CSTs included General Mathematics (GM), Algebra I and II, Geometry, Summative High School Mathematics (HSM), and Integrated Math 1, 2, and 3. The CST for General Math could only be taken by students at grades 8 and 9 while all other end-of-course tests could be administered to students from grades 8 to 11. It was expected that the grade-specific CSTs for math would have a higher correlation with CAT/6 Survey Math tests for the corresponding grades. However, a lower correlation was expected between end-of-course CSTs and the corresponding CAT/6 Survey Math tests since the subject-specific CSTs for math were not intended to be parallel in constructs to CAT/6 Survey Math tests.

The results shown in Table 4.A.2 and Table 4.A.3 show that the grade-specific CSTs for math (grades 2–7) and CAT/6 Survey Math tests had fairly high correlations ranging from 0.77 to 0.79. The CST for General Math, which was taken only by grade 8 and 9 students, correlated moderately high with CAT/6 Survey Math test, with correlations of 0.73 and 0.64 for the two grades respectively. A decreasing trend in correlations between the CST for Algebra I and CAT/6 Survey Math test was observed across grade levels (grades 8–11). The correlations between the tests ranged from 0.72 for grade 8 to 0.43 for grade 11. A similar trend was observed for the relationship between the CST for Geometry and CAT/6 Survey Math, with correlations of 0.64, 0.66, 0.61, and 0.50 for grades 8, 9, 10, and 11, respectively. Both the CST for Algebra II and the CST for Summative High School Math correlated moderately high with CAT/6 Survey Math tests with correlations between 0.60 and 0.79. All the CSTs for Integrated Math exhibited a moderate correlation with the CAT/6 Survey Math tests for the corresponding grades, with correlations ranging from 0.43 to 0.66. This

scenario was expected, as the CSTs for Integrated Math were not designed to measure constructs similar to CAT/6 Survey Math constructs.

CST for Science versus CAT/6 Survey Science

CAT/6 Survey science tests were administered to examinees at grades 9, 10, and 11. Scores from these tests were correlated with the end-of-course CSTs for science to provide evidence of convergent validity. The end-of-course CSTs for science included Biology, Chemistry, Earth Science, Physics, and Integrated Science 1, 2, 3, and 4. As shown in Table 4.A.4 on page 107, all end-of-course CSTs for science correlated moderately high with the CAT/6 Survey Science tests across grades. The correlation coefficients ranged from 0.52 and 0.72. The alignment of the CSTs to the respective test blueprints and the relationship between CST and CAT/6 Survey test scores provides evidence for the validity of CSTs in their present use.

References

American Educational Research Association, American Psychological Association, and National Council on Measurement in Education. *Standards for Educational And Psychological Testing*. Washington, D.C.: American Psychological Association, 1999.

Sireci, S. G. "Validity," *Encyclopedia of Psychological Assessment*. London: Sage Publications, 2002.

Wainer, H. and Braun, H. I. (1998). *Test Validity*. Mahwah, NJ: Lawrence Erlbaum Associates, 1998.

Appendix 4.A—Test Correlations Tables

Table 4.A.1 Correlations Between CSTs for English–Language Arts and CAT/6 Survey Tests

Grades	Number of Examinees (N)	ELA(CST) / Reading (CAT/6)	ELA (CST) / Language (CAT/6)	ELA (CST) / Spelling (CAT/6)
2	468557	0.77	0.76	0.70
3	476748	0.77	0.75	0.68
4	479702	0.77	0.78	0.65
5	491129	0.78	0.77	0.63
6	478342	0.79	0.78	0.62
7	481875	0.80	0.78	0.62
8	483750	0.80	0.78	0.64
9	467253	0.76	0.76	N/A
10	435473	0.77	0.80	N/A
11	372637	0.76	0.76	N/A

Table 4.A.2 Correlations Between Grade-specific CSTs for Mathematics and CAT/6 Survey Mathematics Tests

Grades	Number of Examinees (N)	Math (CST) / Math (CAT/6)
2	471270	0.77
3	479648	0.79
4	486385	0.78
5	483092	0.77
6	479050	0.78
7	485061	0.79

Table 4.A.3 Correlations Between End-of-Course CSTs for Mathematics and CAT/6 Survey Mathematics Tests

Grades	GM (CST) / MTH (CAT/6)		Algebra I (CST) / MTH (CAT/6)		Geometry (CST) / MTH (CAT/6)		Algebra II (CST) / MTH (CAT/6)	
	N	Correl.	N	Correl.	N	Correl.	N	Correl.
8	269630	0.73	188563	0.72	12432	0.64	453	0.72
9	133382	0.64	215774	0.63	89036	0.66	13161	0.61
10	N/A	N/A	128604	0.49	124253	0.61	77970	0.65
11	N/A	N/A	61488	0.43	68306	0.50	87167	0.60
Grades	**HSM (CST) / MTH (CAT/6)**		**Integrated M. 1 (CST)/ MTH (CAT/6)**		**Integrated M. 2 (CST)/ MTH (CAT/6)**		**Integrated M. 3 (CST) / MTH (CAT/6)**	
	N	Correl.	N	Correl.	N	Correl.	N	Correl.
8	N/A	N/A	366	0.57	209	0.60	13	0.64
9	595	0.79	3733	0.66	1742	0.65	175	0.54
10	10707	0.66	2459	0.44	3933	0.58	1425	0.61
11	68038	0.69	2632	0.43	1851	0.43	2726	0.62

Table 4.A.4 Correlations Between End-of-Course CSTs for Science and CAT/6 Survey Science Tests

Grades	Biology (CST) / Science (CAT/6)		Chemistry (CST) / Science (CAT/6)		Earth Science (CST) / Science (CAT/6)		Physics (CST) / Science (CAT/6)	
	N	Correl.	N	Correl.	N	Correl.	N	Correl.
9	121064	0.72	2248	0.68	90721	0.67	14635	0.64
10	198786	0.67	72589	0.68	21296	0.58	7606	0.69
11	69217	0.71	103536	0.64	19385	0.63	29370	0.70
Grades	**Integrated S. 1 (CST) / Science (CAT/6)**		**Integrated S. 2 (CST) / Science (CAT/6)**		**Integrated S. 3 (CST) / Science (CAT/6)**		**Integrated S. 4 (CST) / Science (CAT/6)**	
	N	Correl.	N	Correl.	N	Correl.	N	Correl.
9	73047	0.64	4152	0.62	1368	0.64	549	0.59
10	16765	0.52	15018	0.62	1847	0.58	714	0.53
11	8933	0.53	4778	0.58	2512	0.61	256	0.70

Chapter 5: Score Reports

This chapter describes the score reporting procedures and score-level analyses obtained for the spring 2007 administration of the California Standards Tests. The first section of the chapter describes the score scales, followed by a discussion on the types and purposes of score reports that are relevant to CSTs and the related STAR components. The second section focuses on summaries of scores obtained on the spring 2007 administration of CSTs. Following the pattern of previous chapters, the results are reported for each subject area and for each grade within a subject area. The numbers in the summary tables may not match exactly to the results reported on the CDE Web site, as there may be slight differences in the samples used to compute the statistics. The sample used for analyses in this chapter contained about 99 percent of all test results, constituting approximately 99.8 of the student records used in August 15 reporting. In addition, students testing with invalid scores were excluded rather than added into the below basic category.

Descriptions of Scores

Raw Score

For all of the tests except ELA grades 4 and 7, the raw score is simply the sum of correct responses on the test items. For examinees writing the essay in grades 4 and 7, the ELA raw score is the multiple-choice score plus the number of points obtained on the essay. The essays are rated on a 0–4 scale by a single reader. The essay score is obtained by doubling the rating; potential essay scores are therefore, 0, 2, 4, 6, and 8.

Scale Score

Approximately half of the questions on CSTs are replaced for each administration. Since one test form may be slightly more difficult or slightly easier than another, an equating process is used to adjust for the difficulty of the forms so that scores from year to year are comparable. As a result of this process, raw cut scores may differ from one form of the test to another. If raw scores were used to report results, the user would have to know the form of the CST a student took and the cut score for that form of the test to determine the proficiency level of the student. The aggregation of raw scores across years would also not be meaningful. The conversion of raw scores to a common reporting scale that is consistent from year to year simplifies the interpretation and aggregation of data. This reporting scale for the CSTs ranges from 150 to 600 and is commonly known as the "scale score" range.

Proficiency Levels

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

- far below basic
- below basic
- basic
- proficient
- advanced

For all CSTs, a scale score of 350 provides the cut score separating basic performance from proficient performance and a scale score of 300 differentiates basic performance from below basic performance. The cut scores defining the proficient/advanced and the below basic/far below basic boundaries vary somewhat from test to test.

Score Reporting

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

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

Score Report Applications

STAR Program results provide parents and guardians with information about their children's progress. The results are a tool for increasing communication and collaboration between parents, guardians, and teachers. Along with teacher report cards and information from school and classroom tests, the STAR Student Report can be used by parents and guardians to talk with teachers about ways to improve their children's achievement of the California content standards. Any discrepancies between performance reported on report cards and the scores reported on the STAR Student Report should also be discussed.

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

STAR Program results help school districts and schools identify strengths and weaknesses in their instructional programs. Each year, school districts and school staffs examine STAR Program test results at each grade level and subject tested. Their findings are used to help determine:

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

The results from the STAR program are used for state and federal accountability programs to monitor each school's progress toward achieving established goals. STAR Program results are used to calculate each school's Academic Performance Index (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 (e.g., size and ethnic makeup), identify low-performing and high-priority schools, and set yearly targets for academic growth.

STAR Program results also are used to comply with federal *No Child Left Behind* (*NCLB*) legislation that requires all schools to meet specific academic goals. The progress of each school toward achieving these goals is provided annually in an Adequate Yearly Progress (AYP) report. Each year, California schools must meet AYP goals by showing that a specified percentage of students, districtwide and at each school, are performing at or above the proficient level on the CSTs in English–language arts and mathematics, or the CAPA. At the high school level, the California High School Exit Examination (CAHSEE) results for grade ten students are used in place of the CSTs to make this determination.

Score Report Contents

The individual STAR Student Report provides overall scale scores, performance levels, and reporting cluster (subscore) results for each CST taken by the student. As mentioned earlier, overall scores are reported on a scale ranging from 150 to 600. Results for the CSTs also are reported by performance levels: advanced, proficient, basic, below basic, or far below basic. Each performance level indicates how well a student is achieving the California content standards tested. In addition, CST results are reported in clusters that describe how a student performs on a set of state content standards. Reporting cluster results compare an individual student's percent correct score to the

average percent correct for the state, as a whole, and for the district where a student attends school. The range of proficient scores is also provided for each cluster score using a percent correct metric.

Reports for students with disabilities and English learners who use accommodations or modifications include a notation about the test administration that indicates:

- Student used accommodations, or
- Student was tested with modifications.

Scores for students who use accommodations are reported in the same way as for non-accommodated tests. Modifications, however, change what is being tested and therefore change scores. If students used modifications, their scores are counted differently from non-modified test scores on summary reports. On the CST summary reports, the students' scores are counted as far below basic, regardless of the scale score obtained.

In addition to individual student reports, several other reports are also provided to different groups of stakeholders. A description of those reports is provided in Appendix 5.A.

Score Distributions and Summary Statistics

This section summarizes and reports the score level analyses including descriptive statistics on raw and scale scores, distribution of examinees in various scale score ranges, and the distribution of examinees in the five proficiency levels. The analyses were performed on the sets of valid scores on each CST.

The descriptive information including number of items on each CST, number of examinees taking the CST, and the corresponding means and standard deviations of scores are presented in Table 5.1. Statistical indices are presented on both raw score scale and scale score scale; however, the decisions regarding an examinee performance are based on 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 on the respective CSTs. When a test is administered at more than one grade, the results are reported for the test as a whole and by grade.

The proportions of students in various proficiency categories are presented in Table 5.2. The last column on the table presents the overall proportion of examinees that scored at the proficient level or higher. For ELA the percentage of students that were proficient or advanced was fairly stable ranging from 41% to 51% for the majority of the grades. For the ELA tests administered at grade 3, grade 10, and grade 11, percentage of examinees classified as proficient and above were lower. For the mathematics tests, the percent at proficient or above showed a tendency to decrease with grade, the end-of-course tests being the lowest with the exception of Summative High School Math. The percent at proficient or above for the history–social science tests was in the range of 29% to 35%. The percentage of examinees at proficient or above levels for the science tests were generally lower compared to other subject areas, with the core high school science tests (Earth Science, Biology, Chemistry, and Physics) falling in the 26% to 37% range. The percentage at proficient or above for the Integrated Science tests was the lowest across all tests, falling below 10%.

The examinees who qualified for the advanced category followed fairly similar patterns as in 2006. Highest percentage of examinees qualifying for the advanced category were observed in the lower math grades 2, 3 and 4 (28% to 31%) and ELA grade 3 (25%).

Table 5.B.1 through Table 5.B.5 in Appendix 5.B starting on page 118 show the distributions of scale scores by CST. Table 5.B.6 presents same information for the five grade-specific tests. The tables show the distribution of examinees at 15 scale score intervals for the 38 CSTs. The scale scores range from 150 to 600, resulting in 30 scale score points within each interval.

Table 5.1 Mean and Standard Deviation of Raw and Scale Scores for CSTs

Subject	CST	No. of Items	No. of Examinees	Scale Score		Raw Score		Raw Scr. Pct Poss Range	
				Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.
English–Language Arts	**2**	65	452,972	345	62	41.60	13.86	64.00	21.32
	3	65	455,219	330	59	40.77	12.45	62.72	19.15
	4	75	457,829	353	58	46.35	15.24	61.80	20.32
	5	75	466,854	343	54	45.11	14.58	60.15	19.44
	6	75	474,863	340	54	43.21	15.09	57.61	20.12
	7	75	479,840	343	58	44.30	14.80	59.07	19.73
	8	75	479,717	339	58	45.70	14.58	60.93	19.44
	9	75	505,104	345	60	44.11	15.41	58.81	20.55
	10	75	478,921	331	59	44.75	15.93	59.67	21.24
	11	75	437,551	328	71	43.61	16.41	58.15	21.88
History–Social Science	**8**	75	478,975	330	60	38.18	14.72	50.91	19.63
	World History	60	491,079	321	61	29.59	11.67	49.32	19.45
	11	60	427,071	330	61	30.30	11.80	50.50	19.67
Math	**2**	65	453,919	369	82	47.90	11.73	73.69	18.05
	3	65	456,269	371	85	47.76	12.53	73.48	19.28
	4	65	459,557	366	73	47.07	13.16	72.42	20.25
	5	65	468,049	357	87	40.65	13.66	62.54	21.02
	6	65	475,529	343	69	38.44	13.17	59.14	20.26
	7	65	458,543	336	65	36.14	13.10	55.60	20.15
	General Math	65	303,461	311	49	31.15	10.59	47.92	16.29
	Algebra I	65	738,231	311	61	29.49	11.15	45.37	17.15
	Geometry	65	369,311	310	68	33.44	13.23	51.45	20.35
	Algebra II	65	230,757	314	64	33.18	11.62	51.05	17.88
	High School Math	65	108,750	347	75	44.82	12.40	68.95	19.08
	Integrated Math 1	65	6,901	282	51	25.85	9.35	39.77	14.38
	Integrated Math 2	65	3,615	312	57	27.38	11.15	42.12	17.15
	Integrated Math 3	65	1,657	304	64	27.90	10.73	42.92	16.51
Science	**Grade 5 Science**	60	467,541	334	55	35.93	10.75	59.88	17.92
	Grade 8 Science	60	477,974	340	78	33.26	11.01	55.43	18.35
	Grade 10 Life Science	60	463,572	328	59	32.65	12.36	54.42	20.60
	Biology	60	505,229	336	51	32.66	12.06	54.43	20.10
	Chemistry	60	227,375	330	49	34.19	11.32	56.98	18.87
	Earth Science	60	206,118	320	44	31.12	11.14	51.87	18.57
	Physics	60	63,321	335	49	33.42	11.50	55.70	19.17
	Integrated Science 1	60	96,209	300	36	26.39	9.48	43.98	15.80
	Integrated Science 2	60	13,785	298	34	25.71	8.77	42.85	14.62
	Integrated Science 3	60	1,973	304	33	23.42	8.52	39.03	14.20
	Integrated Science 4	60	951	292	34	24.15	8.67	40.25	14.45
Grade-Specific	**Algebra I – 8**	65	238,426	337	68	34.19	12.04	52.60	18.52
	Geometry – 9	65	115,839	345	70	40.59	12.86	62.45	19.78
	Algebra II – 10	65	102,505	329	62	36.09	11.29	55.52	17.37
	High School Math – 11	65	92,108	341	73	43.92	12.41	67.57	19.09
	World History – 10	60	436,552	323	60	30.02	11.46	50.03	19.10

Table 5.2 Percentage of Examinees in Proficiency Levels for CSTs

Subject	CST	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Proficient/ Advanced
English–Language Arts	**2**	10%	16%	26%	30%	18%	48%
	3	11%	20%	32%	27%	10%	37%
	4	7%	12%	29%	26%	25%	51%
	5	9%	14%	32%	27%	17%	44%
	6	9%	17%	31%	26%	17%	43%
	7	9%	17%	28%	30%	16%	46%
	8	11%	16%	31%	25%	16%	41%
	9	9%	17%	27%	26%	22%	48%
	10	14%	20%	29%	21%	16%	37%
	11	21%	18%	24%	20%	17%	37%
History–Social Science	**8**	17%	20%	28%	21%	14%	35%
	10	24%	19%	29%	18%	11%	29%
	11	16%	21%	28%	22%	13%	35%
Math	**2**	5%	14%	22%	31%	28%	59%
	3	5%	17%	21%	27%	31%	58%
	4	3%	16%	23%	26%	30%	56%
	5	8%	22%	22%	29%	20%	49%
	6	6%	23%	29%	28%	14%	42%
	7	10%	23%	29%	26%	13%	39%
	General Math	15%	29%	35%	18%	3%	21%
	Algebra I	16%	35%	26%	19%	5%	24%
	Geometry	15%	35%	25%	17%	7%	24%
	Algebra II	17%	28%	28%	20%	7%	27%
	High School Math	5%	23%	24%	30%	17%	47%
	Integrated Math 1	28%	42%	21%	8%	1%	9%
	Integrated Math 2	15%	35%	29%	16%	5%	21%
	Integrated Math 3	21%	29%	29%	17%	4%	21%
Science	**Grade 5 Science**	11%	15%	36%	28%	9%	37%
	Grade 8 Science	12%	21%	24%	22%	20%	42%
	Grade 10 Life Science	18%	19%	28%	22%	13%	35%
	Biology	12%	16%	35%	24%	13%	37%
	Chemistry	14%	14%	41%	21%	10%	31%
	Earth Science	17%	19%	38%	20%	6%	26%
	Physics	11%	15%	38%	22%	13%	35%
	Integrated Science 1	28%	23%	38%	9%	1%	10%
	Integrated Science 2	27%	26%	39%	6%	1%	7%
	Integrated Science 3	17%	31%	41%	9%	1%	10%
	Integrated Science 4	34%	26%	33%	5%	1%	6%
Grade-Specific	**Algebra I – 8**	9%	25%	27%	29%	9%	38%
	Geometry – 9	6%	21%	28%	30%	14%	44%
	Algebra II – 10	11%	23%	31%	27%	8%	35%
	High School Math – 11	6%	25%	25%	29%	15%	44%
	World History —10	22%	19%	30%	18%	11%	29%

Reference

California Department of Education, "2007 STAR CST-CAT/6 Survey, CAPA and STS Printed Reports," http://www.startest.org/pdfs/STAR.reports.2007.pdf, 2007.

Appendix 5.A—Types of Score Reports Tables

Table 5.A.1 Score Reports Reflecting CST Results

2007 STAR CST REPORTS	
DESCRIPTION	**DISTRIBUTION**
The STAR Student Report	
This report provides parents/guardians and teachers with the student's results in tables and graphs. It mainly includes: • Scale scores • Performance levels • Number and percent correct in each reporting cluster • Comparison of the student's scores on specific content areas (reporting clusters) to the scores of students statewide who scored at the lowest score for proficient and the lowest score for advanced on the total test • 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 color copies of this report are provided for each student: One is for the student's current teacher, and one is to be distributed to parents/guardians by the district.
Student Record Label	
These reports are printed on adhesive labels to be affixed to the student's permanent school records. Each pupil shall have an individual record of accomplishment; that includes STAR testing results (see California *Education Code* section 60607(a)). Significant information includes: • Scale scores • Performance levels • California Reading List (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 of individual student results. It mainly includes: • Percent correct for each reporting cluster within each subject area tested • A scale score and a performance level for each subject area tested • California Reading List number	This report provides administrators and teachers with a quick reference to all students' results within each grade or within each grade and year-round schedule at a school. This report includes individual student results and is not distributed beyond the student's school.

2007 STAR CST REPORTS	
DESCRIPTION	**DISTRIBUTION**
Student Master List Summary	
This report summarizes student results at the school, district, county, and state level for each grade. It does *not* include any individual student information. The following data is summarized by subject: • Number of students enrolled, number and percent of students tested, and number and percent of valid scores • Mean percent correct, mean scale score, and scale score standard deviation for each subject area tested • Number and percentage of students scoring at each performance level • The number of items for each reporting cluster and the mean percent correct **Note:** Summaries for specific science and mathematics CSTs across grades are provided in the Student Master List Summary—End-of-Course (CST) report.	This report is a resource for evaluators, researchers, teachers, parents/guardians, community members, and administrators. One copy is sent to the school and one to the district. This report is also produced for 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.
Student Master List Summary – End of Course	
This report summarizes Student Master List information for mathematics, science and history–social science end-of-course CSTs across grades at the school, district, county, and state level. It does *not* include any individual student information. At grades 7–11, end-of-course mathematics tests are given in the following subjects: Algebra 1, Geometry, Algebra 2, General Math (grades 8 and 9), Integrated Mathematics 1, 2, and 3, and Summative High School Math (grades 9–11). At grades 9–11, end-of-course science tests are offered in the following subjects: Biology, Chemistry, Physics, Earth Science, and Integrated/Coordinated Science 1, 2, 3, and 4. For each of these CSTs, the following data is summarized by subject: • Number of students enrolled, number and percent of students tested, number and percent of valid scores, and number tested with scores	This report is a resource for evaluators, researchers, teachers, parents/guardians, community members, and administrators. One copy is sent to the school and one to the district. This report is also produced for 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.

2007 STAR CST REPORTS	
DESCRIPTION	**DISTRIBUTION**
• Mean percent correct, mean scale score and scale score standard deviation for each subject area tested • Number and percentage of students scoring at each CST performance level • The number of items for each reporting cluster and the mean percent correct • The Writing Application score for grades 4 and 7	
Subgroup Summary	
This set of reports disaggregates and reports results by the following subgroups: • All students • Disability Status • Economic status • Gender • English–language fluency • Primary Ethnicity These reports contain no individual student-identifying information and are aggregated at the school, district, county, and state level. For each subgroup within a report, and for the total number of students, the following is included: • Total number tested in the subgroup • Percent tested in subgroup as a percent of all students tested • Number and percent of valid scores • Number tested who received scores • Mean scale score • Standard deviation of scale score • Number and percentage of students scoring at each CST performance level	This report is a resource for evaluators, researchers, teachers, parents/guardians, community members, and administrators. One copy is sent to the school and one copy to the district. This report is also produced for 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.

2007 STAR CST REPORTS	
DESCRIPTION	**DISTRIBUTION**
California Report for Teachers	
The purpose of this report is to make the results of last year's CST more useful for instruction by addressing three questions: • How did last year's students perform on the CST? • How did each group of students perform? • What additional resources are available? Information reported includes: • *Reporting cluster* names for the grade. • *Number of items* in each reporting cluster. • *Average percent correct* for the reporting cluster, reported statewide, district, and teacher's students. • *District students* results that include data for all schools in the district including all charter schools that tested as part of the district. • *Proficient range* for the reporting cluster (average percent correct for students statewide whose scale scores were between 350—proficient—and the highest scale score for proficient on the total test).	One copy of this report is provided to the teacher who had the class during the year the test was given if teacher information was included in Pre-ID files or coded on School and Grade Identification Sheets (SGIDs). Every school receives grade-level or end-of-course reports. Reports for individual teachers will be delivered in sealed envelopes. These are to be delivered only to the teacher whose name is on the envelope. Under no circumstances is the information in the reports to be used for teacher evaluation.

Appendix 5.B—Scale Score Distribution Tables

Table 5.B.1 Distribution of CST Scale Scores for English–Language Arts

Scale Score	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11
570 – 600	569	384	245	33	93	164	114	260	206	1,172
540 – 569	0	0	480	311	372	0	492	0	0	0
510 – 539	2,308	12,94	2,513	722	878	1,153	1,164	683	756	1,951
480 – 509	4,531	25,60	5,745	1,582	1,627	3,606	2,163	4,088	1,661	7,346
450 – 479	15,998	93,68	15,888	11,099	9,887	11,482	13,377	15,393	7,065	11,144
420 – 449	34,174	146,87	32,182	28,934	24,686	26,637	22,905	35,763	28,231	29,061
390 – 419	51,657	400,86	69,105	49,116	52,607	65,165	49,035	67,277	49,885	33,604
360 – 389	75,603	738,98	80,416	85,462	80,971	84,057	77,168	87,474	72,839	62,141
330 – 359	85,716	779,66	88,960	92,324	89,318	87,301	96,687	86,069	73,977	57,447
300 – 329	65,133	937,39	73,126	89,180	89,548	75,671	85,729	77,986	82,241	65,519
270 – 299	58,424	701,27	55,216	66,699	74,205	68,256	71,023	68,987	78,046	54,639
240 – 269	44,013	440,19	30,432	34,896	45,709	46,196	47,985	50,185	64,005	65,278
210 – 239	14,267	230,57	3,402	6,263	4,742	9,541	11,238	10,494	19,381	39,900
180 – 209	536	38,63	87	199	197	575	585	395	559	7,764
150 – 179	43	171	32	34	23	36	52	50	69	585

Table 5.B.2 Distribution of CST Scale Scores for History–Social Science

Scale Score	Grade 8	World History	Grade 11
570 – 600	249	781	333
540 – 569	453	1,023	527
510 – 539	1,869	1,490	912
480 – 509	3,546	1,993	3,581
450 – 479	9,105	9,660	10,605
420 – 449	24,762	20,044	16,673
390 – 419	41,977	28,504	38,716
360 – 389	58,620	57,164	56,947
330 – 359	82,049	82,563	72,994
300 – 329	79,991	80,074	65,225
270 – 299	95,463	10,907	90,819
240 – 269	68,966	73,536	55,451
210 – 239	11,281	20,643	13,022
180 – 209	556	2,353	1,123
150 – 179	88	2,178	143

Table 5.B.3 Distribution of CST Scale Scores for Mathematics Grade 2 through 7

Scale Score	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
570 – 600	12,172	7,091	7,405	8,776	1,538	1,459
540 – 569	0	12,459	0	7,395	3,128	0
510 – 539	11,881	15,918	12,623	8,613	4,357	4,431
480 – 509	14,406	17,620	15,675	18,913	11,509	3,378
450 – 479	33,975	17,970	17,081	29,811	14,254	14,640
420 – 449	36,544	53,340	52,645	30,566	32,141	28,236
390 – 419	70,272	63,011	65,634	51,376	36,646	43,637
360 – 389	61,213	53,385	67,359	51,632	72,719	60,581
330 – 359	72,791	65,704	71,284	61,729	80,923	76,655
300 – 329	52,582	51,583	58,916	61,645	81,080	77,462
270 – 299	37,036	44,165	50,260	59,309	73,807	74,252
240 – 269	28,604	29,826	31,491	49,344	46,900	53,709
210 – 239	15,069	16,820	8,549	23,215	14,909	18,091
180 – 209	6,179	6,429	576	5,115	1,537	1,820
150 – 179	1,195	948	59	610	81	192

Table 5.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	15	1,473	613	477	549	2	2	2
540 – 569	48	1,053	1,387	473	1,245	4	3	2
510 – 539	81	3,101	2,087	646	0	6	12	7
480 – 509	443	4,457	5,511	1,677	1,906	19	20	11
450 – 479	981	9,515	6,607	4,082	5,330	21	71	18
420 – 449	4,751	19,832	11,465	8,029	9,636	43	89	40
390 – 419	13,474	37,089	22,900	11,525	10,287	136	156	78
360 – 389	29,510	67,854	27,664	24,781	16,606	227	312	152
330 – 359	53,156	95,550	47,176	33,713	15,032	608	516	185
300 – 329	67,004	125,425	56,689	40,936	17,681	997	644	334
270 – 299	70,766	164,941	70,881	43,420	13,698	1,531	931	287
240 – 269	48,530	140,828	71,401	39,108	9,810	2,035	699	316
210 – 239	13,586	61,072	37,568	18,296	4,999	982	146	167
180 – 209	1,011	5,360	7,110	2,987	1,676	268	14	48
150 – 179	105	681	252	607	295	22	0	10

Table 5.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	113	3,503	340	324	215	5	27
540 – 569	483	2,443	947	0	0	0	0
510 – 539	1,106	7,572	1,820	952	555	44	84
480 – 509	2,035	10,812	2,719	1,758	1,004	128	203
450 – 479	7,499	21,991	8,373	6,365	1,392	273	702
420 – 449	20,625	28,316	19,566	22,842	6,122	2,537	1,926
390 – 419	42,665	46,205	44,770	46,229	17,601	12,001	5,366
360 – 389	68,474	53,872	61,888	70,473	31,766	24,238	10,740
330 – 359	105,846	72,942	74,850	114,588	46,564	39,650	14,133
300 – 329	94,915	72,452	77,633	101,770	58,830	53,386	13,647
270 – 299	62,660	65,833	88,448	104,354	41,684	50,000	12,089
240 – 269	43,573	44,443	65,904	31,899	18,613	21,302	4,096
210 – 239	15,623	32,032	15,424	3,515	2,921	2,484	300
180 – 209	1,817	13,405	742	132	94	51	6
150 – 179	107	2,153	148	28	14	19	2

Scale Score	Integrated Science 1	Integrated Science 2	Integrated Science 3	Integrated Science 4
570 – 600	0	0	0	0
540 – 569	0	0	0	0
510 – 539	4	0	0	0
480 – 509	13	2	0	0
450 – 479	13	2	2	0
420 – 449	121	14	4	2
390 – 419	1,024	125	14	11
360 – 389	4,664	424	108	23
330 – 359	14,913	1,734	259	86
300 – 329	26,242	4,111	624	252
270 – 299	30,398	4,829	693	288
240 – 269	16,599	2,242	247	261
210 – 239	2,168	291	22	27
180 – 209	44	10	0	0
150 – 179	6	1	0	1

Table 5.B.6 Distribution of CST Scale Scores for 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	958	273	162	369	677
540 – 569	731	662	208	854	900
510 – 539	2,136	1,114	284	0	1,310
480 – 509	3,059	3,211	819	1,375	1,748
450 – 479	6,528	4,091	2,265	3,935	8,521
420 – 449	12,914	7,231	4,890	7,348	17,985
390 – 419	21,808	13,892	7,177	8,124	25,962
360 – 389	32,854	15,061	14,954	13,593	52,693
330 – 359	36,741	20,890	18,346	12,776	76,323
300 – 329	38,867	18,034	19,101	15,655	73,733
270 – 299	41,464	15,751	16,584	12,483	96,703
240 – 269	28,988	10,452	11,992	9,142	61,219
210 – 239	10,498	4,344	4,819	4,694	16,499
180 – 209	791	805	767	1,510	1,680
150 – 179	89	28	137	250	599

Chapter 6: Test Fairness

In order to ensure equity among various subpopulations, comprehensive analyses were conducted for the spring 2007 administration of the California Standards Tests. This chapter summarizes the subgroup analyses performed at the test level. Detailed item level analyses were also conducted when sufficient sample sizes were available for a subgroup. In addition, analyses are presented related to students with physical and learning disabilities who took the test under standard or modified conditions.

The chapter is, therefore, divided into two major sections. The first section presents the summary of statistics obtained on various demographic indicators, while the second section discusses the distributions of examinees grouped by accommodation provisions. Following the pattern of previous chapters, all analyses are replicated for each grade within a subject area.

Since assuring test security is crucial in the sustenance of a fair test, the chapter also briefly describes procedures for ensuring test security.

Demographic Distributions

Table 6.1 presents a listing of various subgroups included in this chapter, along with their definitions. Summary statistics for all students, and for subgroups based on demographic variables presented in Table 6.1, are discussed in this section. The demographic variables examined included gender, ethnicity, language fluency, economic disadvantage, and special education programs.

The results of the demographic-based analyses are presented in Tables 6.A.1 through 6.A.38 for the 38 CSTs. The tables include number of students tested for whom valid scores were available, mean scale scores, standard deviation of scale scores, and percentages of students in various proficiency levels, as well as mean percent correct scores within each reporting cluster. Note that the statistics in these tables slightly differ from the statewide statistics reported on the CDE Web site because the P1 data file[8] was used for the analyses in this chapter. This file contained about 99 percent of the test results and approximately 99.8 of the student records used in the August 15 reporting of STAR results. In addition, students testing with invalid scores were excluded rather than added into the below basic category.

In addition to the subgroups presented in Table 6.1, the demographic tables also include grade-level data for the end-of-course tests. The grades included for the various end-of-course tests are presented below:

- General Math includes students at grades 8 and 9
- Algebra I includes students at grades 7, 8, 9, 10, and 11
- Geometry, Algebra II, and Integrated Math tests include students at grades 8, 9, 10 and 11
- World History, Summative High School Mathematics, and all end-of-course CSTs for science include students at grades 9, 10, and 11

Table 6.1 Subgroup Definitions

Subgroup	Definition
Gender	• Male • Female
English Language	• English-Language Fluency

[8] P1 files are the first attempt to collect all student records statewide, but are not expected to include the records of a small number of schools that test at the very end of the administration cycle. P1 contains data for the schools from whom answer documents were received for scoring by approximately June 20, 2007. The small number of schools that sent answer documents for scoring after that deadline are included in the file used for August 15, 2007, reporting.

Subgroup	Definition
Fluency	• Initially–Fluent English Proficient • English Learner • Reclassified-Fluent English Proficient

Ethnicity	• African American
	• American Indian or Alaska Native
	• Asian
	  o Chinese
	  o Japanese
	  o Korean
	  o Vietnamese
	  o Asian Indian
	  o Laotian
	  o Cambodian
	  o Other Asian
	• Filipino
	• Hispanic or Latino
	• Pacific Islander
	  o Native Hawaiian
	  o Guamanian
	  o Samoan
	  o Tahitian
	  o Other Pacific Islander
	White (not Hispanic)

Economic Status	• Economically Disadvantaged (NSLP) • Non-Economically Disadvantaged

Special Education Services	• Special Education Services
	  o Class Size Reduction Option 1, 2
	  o Migrant Education
	  o Indian Education
	  o Gifted and Talented
	  o ESEA Title I School wide, Targeted
	  o English Learner (EL) in English Language Development (ELD)
	  o English Learner in ELD and specially designed academic instruction in English (SDAIE)
	  o English Learner in ELD and SDAIE with Primary Language Support
	  o English Learner in ELD and Academic Subjects with Primary Language Support
	  o No Special Education Services

Test Variations, Accommodations and Modifications

All students participate in the STAR Program, including students with disabilities and English learners. Most students with disabilities and English learners take the California Standards Tests under standard conditions. Some students with disabilities and English learners, however, 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. In addition, all eligible students may have test variations if they are regularly used in the classroom. They also must be allowed to use the accommodations and modifications that are specified in each student's Individualized Education Program (IEP) or Section 504 Plan. These accommodations and/or modifications must match the one(s) used for classroom work throughout the year.

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 be tested in a smaller group or individually, have special lighting or adaptive furniture, or use magnifying equipment.

Category 2: Accommodations

Eligible students are permitted to take the CSTs with accommodations if 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 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 if 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 an examiner's reading the test to the student or a student's using a calculator to perform computations on the mathematics test.

Appendix 6.B presents the 2007 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 under the STAR Program in 2007.

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

Accommodation Summaries

The percentage of students utilizing various testing accommodations during the 2007 administration of all 38 CSTs is presented in Appendix 6.C. The data are organized into three sections within each table. The first section presents the percentages of students for the total testing population. The next section presents the results for non-Special Education and Special Education students. The final section presents the results for various categories based on English-language proficiency. The information within each section is presented for the relevant grades. Most accommodations are common across CSTs, although the CSTs for grades 4 and 7 ELA also include accommodations related to the essays. Additional accommodations were included for CSTs for math that involved the use of calculators, arithmetic tables, and math manipulatives.

Examinees at lower and middle grade levels who utilized various accommodations, modifications, and variations constituted approximately 1.5 to 3.5% of the overall examinee population. Fewer examinees (less than 0.1 to 2%) made use of these services for higher-level assessments. As expected, a significantly large percentage of Special Education students made use of the

accommodations regardless of the grade and CST administered as compared to the non-Special Education students. For students who were classified based on English fluency, the two groups where larger numbers of students used any modification, variation, or accommodation were the groups defined as "English only" and "English learner" groups. English learners used these services more frequently than the other group on all CSTs. The percentage of examinees making use of accommodations, variations, or modifications remained less than 5% on majority of the CSTs for the English learners; the percentage remained less than or equal to 3.5% for the English-speaking examinees. The exceptions were observed for the CSTs for grade 4 and 7 ELA and the CST for General Math. In those cases, 5.2% and 7.4% of the English learners used special services for CSTs for ELA grades 4 and 7, respectively while 6% of this General Math group utilized any accommodation, variation, or modification.

The most frequently used modifications or accommodations were the use of supervised breaks and having examiners read the questions aloud for all lower to middle grade CSTs for ELA and math. For all end-of-course CSTs for math, a large number of special education examinees made use of calculators.

The use of any modification, accommodation, or variation was less frequent for a majority of the CSTs for science for all groups. The percentage remained less than or equal to 1.5% for all groups on most of those tests except for CSTs for Grade 5 and Grade 8 Science. In these cases, the special education students frequently utilized supervised breaks (8% for grade 5, 3% for grade 8) and had examiners read the questions aloud (13% for grade 5, 6% for grade 8).

Of all students making use of the accommodations or modifications, the largest percentage used IEP accommodations or modifications. This pattern was consistent with previous years.

DIF Analyses

Differential Item Functioning (DIF) analyses measure differences in item performance between different demographic groups of students who have similar overall test performance.

DIF analyses were performed on all operational items and all field-test items for which sufficient student samples were available. The sample size requirements for the field-test 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 and Haenszel, 1959; Holland and Thayer, 1985). This statistic is based on the estimate of constant odds ratio and is described as:

The α_{MH} is the constant odds ratio taken from Dorans and Holland (1993, equation 7) and computed as:

$$\alpha_{MH} = \frac{\left(\sum_m R_{rm} \frac{W_{fm}}{N_{tm}}\right)}{\left(\sum_m R_{fm} \frac{W_{rm}}{N_{tm}}\right)} \tag{6.1}$$

$$MH\ D\text{-}DIF = -2.35 \ln[\alpha_{MH}] \tag{6.2}$$

where,

R = number right,
W = number wrong,
N = total in:
fm = focal group at ability level m,
rm = reference group at ability level m, and

$_{tm}$ = total group at ability level 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 all ETS testing programs for more than 13 years. The definitions of the categories based on evaluations of the item-level MH D-DIF statistics is as follows:

DIF Category	Definition
A (negligible)	MH D-DIF not significantly different from zero, or has an absolute value less than one.
B (moderate)	MH D-DIF is significantly different from zero, and is either (1) less than 1.5; or (2) not significantly different from one.
C (large)	MH D-DIF is significantly different from one, and has an absolute value greater than 1.5.

The groups studied for DIF were based on gender, ethnicity, and level of English proficiency[9]. The results of the DIF analyses are presented in Appendix 6.D. Table 6.D.1 represents the operational items exhibiting significant negative DIF. Table 6.D.2 represents the same results for the field-test items. Test developers have been instructed to avoid selecting field-test items flagged as having shown DIF that disadvantage a focal group (C-DIF) for future operational test forms unless their inclusion is deemed essential to meeting test-content specifications.

Tables 6.D.3 to 6.D.40 summarize the DIF category classifications for operational items in each CST based on the A, B, or C classifications. In these tables, classifications of B- or C- indicate DIF against a focal group and classifications of B+ and C+ indicate DIF in favor of a focal group. The last two columns of each table summarize the total number of questions classified as C- for one or more comparisons. Tables 6.D.41 to 6.D.78, summarize the DIF category classifications for the field-test items. Both sets of tables are presented for all 38 CSTs.

Test Security and Confidentiality

All tests within the STAR Program are secure documents. For the 2007 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), 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 student data. To ensure security for all the tests that ETS develops or handles, ETS maintains an Office of Testing Integrity (OTI), as discussed below.

ETS's Office of Testing Integrity (OTI)

The OTI is a division of ETS that provides Quality Assurance and resides in the ETS Legal Department. The Quality Assurance division publishes and maintains *ETS Standards for Quality and Fairness,* which supports 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.

OTI's mission is to

- Prevent and minimize any testing security violations that can impact the fairness of testing

[9] Analyses of English learners on the CSTs for English–Language Arts were not carried out because differential performance due to language difficulties of nonnative speakers does not indicate that an item is unfair or biased.

- Prevent and investigate any security breach
- Report on security activities

OTI helps prevent misconduct on the part of test takers and administrators, detect potential misconduct through empirically established indicators, and resolve situations in a fair and balanced way that reflects the laws and professional standards governing the integrity of testing.

Test Development

During the test development process, ETS staff members consistently follow these established security procedures:

- Only authorized individuals have access to test content at any step in the development, review, and data analysis processes.
- Test developers keep all hardcopy 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 development process.
- Test developers take further security measures whenever they share items outside of ETS, including registered, secure mail, express delivery, and tracking records of sending and receipt of any test materials.

Item Review

ETS enforces security measures at ARP meetings to protect the integrity of meeting materials using these guidelines:

- Individuals who participate in the ARPs must sign the 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 strictly prohibited in the meeting rooms.

Item Bank

Once the ARP review is complete, the items are placed in the item bank along with their corresponding review information. ETS then delivers the items to CDE via a delivery of the STAR electronic item bank. Subsequent updates to items are based on field-test and operational use of the items. However, only the latest version of the item is in the bank at any point in time, along with the administration data from every administration that has 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 offsite, 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.
- 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 authorize access to the database or designated portions of the database. In addition, only users authorized to access the specific SQL database will be able to use the electronic item banking system. A designated administrator at the CDE and at ETS will authorize users.

Transfer of Forms and Items to CDE

ETS shares a File Transfer Protocol (FTP) site with CDE. FTP is a standard method for exclusive routing of files. It is a password-protected server that only authorized users may access. On that site, ETS posts Word, PDF, or other document files for CDE to review. ETS sends an e-mail to CDE to notify them that files are posted. Item data are always transmitted in an encrypted format to the FTP site, never via e-mail.

Firewall

A firewall is software that prevents entry to files, e-mail, and other organization-specific programs from unauthorized users or computers. All ETS data exchange and internal e-mail remain within the ETS firewall at all ETS locations, from Princeton to San Antonio to Sacramento. The CDE has and will continue to view and approve ETS-developed applications such as those on the STAR Management System at ETS's Sacramento office, because the applications remain behind ETS's firewall before release. No hacker has ever broken into ETS's firewall.

Printing

After items and test forms are approved, the files are sent for printing on a CD using a secure courier system, such as Federal Express. According to established procedures, OTI pre-approves all printing vendors before they can work on secured confidential and proprietary test material. The printing vendor must submit a completed ETS Printing Plan and Typesetting Facility Security Plan which documents security procedures, access to test materials, work in progress, personnel procedures, and access to the facilities by the employees and visitors. After reviewing the completed plan, members of the OTI visit the printing vendor to conduct an onsite inspection. The secured printing vendor packs and ships printed test booklets to Pearson Educational Measurement (PEM) for packaging and distribution in a tight and precise way to prevent boxes from opening.

Test Administration

PEM receives testing materials from printers, packages them, and sends them to districts. After testing, districts return materials to PEM for scoring. During all these stages, PEM takes extraordinary measures to protect testing materials. PEM's customized Oracle business applications verify that inventory controls are in place from materials receipt to packaging. The reputable carriers used by PEM provide specialized handling and delivery service that maintain test security and meet the CST 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 test 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 coordinator, who is responsible for returning them to the STAR Scoring and Processing Centers. More specifically:

- District STAR coordinators have 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 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 test materials 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 is to contact the CDE immediately and will be asked to follow up with a written explanation of the violation or suspected violation.
- Any irregularities in test security may result in invalidation of student test results.

Processing and Scoring

An environment that promotes the security of the test prompts, student responses, data, and employees is of utmost concern to PEM throughout the project. PEM requires the following standard safeguards for security at their 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 Educational Measurement identification badges at all times in PEM 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 then stored in secure warehouses. The only time they are touched then is if there is a dispute of a score. For example, districts or parents may request rescoring of a student's test. In such a case, a grade two or three test booklet or grade 4–11 answer document is removed from storage, copied, and sent securely to the ETS facility in Concord for hand scoring, after which the copy is destroyed. No school or district personnel are allowed to look at the completed answer documents unless necessary for the purposes of transcription or to investigate irregular cases.

All answer documents and test booklets are destroyed after October 31 each year.

Transfer of Scores via Secure Data Exchange

After scoring is completed, PEM sends files to ETS and follows secure data exchange procedures. PEM provides overall security for assessment materials through its limited-access facilities and through its secure data processing capabilities. PEM enforces stringent procedures to prevent unauthorized attempts to access their facilities. Entrances are monitored by security personnel and a computerized badge-reading system is utilized. Upon entering the facilities, all PEM employees are required to display identification badges that must be worn at all times while in the facility. Visitors must sign in and out, are assigned a visitor badge, and are escorted by PEM personnel while at the facility. 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, PEM 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, PEM 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.

ETS and PEM have implemented procedures and systems to provide efficient coordination of secure data exchange. This includes the established, secure, FTP site that is used for secure data transfers between ETS and PEM. 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

ETS Systems loads the PEM files in a database. The Data Quality Services area at ETS extracts the data from the database and performs quality control procedures before passing files to the Statistical Analysis Group. The statistical analysis group then keeps the files on secure servers and adheres to the ETS Code of Ethics to prevent any unauthorized access.

Reporting and Posting Results

After statistical analysis is completed for student results, the files flow into three different directions. Paper reports, some with individual student results and others with summary results, are produced. Encrypted files of summary results are also sent to CDE via FTP. Any summary results that have less than ten students are not reported. The statistics from the results are also entered into the item bank.

Student Confidentiality

To meet *NCLB* and state requirements, districts must collect demographic data about students, such as ethnicity, parent education, disabilities, whether the student qualifies for the school lunch program, etc. In addition, students may reveal other information about themselves through the essays they write. ETS takes precautions to prevent any of this information becoming public or being used other than for testing purposes. Such measures are applicable to all documents where these data may appear, including:

- Pre-ID files
- Reports
- Essays

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 their possession from unauthorized access, disclosure, modification, or destruction. ETS has strict information security policies in order to protect the confidentiality of ETS and client data. ETS staff access to production databases is very limited. 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. Comprehensive disaster recovery facilities are

available and tested regularly at the SunGard installation in Philadelphia. ETS routinely sends backup data cartridges and files for critical software, applications, and documentation to an off-site storage facility for safekeeping to permit continued operation in the case of a disaster.

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:

- Scoring
- Transfer of scores via secure data exchange
- Reporting
- Erasure marks
- Internet postings
- 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 an ETS-contracted test, such as STAR. The ETS Office of Testing Integrity verifies that these standards are followed throughout the organization, including conducting periodic onsite security audits of departments, with follow-up reports containing recommendations for improvement.

References

Holland, P.W. and Thayer, D.T. An alternative definition of the ETS delta scale of item difficulty. RR-85–43, 1985.

Dorans, N.J. and Holland, P.W. "DIF detection and description: Mantel-Haenszel and standardization," Differential Item Functioning. Edited by P. W. Holland and H. Wainder. Hillsdale, NJ: Erlbaum, pp. 35–66, 1993

Mantel, N. & Haenszel, W. "Statistical aspects of the analyses of data from retrospective studies of disease," Journal of the National Cancer Institute, Vol. 22, pp. 719–748, 1959.

Appendix 6.A—Demographic Summary Tables

Table 6.A.1 Demographic Summary for English–Language Arts Grade 2

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	452,972	345	62	10%	16%	26%	30%	18%	68%	61%	64%	66%	57%
Male	231,668	339	62	12%	17%	26%	28%	16%	66%	59%	63%	63%	55%
Female	221,093	351	62	8%	14%	25%	32%	21%	69%	63%	65%	68%	59%
Gender unknown	211	319	57	20%	21%	27%	24%	7%	59%	53%	55%	53%	49%
American Indian	3,628	334	58	12%	19%	27%	30%	12%	64%	59%	62%	60%	54%
Asian American	36,140	384	63	3%	7%	17%	33%	40%	80%	71%	75%	81%	68%
Pacific Islander	2,967	346	56	7%	15%	28%	34%	16%	70%	61%	65%	67%	56%
Filipino	12,353	374	56	3%	7%	21%	39%	30%	78%	69%	73%	79%	64%
Hispanic	234,469	326	56	14%	21%	30%	26%	9%	62%	54%	57%	59%	51%
African American	32,769	331	58	13%	19%	29%	28%	12%	64%	56%	59%	60%	52%
White	124,677	370	60	5%	9%	20%	36%	30%	75%	71%	74%	73%	65%
Ethnicity unknown	5,969	360	62	7%	11%	24%	34%	24%	72%	67%	70%	70%	61%
English Only	249,006	357	62	7%	12%	24%	34%	24%	72%	66%	69%	69%	61%
Initially Fluent English Prof.	33,811	372	60	4%	8%	21%	37%	30%	76%	70%	73%	76%	65%
English Learner	164,070	320	55	16%	23%	30%	23%	8%	60%	51%	54%	57%	49%
Reclassified Fluent Eng.	5,282	376	53	2%	6%	20%	41%	31%	79%	71%	75%	80%	65%
English Prof. unknown	803	320	60	22%	19%	25%	24%	9%	59%	53%	56%	55%	50%
Not in NSLP	195,287	370	61	5%	9%	20%	35%	31%	75%	70%	74%	74%	65%
In NSLP	256,329	326	56	14%	21%	30%	26%	9%	62%	54%	57%	59%	51%
NSLP status unknown	1,356	323	60	19%	20%	26%	25%	10%	60%	54%	57%	56%	50%
No Special Ed Services	418,543	348	61	8%	15%	26%	31%	19%	69%	62%	65%	67%	58%
Special Ed Services	34,369	305	61	30%	24%	22%	16%	8%	52%	47%	49%	49%	45%
Special Ed unknown	60	294	50	32%	27%	27%	13%	2%	49%	43%	45%	45%	43%

Table 6.A.2 Demographic Summary for English–Language Arts Grade 3

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	455,219	330	59	11%	20%	32%	27%	10%	67%	59%	65%	63%	57%
Male	232,475	324	59	13%	21%	32%	25%	9%	66%	56%	63%	61%	55%
Female	222,559	336	58	9%	18%	32%	29%	12%	68%	61%	67%	66%	59%
Gender unknown	185	304	60	26%	24%	26%	18%	5%	58%	50%	56%	53%	48%
American Indian	3,675	321	55	12%	23%	33%	24%	7%	66%	56%	62%	59%	54%
Asian American	36,564	363	61	5%	10%	25%	36%	24%	76%	69%	75%	74%	69%
Pacific Islander	3,025	332	53	7%	19%	36%	30%	8%	69%	59%	66%	65%	57%
Filipino	12,603	352	52	3%	11%	32%	38%	15%	75%	65%	72%	72%	66%
Hispanic	233,587	311	51	16%	26%	35%	19%	4%	61%	53%	58%	58%	50%
African American	33,557	316	54	15%	24%	33%	22%	6%	64%	54%	60%	59%	51%
White	127,204	356	58	5%	11%	28%	37%	19%	75%	68%	75%	70%	66%
Ethnicity unknown	5,004	344	61	8%	15%	29%	32%	15%	71%	63%	70%	67%	62%
English Only	250,394	343	59	8%	16%	31%	32%	14%	72%	63%	70%	66%	61%
Initially Fluent English Prof.	36,878	354	55	4%	12%	31%	37%	17%	74%	67%	74%	71%	66%
English Learner	150,459	300	48	20%	31%	34%	13%	2%	57%	49%	53%	55%	46%
Reclassified Fluent Eng.	16,632	359	44	1%	6%	34%	46%	14%	76%	69%	76%	75%	69%
English Prof. unknown	856	306	59	23%	24%	31%	17%	5%	59%	51%	56%	54%	48%
Not in NSLP	198,861	355	59	5%	12%	28%	36%	19%	75%	67%	74%	70%	66%
In NSLP	254,974	311	51	16%	26%	35%	19%	4%	61%	52%	58%	58%	50%
NSLP status unknown	1,384	309	57	19%	26%	30%	19%	5%	60%	52%	57%	55%	50%
No Special Ed Services	414,275	334	57	9%	19%	33%	28%	11%	69%	60%	66%	65%	58%
Special Ed Services	40,872	288	59	36%	26%	21%	12%	4%	52%	45%	49%	49%	43%
Special Ed unknown	72	279	52	47%	22%	18%	11%	1%	48%	42%	48%	44%	41%

Table 6.A.3 Demographic Summary for English–Language Arts Grade 4

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	457,829	353	58	7%	12%	29%	26%	25%	69%	60%	64%	60%	56%
Male	233,620	348	57	9%	14%	30%	25%	23%	68%	59%	62%	58%	54%
Female	224,046	359	57	6%	11%	29%	27%	28%	70%	62%	66%	62%	58%
Gender unknown	163	327	54	15%	23%	29%	18%	15%	58%	52%	54%	50%	47%
American Indian	3,674	345	54	9%	13%	31%	27%	20%	68%	58%	61%	56%	54%
Asian American	38,392	389	61	3%	6%	17%	24%	50%	79%	72%	75%	72%	68%
Pacific Islander	3,036	352	52	6%	11%	33%	29%	22%	70%	60%	63%	60%	55%
Filipino	12,934	376	51	2%	5%	23%	32%	38%	78%	69%	71%	68%	64%
Hispanic	232,220	334	50	10%	17%	36%	24%	13%	62%	53%	58%	54%	49%
African American	33,838	336	52	10%	17%	34%	24%	15%	64%	54%	57%	54%	49%
White	129,230	379	55	3%	6%	20%	29%	42%	78%	71%	72%	67%	66%
Ethnicity unknown	4,505	368	59	6%	8%	24%	27%	35%	74%	66%	69%	64%	62%
English Only	248,717	365	57	5%	9%	25%	28%	33%	73%	65%	68%	63%	61%
Initially Fluent English Prof.	32,708	380	56	2%	5%	23%	29%	40%	77%	69%	73%	68%	65%
English Learner	144,910	319	44	14%	22%	40%	19%	6%	56%	47%	52%	49%	44%
Reclassified Fluent Eng.	30,842	386	43	0%	2%	17%	38%	43%	80%	72%	78%	73%	69%
English Prof. unknown	652	328	55	14%	22%	30%	20%	14%	59%	52%	54%	51%	47%
Not in NSLP	201,662	379	56	3%	6%	21%	29%	42%	77%	70%	73%	68%	66%
In NSLP	254,920	333	50	11%	17%	36%	24%	12%	62%	52%	57%	53%	49%
NSLP status unknown	1,247	332	56	13%	20%	33%	19%	15%	60%	53%	56%	52%	49%
No Special Ed Services	413,863	358	56	5%	11%	30%	27%	27%	71%	62%	66%	62%	58%
Special Ed Services	43,904	309	55	28%	24%	26%	13%	9%	52%	44%	46%	43%	41%
Special Ed unknown	62	315	50	26%	18%	29%	18%	10%	56%	48%	44%	45%	46%

Table 6.A.4 Demographic Summary for English–Language Arts Grade 5

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	466,854	343	54	9%	14%	32%	27%	17%	65%	55%	66%	63%	54%
Male	237,934	338	55	11%	16%	32%	25%	16%	64%	54%	64%	60%	52%
Female	228,708	348	53	7%	13%	32%	29%	19%	66%	56%	68%	65%	56%
Gender unknown	212	319	54	17%	25%	30%	18%	10%	56%	46%	57%	53%	45%
American Indian	3,843	334	50	10%	16%	34%	27%	12%	64%	52%	63%	58%	50%
Asian American	39,502	375	57	4%	7%	21%	31%	38%	75%	65%	76%	76%	65%
Pacific Islander	2,882	340	49	7%	15%	37%	27%	14%	65%	53%	65%	63%	52%
Filipino	13,075	363	48	3%	7%	28%	37%	25%	73%	61%	73%	73%	60%
Hispanic	233,648	325	47	12%	19%	38%	23%	7%	58%	49%	60%	57%	47%
African American	34,864	326	49	13%	19%	36%	23%	9%	60%	49%	59%	57%	47%
White	134,777	366	53	4%	7%	24%	34%	30%	75%	64%	74%	69%	63%
Ethnicity unknown	4,263	356	56	7%	11%	27%	31%	25%	71%	60%	71%	66%	59%
English Only	254,079	354	54	6%	11%	29%	31%	23%	70%	59%	70%	66%	58%
Initially Fluent English Prof.	31,891	367	52	3%	7%	27%	34%	30%	74%	63%	75%	72%	63%
English Learner	128,161	306	39	19%	27%	40%	12%	2%	49%	42%	52%	51%	40%
Reclassified Fluent Eng.	51,988	366	40	1%	3%	30%	44%	22%	74%	62%	76%	73%	63%
English Prof. unknown	735	322	53	18%	19%	33%	22%	9%	57%	49%	58%	55%	46%
Not in NSLP	208,102	366	53	4%	8%	25%	33%	30%	74%	64%	74%	70%	63%
In NSLP	257,374	324	47	13%	20%	38%	22%	7%	58%	48%	59%	57%	47%
NSLP status unknown	1,378	322	55	19%	19%	31%	21%	10%	57%	48%	58%	55%	47%
No Special Ed Services	420,822	348	52	6%	13%	33%	29%	19%	67%	57%	68%	65%	56%
Special Ed Services	45,937	298	49	33%	27%	24%	11%	5%	47%	40%	47%	45%	38%
Special Ed unknown	95	296	48	39%	19%	27%	13%	2%	47%	42%	47%	44%	36%

Table 6.A.5 Demographic Summary for English–Language Arts Grade 6

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	474,863	340	54	9%	17%	31%	26%	17%	62%	53%	57%	62%	56%
Male	242,497	335	55	11%	19%	30%	24%	16%	60%	51%	56%	59%	54%
Female	232,130	344	52	7%	15%	33%	27%	18%	64%	54%	58%	64%	58%
Gender unknown	236	317	54	19%	26%	29%	19%	8%	54%	46%	48%	52%	46%
American Indian	3,995	333	50	10%	19%	33%	26%	12%	59%	51%	56%	59%	54%
Asian American	39,940	373	57	3%	8%	22%	30%	37%	74%	64%	67%	74%	69%
Pacific Islander	3,145	338	48	7%	17%	35%	28%	13%	62%	52%	56%	63%	55%
Filipino	13,182	360	48	3%	9%	28%	35%	25%	71%	60%	64%	71%	65%
Hispanic	234,783	321	46	13%	23%	36%	21%	7%	54%	47%	50%	56%	48%
African American	36,421	321	48	14%	23%	34%	21%	8%	55%	46%	51%	55%	49%
White	139,013	363	53	4%	9%	25%	33%	30%	71%	61%	66%	69%	66%
Ethnicity unknown	4,384	351	55	6%	14%	28%	28%	23%	66%	56%	61%	65%	61%
English Only	260,128	350	54	7%	13%	29%	29%	22%	66%	56%	61%	65%	61%
Initially Fluent English Prof.	39,527	361	53	3%	10%	28%	32%	26%	70%	60%	64%	69%	65%
English Learner	106,090	297	37	22%	35%	34%	8%	1%	44%	38%	41%	47%	38%
Reclassified Fluent Eng.	68,378	351	42	2%	9%	39%	35%	15%	67%	57%	62%	68%	61%
English Prof. unknown	740	319	54	18%	25%	28%	19%	9%	53%	46%	48%	54%	47%
Not in NSLP	218,909	362	54	4%	10%	26%	32%	29%	71%	60%	65%	69%	65%
In NSLP	254,796	320	46	13%	24%	36%	20%	7%	54%	46%	50%	55%	48%
NSLP status unknown	1,158	323	53	16%	24%	30%	20%	11%	55%	47%	51%	54%	50%
No Special Ed Services	430,350	344	52	6%	16%	32%	27%	18%	64%	54%	59%	64%	58%
Special Ed Services	44,465	293	46	34%	32%	22%	8%	4%	42%	37%	40%	42%	37%
Special Ed unknown	48	297	43	33%	27%	25%	13%	2%	47%	41%	43%	42%	36%

Table 6.A.6 Demographic Summary for English–Language Arts Grade 7

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	479,840	343	58	9%	17%	28%	30%	16%	64%	60%	55%	59%	57%
Male	245,189	336	58	11%	20%	27%	28%	14%	63%	58%	53%	56%	54%
Female	234,375	351	56	6%	15%	28%	32%	19%	66%	63%	58%	61%	61%
Gender unknown	276	310	55	20%	29%	30%	14%	7%	53%	49%	45%	48%	45%
American Indian	3,960	336	54	10%	18%	30%	30%	12%	63%	59%	54%	56%	54%
Asian American	40,742	379	59	4%	8%	18%	34%	37%	73%	72%	66%	71%	70%
Pacific Islander	3,164	340	52	7%	17%	32%	31%	13%	63%	60%	54%	59%	56%
Filipino	12,908	367	50	2%	8%	24%	41%	25%	72%	69%	63%	68%	66%
Hispanic	234,819	324	51	12%	23%	33%	25%	7%	58%	54%	49%	52%	51%
African American	37,961	323	53	13%	24%	30%	25%	8%	58%	54%	49%	53%	50%
White	142,170	368	55	4%	9%	22%	38%	28%	73%	69%	64%	66%	66%
Ethnicity unknown	4,116	350	60	8%	14%	25%	32%	21%	67%	63%	59%	61%	59%
English Only	263,275	354	57	6%	13%	25%	34%	21%	68%	64%	60%	62%	61%
Initially Fluent English Prof.	38,496	365	56	4%	10%	25%	36%	26%	71%	68%	62%	66%	65%
English Learner	100,024	295	40	22%	36%	31%	9%	1%	47%	44%	38%	43%	40%
Reclassified Fluent Eng.	77,046	356	44	2%	9%	34%	41%	15%	69%	65%	60%	64%	64%
English Prof. unknown	999	319	57	18%	23%	30%	21%	8%	57%	52%	49%	51%	49%
Not in NSLP	234,588	364	57	5%	10%	23%	36%	26%	71%	68%	63%	65%	65%
In NSLP	243,761	323	51	13%	24%	33%	24%	7%	58%	54%	48%	52%	50%
NSLP status unknown	1,491	321	57	16%	25%	28%	22%	9%	57%	53%	49%	52%	50%
No Special Ed Services	437,084	348	56	6%	16%	28%	32%	18%	66%	62%	57%	60%	59%
Special Ed Services	42,710	289	46	33%	35%	21%	9%	3%	46%	42%	37%	40%	37%
Special Ed unknown	46	300	56	35%	28%	13%	22%	2%	52%	47%	38%	45%	41%

Table 6.A.7 Demographic Summary for English–Language Arts Grade 8

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	479,717	339	58	11%	16%	31%	25%	16%	66%	63%	59%	59%	60%
Male	245,335	331	58	14%	18%	30%	23%	14%	64%	61%	56%	56%	57%
Female	234,154	346	57	7%	14%	32%	27%	19%	68%	65%	61%	62%	64%
Gender unknown	228	311	58	27%	19%	29%	18%	8%	55%	54%	50%	49%	49%
American Indian	3,878	333	55	12%	17%	33%	24%	13%	64%	61%	58%	56%	59%
Asian American	41,415	370	61	5%	9%	23%	30%	34%	74%	73%	69%	69%	70%
Pacific Islander	3,119	331	52	11%	18%	35%	25%	11%	64%	60%	57%	58%	57%
Filipino	13,222	356	50	4%	10%	31%	36%	20%	72%	69%	65%	67%	66%
Hispanic	230,178	319	50	15%	22%	36%	20%	7%	60%	56%	52%	53%	53%
African American	38,004	318	51	17%	22%	34%	20%	7%	59%	55%	52%	52%	54%
White	145,839	365	57	5%	8%	25%	33%	29%	74%	71%	68%	66%	70%
Ethnicity unknown	4,062	343	62	13%	13%	27%	27%	20%	67%	64%	61%	59%	62%
English Only	265,764	351	58	8%	12%	28%	29%	22%	69%	67%	63%	62%	65%
Initially Fluent English Prof.	38,686	358	56	5%	10%	30%	31%	24%	73%	69%	65%	66%	67%
English Learner	91,635	289	37	29%	35%	30%	5%	1%	48%	46%	41%	42%	42%
Reclassified Fluent Eng.	82,719	347	45	3%	11%	42%	32%	13%	70%	67%	61%	63%	63%
English Prof. unknown	913	313	56	25%	20%	30%	17%	8%	57%	54%	50%	50%	51%
Not in NSLP	244,518	359	58	6%	10%	27%	31%	26%	72%	69%	66%	65%	68%
In NSLP	233,832	318	50	16%	22%	36%	19%	7%	60%	56%	51%	52%	53%
NSLP status unknown	1,367	316	56	23%	18%	32%	18%	9%	58%	55%	51%	51%	52%
No Special Ed Services	438,437	344	56	8%	15%	32%	27%	18%	68%	65%	60%	61%	62%
Special Ed Services	41,237	285	45	40%	30%	21%	7%	3%	46%	43%	41%	39%	41%
Special Ed unknown	43	266	41	67%	12%	14%	7%	0%	39%	37%	34%	33%	33%

Table 6.A.8 Demographic Summary for English–Language Arts Grade 9

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	505,104	345	60	9%	17%	27%	26%	22%	57%	62%	64%	59%	52%
Male	259,522	338	61	11%	20%	26%	23%	20%	56%	60%	61%	56%	49%
Female	245,301	353	58	6%	14%	27%	28%	25%	59%	64%	66%	63%	55%
Gender unknown	281	309	50	15%	30%	33%	15%	6%	45%	50%	51%	46%	39%
American Indian	4,413	339	57	9%	18%	30%	25%	18%	56%	60%	63%	56%	50%
Asian American	43,587	381	62	3%	8%	18%	27%	44%	68%	74%	74%	71%	64%
Pacific Islander	3,379	342	55	8%	16%	29%	28%	18%	57%	62%	63%	59%	52%
Filipino	13,900	367	53	3%	8%	24%	34%	31%	65%	71%	71%	67%	60%
Hispanic	239,293	325	52	12%	23%	32%	23%	10%	51%	56%	57%	52%	45%
African American	40,346	324	54	13%	23%	31%	22%	11%	50%	56%	57%	51%	45%
White	154,864	370	58	4%	9%	20%	30%	36%	66%	70%	73%	67%	60%
Ethnicity unknown	5,322	345	63	10%	18%	23%	24%	25%	57%	62%	64%	59%	52%
English Only	285,660	356	60	7%	13%	24%	28%	28%	61%	66%	68%	62%	55%
Initially Fluent English Prof.	41,344	365	59	4%	10%	24%	30%	32%	64%	69%	71%	66%	59%
English Learner	93,408	294	39	22%	38%	31%	8%	2%	39%	44%	44%	41%	36%
Reclassified Fluent Eng.	83,571	355	49	3%	10%	32%	35%	20%	62%	67%	68%	63%	56%
English Prof. unknown	1,121	316	54	16%	28%	28%	19%	9%	48%	52%	54%	49%	42%
Not in NSLP	284,851	361	60	6%	12%	23%	28%	31%	63%	68%	70%	64%	57%
In NSLP	218,796	324	53	13%	24%	31%	22%	10%	50%	55%	56%	52%	45%
NSLP status unknown	1,457	317	54	16%	26%	29%	19%	10%	48%	52%	54%	49%	43%
No Special Ed Services	464,264	350	59	7%	15%	27%	27%	24%	59%	64%	66%	61%	54%
Special Ed Services	40,801	289	44	30%	37%	22%	8%	3%	37%	42%	43%	39%	34%
Special Ed unknown	39	300	56	31%	28%	21%	10%	10%	40%	46%	52%	39%	35%

Table 6.A.9 Demographic Summary for English–Language Arts Grade 10

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	478,921	331	59	14%	20%	29%	21%	16%	64%	58%	57%	63%	60%
Male	243,853	324	60	19%	21%	27%	19%	14%	62%	55%	55%	59%	56%
Female	234,825	339	57	10%	18%	30%	24%	18%	66%	61%	59%	66%	63%
Gender unknown	243	290	46	32%	32%	24%	8%	3%	49%	43%	43%	48%	42%
American Indian	4,128	325	57	17%	21%	29%	21%	13%	63%	56%	56%	59%	58%
Asian American	43,438	361	61	6%	11%	24%	27%	32%	72%	69%	67%	73%	70%
Pacific Islander	3,235	322	53	15%	23%	32%	20%	10%	62%	54%	54%	60%	57%
Filipino	14,165	350	51	5%	12%	32%	31%	20%	70%	66%	63%	71%	68%
Hispanic	214,603	312	50	19%	26%	32%	16%	7%	58%	51%	50%	57%	52%
African American	37,537	309	52	22%	26%	30%	16%	7%	57%	49%	49%	56%	52%
White	156,982	354	59	8%	12%	25%	28%	27%	72%	66%	65%	69%	69%
Ethnicity unknown	4,833	331	64	18%	19%	24%	20%	19%	63%	57%	57%	61%	59%
English Only	279,388	341	60	12%	16%	27%	24%	21%	68%	61%	61%	65%	64%
Initially Fluent English Prof.	41,034	349	58	8%	14%	29%	27%	23%	70%	64%	63%	69%	67%
English Learner	78,341	281	35	34%	40%	22%	3%	1%	44%	40%	39%	46%	38%
Reclassified Fluent Eng.	79,201	337	47	6%	16%	40%	26%	12%	67%	61%	59%	67%	63%
English Prof. unknown	957	302	51	28%	27%	27%	13%	6%	53%	47%	47%	52%	48%
Not in NSLP	286,638	345	60	10%	15%	27%	25%	23%	69%	63%	62%	67%	65%
In NSLP	190,892	310	50	20%	27%	31%	16%	6%	57%	50%	50%	57%	51%
NSLP status unknown	1,391	304	53	27%	27%	27%	13%	7%	54%	48%	48%	52%	49%
No Special Ed Services	440,139	336	58	11%	19%	30%	23%	17%	66%	60%	59%	65%	62%
Special Ed Services	38,742	277	41	45%	33%	16%	5%	2%	43%	37%	38%	42%	38%
Special Ed unknown	40	286	49	45%	30%	15%	5%	5%	45%	41%	42%	43%	41%

Table 6.A.10 Demographic Summary for English–Language Arts Grade 11

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	437,551	328	71	21%	18%	24%	20%	17%	62%	55%	53%	64%	61%
Male	221,116	319	72	26%	18%	22%	18%	15%	60%	52%	51%	60%	58%
Female	216,210	336	70	16%	17%	26%	22%	19%	65%	57%	55%	69%	64%
Gender unknown	225	279	60	49%	23%	16%	8%	4%	45%	41%	40%	45%	42%
American Indian	4,008	317	67	24%	19%	25%	19%	12%	58%	53%	51%	61%	57%
Asian American	42,358	363	76	11%	12%	20%	23%	34%	71%	65%	63%	75%	72%
Pacific Islander	3,056	312	64	25%	21%	27%	18%	10%	56%	50%	49%	60%	57%
Filipino	13,714	347	63	10%	14%	27%	28%	21%	69%	61%	59%	72%	69%
Hispanic	182,916	305	60	27%	23%	27%	16%	7%	57%	48%	47%	57%	54%
African American	33,738	299	61	32%	22%	24%	15%	7%	52%	47%	46%	55%	52%
White	153,267	350	73	14%	13%	22%	25%	27%	68%	62%	59%	72%	68%
Ethnicity unknown	4,494	320	75	27%	17%	21%	18%	17%	58%	53%	52%	61%	58%
English Only	263,867	336	73	19%	15%	23%	22%	21%	64%	58%	56%	67%	64%
Initially Fluent English Prof.	39,660	348	72	13%	14%	25%	24%	24%	69%	61%	58%	71%	67%
English Learner	60,629	269	42	48%	31%	17%	3%	1%	44%	36%	37%	43%	41%
Reclassified Fluent Eng.	72,564	334	58	11%	18%	34%	24%	13%	67%	57%	54%	68%	64%
English Prof. unknown	831	295	64	35%	24%	20%	14%	7%	51%	45%	45%	52%	49%
Not in NSLP	276,698	342	73	16%	15%	23%	23%	23%	66%	59%	57%	69%	65%
In NSLP	159,652	303	60	29%	23%	26%	15%	7%	55%	47%	46%	57%	53%
NSLP status unknown	1,201	296	64	36%	24%	19%	13%	8%	52%	45%	45%	53%	49%
No Special Ed Services	402,816	333	70	17%	17%	25%	21%	19%	64%	57%	55%	67%	63%
Special Ed Services	34,687	263	48	60%	22%	12%	4%	2%	39%	35%	36%	40%	38%
Special Ed unknown	48	274	44	44%	31%	21%	2%	2%	43%	40%	39%	43%	42%

Table 6.A.11 Demographic Summary for History–Social Science Grade 8

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	478,975	330	60	17%	20%	28%	21%	14%	51%	51%	49%	51%	51%
Male	244,958	330	63	19%	19%	26%	21%	15%	52%	51%	50%	51%	51%
Female	233,795	329	56	15%	21%	31%	21%	12%	51%	50%	49%	51%	52%
Gender unknown	222	293	47	36%	30%	19%	13%	2%	41%	36%	36%	39%	40%
American Indian	3,863	321	54	19%	22%	30%	20%	9%	49%	48%	46%	49%	48%
Asian American	41,405	370	65	6%	10%	22%	28%	34%	63%	64%	63%	64%	65%
Pacific Islander	3,112	323	53	17%	22%	32%	20%	9%	50%	49%	46%	49%	49%
Filipino	13,209	350	54	7%	13%	31%	30%	19%	58%	59%	56%	58%	59%
Hispanic	229,868	310	49	23%	26%	30%	15%	6%	45%	44%	43%	45%	45%
African American	37,913	307	50	26%	26%	28%	14%	6%	45%	42%	40%	44%	45%
White	145,569	354	60	9%	13%	27%	28%	24%	60%	59%	57%	59%	59%
Ethnicity unknown	4,036	333	63	19%	17%	27%	22%	16%	54%	52%	51%	51%	52%
English Only	265,194	340	61	13%	17%	28%	24%	18%	55%	54%	52%	55%	55%
Initially Fluent English Prof.	38,620	350	62	10%	15%	28%	26%	22%	58%	58%	56%	58%	58%
English Learner	91,677	286	38	38%	34%	22%	5%	1%	36%	35%	35%	37%	36%
Reclassified Fluent Eng.	82,577	337	52	8%	17%	37%	25%	12%	53%	54%	52%	54%	54%
English Prof. unknown	907	303	54	31%	27%	24%	12%	6%	44%	41%	40%	42%	42%
Not in NSLP	244,088	350	62	10%	14%	27%	27%	22%	58%	57%	56%	58%	58%
In NSLP	233,523	309	50	24%	26%	30%	15%	5%	45%	44%	42%	44%	45%
NSLP status unknown	1,364	306	51	26%	27%	28%	14%	5%	44%	42%	41%	44%	43%
No Special Ed Services	437,042	334	59	14%	19%	29%	22%	15%	53%	52%	51%	53%	53%
Special Ed Services	41,887	287	46	42%	30%	18%	7%	3%	38%	35%	36%	37%	36%
Special Ed unknown	46	267	30	59%	28%	11%	2%	0%	30%	26%	30%	32%	28%

Table 6.A.12 Demographic Summary for World History

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	491,079	321	61	24%	19%	29%	18%	11%	51%	52%	49%	50%	45%
Grade 9	35,954	317	71	32%	17%	21%	15%	14%	50%	50%	47%	48%	43%
Grade 10	436,552	323	60	22%	19%	30%	18%	11%	51%	53%	50%	51%	45%
Grade 11	18,573	279	56	52%	21%	18%	7%	3%	37%	38%	35%	36%	33%
Male	249,783	325	66	25%	17%	26%	18%	14%	51%	52%	51%	51%	46%
Female	241,067	317	55	22%	21%	32%	17%	8%	50%	52%	47%	48%	44%
Gender unknown	229	283	47	49%	21%	23%	6%	1%	39%	39%	35%	37%	33%
American Indian	4,187	313	57	26%	21%	28%	17%	8%	48%	50%	47%	47%	41%
Asian American	45,813	357	66	10%	11%	27%	26%	26%	60%	63%	60%	62%	59%
Pacific Islander	3,288	313	54	26%	20%	31%	15%	7%	48%	49%	46%	47%	42%
Filipino	14,743	337	55	11%	16%	35%	25%	13%	56%	57%	54%	55%	52%
Hispanic	219,045	302	50	32%	24%	28%	12%	4%	45%	46%	43%	43%	38%
African American	38,159	296	49	36%	24%	26%	10%	4%	44%	44%	40%	41%	36%
White	160,974	342	64	14%	13%	30%	24%	18%	57%	59%	56%	57%	51%
Ethnicity unknown	4,870	320	64	27%	18%	26%	17%	13%	51%	52%	48%	49%	44%
English Only	284,628	329	63	20%	16%	29%	21%	14%	53%	55%	52%	53%	47%
Initially Fluent English Prof.	43,101	338	64	15%	16%	30%	22%	17%	56%	57%	54%	56%	51%
English Learner	80,140	280	39	49%	28%	18%	4%	1%	37%	38%	36%	36%	31%
Reclassified Fluent Eng.	82,281	325	54	16%	20%	36%	19%	9%	52%	53%	50%	51%	46%
English Prof. unknown	929	291	50	41%	23%	25%	8%	3%	42%	43%	39%	39%	34%
Not in NSLP	294,488	334	64	18%	16%	29%	22%	16%	55%	56%	53%	54%	49%
In NSLP	195,223	302	51	32%	24%	28%	12%	5%	45%	46%	43%	43%	38%
NSLP status unknown	1,368	293	49	40%	23%	24%	9%	3%	42%	42%	40%	40%	35%
No Special Ed Services	451,579	325	61	21%	18%	30%	19%	12%	52%	53%	50%	51%	46%
Special Ed Services	39,452	279	47	53%	24%	15%	5%	3%	37%	38%	35%	36%	31%
Special Ed unknown	48	272	45	63%	21%	10%	4%	2%	35%	35%	33%	32%	31%

Table 6.A. 13 Demographic Summary for History–Social Science Grade 11

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	427,071	330	61	16%	21%	28%	22%	13%	52%	50%	50%	50%	51%
Male	215,332	331	65	18%	20%	25%	22%	15%	52%	51%	50%	52%	50%
Female	211,534	328	58	15%	22%	30%	22%	11%	51%	49%	50%	49%	51%
Gender unknown	205	291	49	34%	34%	19%	11%	3%	40%	36%	37%	38%	39%
American Indian	3,866	322	58	18%	24%	28%	21%	9%	50%	48%	48%	48%	48%
Asian American	41,714	359	64	8%	13%	25%	29%	25%	60%	60%	58%	61%	60%
Pacific Islander	2,959	317	55	19%	25%	30%	19%	7%	48%	46%	46%	46%	46%
Filipino	13,536	342	55	8%	16%	33%	30%	13%	55%	54%	54%	55%	56%
Hispanic	177,986	312	53	21%	27%	29%	16%	6%	46%	45%	45%	44%	45%
African American	32,351	305	52	26%	29%	26%	14%	5%	44%	42%	43%	41%	43%
White	150,428	348	64	11%	15%	26%	28%	20%	58%	55%	55%	57%	56%
Ethnicity unknown	4,231	325	64	21%	22%	24%	21%	13%	50%	48%	48%	49%	49%
English Only	257,674	336	63	15%	19%	27%	24%	15%	54%	52%	52%	53%	53%
Initially Fluent English Prof.	38,975	346	62	10%	16%	28%	28%	18%	56%	55%	55%	56%	56%
English Learner	58,164	285	39	35%	37%	21%	5%	1%	36%	37%	36%	34%	35%
Reclassified Fluent Eng.	71,506	334	54	10%	20%	35%	25%	11%	53%	52%	52%	51%	53%
English Prof. unknown	752	301	52	30%	30%	23%	11%	5%	43%	41%	40%	40%	41%
Not in NSLP	270,821	341	63	13%	18%	27%	26%	17%	55%	53%	53%	54%	54%
In NSLP	155,141	311	53	22%	27%	29%	16%	6%	45%	44%	44%	43%	44%
NSLP status unknown	1,109	302	53	29%	29%	25%	12%	6%	43%	41%	41%	40%	42%
No Special Ed Services	393,602	334	61	14%	20%	29%	23%	14%	53%	51%	51%	52%	52%
Special Ed Services	33,424	284	46	42%	33%	16%	6%	3%	37%	36%	35%	35%	34%
Special Ed unknown	45	284	45	31%	47%	11%	9%	2%	40%	38%	35%	33%	34%

Table 6.A.14 Demographic Summary for Mathematics Grade 2

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	453,919	369	82	5%	14%	22%	31%	28%	74%	73%	73%	76%	71%
Male	232,475	370	84	6%	14%	21%	30%	29%	74%	73%	73%	76%	70%
Female	221,231	368	79	4%	15%	23%	31%	27%	74%	74%	73%	76%	71%
Gender unknown	213	330	78	12%	23%	25%	26%	13%	63%	64%	64%	69%	62%
American Indian	3,632	356	75	5%	18%	24%	31%	21%	71%	71%	70%	74%	68%
Asian American	36,212	420	83	2%	5%	12%	28%	53%	85%	82%	85%	84%	81%
Pacific Islander	2,969	365	77	5%	14%	24%	32%	25%	74%	73%	73%	76%	70%
Filipino	12,367	397	77	2%	7%	16%	34%	41%	81%	79%	82%	81%	77%
Hispanic	234,902	348	75	7%	19%	26%	30%	18%	69%	69%	68%	72%	66%
African American	32,854	339	77	9%	21%	25%	28%	16%	67%	67%	65%	69%	64%
White	124,993	399	80	2%	8%	16%	33%	41%	80%	80%	80%	82%	76%
Ethnicity unknown	5,990	383	83	4%	11%	19%	32%	34%	77%	76%	76%	79%	73%
English Only	249,567	380	82	4%	12%	20%	32%	33%	76%	76%	75%	78%	73%
Initially Fluent English Prof.	33,813	402	78	1%	7%	17%	33%	42%	82%	80%	81%	82%	78%
English Learner	164,450	344	76	7%	20%	26%	29%	17%	68%	68%	67%	71%	65%
Reclassified Fluent Eng.	5,282	406	74	1%	5%	15%	35%	44%	83%	81%	83%	83%	79%
English Prof. unknown	807	336	82	13%	20%	22%	28%	16%	65%	66%	66%	68%	62%
Not in NSLP	195,646	398	81	2%	8%	16%	32%	41%	80%	79%	80%	81%	77%
In NSLP	256,901	347	75	7%	19%	26%	30%	18%	69%	69%	67%	72%	66%
NSLP status unknown	1,372	339	80	11%	22%	22%	28%	17%	66%	66%	67%	69%	62%
No Special Ed Services	418,365	374	80	4%	14%	22%	32%	29%	75%	75%	74%	77%	72%
Special Ed Services	35,485	318	88	21%	24%	20%	20%	14%	60%	60%	60%	63%	58%
Special Ed unknown	69	299	78	22%	25%	36%	9%	9%	55%	56%	55%	58%	55%

Table 6.A.15 Demographic Summary for Mathematics Grade 3

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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, Multplication, Division	Algebra and Functions	Measurement and Geometry	Statistics, Data Analysis, and Probability
All valid scores	456,269	371	85	5%	17%	21%	27%	31%	74%	70%	71%	75%	83%
Male	233,336	372	87	5%	17%	19%	26%	32%	75%	69%	72%	75%	81%
Female	222,747	370	82	4%	17%	22%	28%	30%	73%	71%	71%	75%	84%
Gender unknown	186	326	85	15%	31%	19%	19%	17%	62%	58%	59%	65%	72%
American Indian	3,691	353	78	6%	21%	24%	27%	22%	71%	64%	67%	72%	80%
Asian American	36,618	430	86	1%	6%	11%	23%	59%	85%	84%	84%	84%	91%
Pacific Islander	3,025	369	79	4%	16%	22%	29%	29%	74%	71%	71%	75%	83%
Filipino	12,611	404	79	2%	8%	15%	30%	46%	81%	79%	79%	81%	89%
Hispanic	234,089	350	77	6%	22%	24%	27%	21%	69%	66%	66%	71%	79%
African American	33,688	338	78	9%	25%	24%	24%	18%	66%	62%	63%	69%	76%
White	127,543	398	83	2%	10%	16%	28%	44%	81%	75%	79%	80%	88%
Ethnicity unknown	5,004	382	88	5%	14%	17%	28%	36%	77%	72%	75%	77%	84%
English Only	251,035	381	85	4%	14%	19%	28%	35%	77%	71%	74%	77%	85%
Initially Fluent English Prof.	36,878	407	84	1%	9%	16%	28%	46%	81%	79%	80%	82%	90%
English Learner	150,865	340	75	7%	25%	25%	25%	17%	66%	64%	63%	69%	76%
Reclassified Fluent Eng.	16,633	422	75	0%	4%	12%	30%	54%	84%	83%	84%	85%	93%
English Prof. unknown	858	332	84	13%	26%	22%	23%	17%	65%	59%	60%	67%	72%
Not in NSLP	199,305	400	84	2%	10%	16%	28%	44%	81%	76%	79%	80%	88%
In NSLP	255,569	348	78	6%	22%	24%	26%	21%	69%	65%	65%	71%	78%
NSLP status unknown	1,395	335	83	12%	25%	23%	24%	17%	66%	60%	63%	67%	74%
No Special Ed Services	414,082	377	82	3%	16%	21%	28%	33%	75%	72%	73%	77%	84%
Special Ed Services	42,108	314	87	20%	30%	18%	17%	15%	59%	54%	56%	62%	66%
Special Ed unknown	79	292	69	22%	38%	22%	10%	9%	54%	47%	49%	58%	64%

Table 6.A.16 Demographic Summary for Mathematics Grade 4

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	459,557	366	73	3%	16%	23%	26%	30%	74%	71%	76%	68%	72%
Male	234,902	365	76	4%	17%	22%	25%	31%	74%	70%	75%	67%	71%
Female	224,493	367	71	2%	16%	24%	28%	30%	73%	72%	77%	68%	73%
Gender unknown	162	340	72	6%	28%	25%	24%	17%	65%	63%	68%	60%	64%
American Indian	3,694	350	69	4%	22%	26%	26%	22%	71%	66%	71%	62%	67%
Asian American	38,470	421	78	1%	5%	11%	23%	60%	85%	86%	88%	80%	82%
Pacific Islander	3,036	363	67	3%	16%	25%	29%	28%	74%	71%	76%	67%	71%
Filipino	12,957	394	68	1%	7%	17%	30%	45%	81%	80%	84%	75%	79%
Hispanic	233,108	348	66	4%	21%	28%	26%	20%	69%	66%	71%	63%	67%
African American	34,090	338	66	7%	25%	27%	23%	18%	67%	62%	67%	59%	64%
White	129,677	388	73	2%	10%	19%	29%	41%	80%	77%	81%	74%	78%
Ethnicity unknown	4,525	374	74	3%	14%	21%	27%	35%	76%	73%	78%	70%	75%
English Only	249,661	374	74	3%	14%	22%	27%	34%	76%	73%	77%	70%	74%
Initially Fluent English Prof.	32,751	398	75	1%	8%	18%	27%	47%	81%	80%	84%	77%	80%
English Learner	145,651	337	63	5%	25%	30%	24%	15%	66%	63%	68%	59%	63%
Reclassified Fluent Eng.	30,843	411	66	0%	3%	13%	29%	54%	84%	85%	88%	80%	83%
English Prof. unknown	651	333	69	8%	29%	27%	20%	16%	64%	61%	66%	56%	63%
Not in NSLP	202,268	391	74	2%	9%	18%	28%	43%	80%	78%	82%	74%	79%
In NSLP	256,042	346	67	5%	22%	27%	25%	20%	69%	65%	71%	62%	67%
NSLP status unknown	1,247	334	69	9%	27%	27%	19%	18%	65%	60%	65%	57%	63%
No Special Ed Services	413,890	372	72	2%	14%	24%	28%	32%	75%	73%	78%	69%	74%
Special Ed Services	45,599	314	70	16%	35%	22%	15%	12%	58%	53%	58%	51%	55%
Special Ed unknown	68	313	61	10%	31%	31%	21%	7%	59%	55%	60%	47%	58%

Table 6.A.17 Demographic Summary for Mathematics Grade 5

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	468,049	357	87	8%	22%	22%	29%	20%	61%	61%	65%	60%	73%
Male	238,818	357	92	9%	22%	21%	27%	21%	61%	60%	65%	60%	73%
Female	229,016	356	83	6%	22%	23%	30%	19%	60%	61%	65%	61%	74%
Gender unknown	215	308	73	20%	34%	20%	19%	7%	48%	48%	51%	49%	62%
American Indian	3,849	337	78	11%	26%	24%	27%	13%	56%	56%	61%	55%	70%
Asian American	39,541	425	95	2%	8%	13%	30%	47%	76%	77%	79%	75%	86%
Pacific Islander	2,886	353	80	7%	22%	23%	31%	17%	60%	60%	65%	59%	72%
Filipino	13,094	391	84	3%	12%	19%	36%	31%	69%	70%	74%	69%	82%
Hispanic	234,369	332	74	10%	28%	25%	26%	11%	55%	55%	59%	55%	68%
African American	35,026	322	75	15%	30%	23%	23%	9%	53%	52%	57%	52%	64%
White	135,007	386	89	4%	14%	19%	33%	30%	68%	68%	73%	67%	81%
Ethnicity unknown	4,277	367	91	8%	18%	20%	32%	23%	64%	63%	67%	62%	76%
English Only	254,641	367	89	7%	19%	21%	30%	24%	63%	63%	68%	62%	76%
Initially Fluent English Prof.	31,912	396	93	3%	13%	19%	32%	34%	69%	70%	74%	69%	82%
English Learner	128,757	312	65	14%	35%	26%	20%	5%	50%	50%	53%	50%	61%
Reclassified Fluent Eng.	51,997	397	78	1%	8%	20%	40%	31%	70%	71%	76%	71%	84%
English Prof. unknown	742	319	77	15%	32%	22%	21%	9%	52%	51%	54%	51%	64%
Not in NSLP	208,399	389	91	4%	13%	19%	33%	32%	69%	68%	73%	67%	81%
In NSLP	258,258	331	76	11%	28%	25%	25%	11%	54%	55%	59%	54%	67%
NSLP status unknown	1,392	316	79	17%	32%	22%	20%	9%	50%	50%	54%	49%	64%
No Special Ed Services	420,726	364	86	5%	20%	23%	30%	22%	62%	63%	67%	62%	76%
Special Ed Services	47,222	293	75	29%	35%	16%	13%	6%	45%	43%	47%	44%	55%
Special Ed unknown	101	282	69	35%	34%	12%	17%	3%	44%	40%	43%	41%	49%

Table 6.A.18 Demographic Summary for Mathematics Grade 6

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	475,529	343	69	6%	23%	29%	28%	14%	56%	64%	66%	53%	53%
Male	243,031	343	71	7%	23%	28%	27%	15%	56%	64%	66%	52%	52%
Female	232,261	343	66	5%	22%	31%	28%	13%	56%	63%	66%	54%	54%
Gender unknown	237	315	64	15%	34%	26%	20%	5%	46%	55%	57%	44%	43%
American Indian	4,003	330	61	7%	27%	31%	26%	9%	52%	61%	62%	48%	49%
Asian American	39,960	400	78	2%	8%	18%	33%	39%	73%	78%	81%	69%	67%
Pacific Islander	3,143	338	61	5%	23%	32%	29%	10%	55%	63%	66%	53%	51%
Filipino	13,189	368	65	2%	12%	27%	38%	21%	64%	71%	75%	62%	60%
Hispanic	235,242	322	56	8%	30%	34%	23%	6%	50%	57%	60%	47%	46%
African American	36,482	313	56	12%	34%	31%	19%	5%	46%	55%	56%	44%	44%
White	139,135	368	69	3%	13%	25%	36%	22%	64%	72%	73%	59%	61%
Ethnicity unknown	4,375	351	70	5%	20%	27%	31%	17%	58%	67%	68%	55%	55%
English Only	260,406	352	70	5%	19%	28%	31%	17%	59%	67%	69%	55%	56%
Initially Fluent English Prof.	39,523	371	74	3%	14%	27%	33%	24%	64%	71%	74%	61%	60%
English Learner	106,481	301	48	13%	41%	31%	12%	2%	43%	50%	53%	41%	38%
Reclassified Fluent Eng.	68,376	360	60	1%	13%	34%	36%	16%	62%	69%	73%	58%	58%
English Prof. unknown	743	315	63	12%	36%	27%	17%	7%	47%	55%	57%	44%	43%
Not in NSLP	219,074	368	72	3%	14%	25%	34%	23%	64%	71%	73%	60%	61%
In NSLP	255,296	322	57	9%	30%	33%	22%	6%	50%	57%	60%	47%	46%
NSLP status unknown	1,159	317	62	12%	32%	30%	19%	7%	47%	57%	58%	45%	45%
No Special Ed Services	430,076	349	67	4%	21%	30%	30%	15%	58%	66%	68%	55%	54%
Special Ed Services	45,400	289	54	25%	43%	20%	9%	3%	39%	46%	46%	37%	36%
Special Ed unknown	53	282	43	25%	47%	19%	8%	2%	37%	45%	44%	35%	35%

Table 6.A.19 Demographic Summary for Mathematics Grade 7

				Percent in Proficiency Level					Mean Percent Correct in Content Area					
	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	458,543	336	65	10%	23%	29%	26%	13%	57%	49%	62%	52%	56%	60%
Male	234,127	335	69	12%	23%	26%	25%	14%	57%	49%	60%	52%	56%	58%
Female	224,149	337	62	8%	22%	32%	26%	12%	57%	49%	64%	51%	56%	63%
Gender unknown	267	302	53	20%	34%	28%	13%	4%	45%	37%	50%	42%	46%	49%
American Indian	3,876	327	60	12%	24%	31%	24%	9%	54%	46%	59%	49%	54%	56%
Asian American	34,311	386	74	3%	9%	19%	33%	36%	73%	65%	75%	66%	70%	75%
Pacific Islander	3,048	333	60	8%	23%	33%	26%	10%	56%	49%	63%	50%	55%	60%
Filipino	12,065	363	62	3%	11%	28%	36%	21%	66%	58%	72%	59%	64%	71%
Hispanic	230,394	318	57	12%	29%	32%	21%	6%	51%	44%	57%	47%	50%	55%
African American	37,234	309	55	17%	32%	30%	17%	5%	48%	42%	55%	43%	47%	50%
White	133,670	359	66	5%	14%	27%	34%	21%	65%	56%	68%	59%	64%	67%
Ethnicity unknown	3,945	340	68	10%	21%	27%	27%	15%	58%	50%	62%	53%	58%	60%
English Only	250,393	344	66	8%	19%	28%	29%	16%	60%	51%	64%	54%	59%	62%
Initially Fluent English Prof.	35,085	358	68	5%	16%	28%	30%	21%	64%	56%	68%	58%	63%	67%
English Learner	99,666	296	49	20%	39%	28%	11%	2%	44%	37%	49%	39%	43%	46%
Reclassified Fluent Eng.	72,430	353	58	3%	14%	34%	34%	15%	63%	54%	68%	57%	61%	68%
English Prof. unknown	969	312	62	17%	31%	26%	19%	7%	49%	40%	53%	45%	50%	50%
Not in NSLP	218,547	356	68	6%	16%	27%	31%	20%	64%	55%	68%	57%	63%	66%
In NSLP	238,548	318	58	13%	29%	31%	20%	7%	51%	44%	57%	46%	50%	54%
NSLP status unknown	1,448	311	61	18%	28%	29%	18%	6%	49%	40%	53%	45%	49%	50%
No Special Ed Services	415,547	342	64	7%	21%	30%	28%	14%	59%	51%	64%	53%	58%	62%
Special Ed Services	42,945	281	50	34%	39%	17%	7%	2%	38%	33%	42%	35%	39%	40%
Special Ed unknown	51	273	49	41%	31%	18%	10%	0%	34%	29%	38%	36%	36%	40%

Table 6.A.20 Demographic Summary for General Mathematics

				Percent in Proficiency Level					Mean Percent Correct in Content Area					
	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	303,461	311	49	15%	29%	35%	18%	3%	49%	42%	54%	48%	41%	54%
Grade 8	217,750	316	50	12%	28%	36%	20%	3%	51%	43%	55%	49%	43%	56%
Grade 9	85,711	299	46	20%	33%	33%	12%	1%	45%	37%	51%	44%	38%	49%
Male	165,030	309	51	17%	29%	32%	18%	3%	49%	41%	52%	47%	42%	52%
Female	138,232	313	46	12%	30%	39%	18%	2%	49%	42%	56%	48%	41%	56%
Gender unknown	199	295	50	25%	37%	24%	12%	3%	44%	38%	46%	44%	37%	46%
American Indian	3,158	307	48	16%	31%	35%	16%	2%	48%	39%	52%	47%	41%	52%
Asian American	12,869	339	55	7%	18%	35%	31%	9%	59%	53%	64%	57%	49%	61%
Pacific Islander	2,013	314	48	13%	27%	37%	20%	2%	50%	43%	56%	49%	42%	54%
Filipino	5,562	332	49	7%	20%	39%	29%	5%	56%	49%	63%	55%	48%	61%
Hispanic	163,677	302	45	17%	34%	35%	13%	1%	46%	39%	51%	45%	38%	51%
African American	26,784	296	44	22%	35%	31%	11%	1%	44%	37%	49%	41%	36%	49%
White	86,174	327	51	10%	22%	36%	27%	5%	54%	46%	59%	53%	48%	59%
Ethnicity unknown	3,224	308	52	18%	29%	32%	18%	3%	48%	41%	53%	47%	42%	53%
English Only	166,946	316	51	13%	27%	35%	21%	3%	50%	43%	56%	49%	44%	56%
Initially Fluent English Prof.	17,646	322	50	10%	25%	38%	23%	4%	53%	45%	58%	52%	45%	58%
English Learner	81,527	291	41	22%	40%	30%	7%	1%	43%	36%	47%	40%	34%	46%
Reclassified Fluent Eng.	36,493	328	44	5%	21%	46%	25%	3%	55%	46%	61%	54%	46%	61%
English Prof. unknown	849	298	50	23%	34%	28%	13%	2%	45%	38%	49%	42%	39%	48%
Not in NSLP	142,100	322	51	11%	25%	36%	24%	4%	52%	45%	58%	51%	45%	57%
In NSLP	160,138	302	45	18%	34%	34%	13%	1%	46%	39%	51%	44%	38%	51%
NSLP status unknown	1,223	297	48	23%	34%	28%	12%	2%	45%	37%	50%	43%	37%	49%
No Special Ed Services	255,178	317	48	11%	27%	38%	20%	3%	51%	43%	56%	50%	43%	56%
Special Ed Services	48,235	278	40	35%	40%	19%	5%	1%	38%	33%	41%	35%	32%	42%
Special Ed unknown	48	272	41	42%	38%	17%	4%	0%	36%	34%	37%	36%	30%	38%

Table 6.A.21 Demographic Summary for Algebra I

				Percent in Proficiency Level					Mean Percent Correct in Content Area			
	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	738,231	311	61	16%	35%	26%	19%	5%	54%	44%	44%	37%
Grade 7	21,652	400	74	3%	5%	15%	45%	32%	79%	71%	67%	58%
Grade 8	238,426	337	68	9%	25%	27%	29%	9%	63%	52%	51%	43%
Grade 9	269,287	302	50	17%	37%	28%	16%	1%	52%	42%	41%	34%
Grade 10	138,172	287	43	23%	44%	25%	8%	0%	46%	37%	37%	31%
Grade 11	70,694	279	40	27%	46%	21%	5%	0%	43%	35%	36%	30%
Male	380,872	309	63	18%	34%	25%	18%	5%	53%	44%	43%	36%
Female	356,970	314	60	14%	35%	28%	20%	5%	56%	45%	45%	37%
Gender unknown	389	281	51	32%	44%	14%	8%	1%	44%	35%	35%	31%
American Indian	6,594	301	54	19%	38%	26%	15%	2%	52%	41%	41%	34%
Asian American	54,351	368	79	5%	16%	23%	35%	21%	69%	61%	59%	51%
Pacific Islander	5,193	309	56	15%	35%	28%	19%	3%	54%	44%	44%	36%
Filipino	19,524	332	61	8%	26%	31%	29%	6%	62%	51%	50%	41%
Hispanic	369,453	295	50	20%	41%	25%	12%	1%	49%	40%	40%	33%
African American	61,977	288	48	24%	42%	22%	10%	1%	47%	38%	38%	31%
White	214,195	330	63	10%	26%	30%	28%	7%	62%	50%	49%	41%
Ethnicity unknown	6,944	306	62	19%	35%	24%	18%	4%	53%	43%	43%	36%
English Only	409,436	316	62	14%	32%	27%	21%	5%	57%	46%	45%	38%
Initially Fluent English Prof.	59,837	328	70	11%	30%	27%	23%	9%	60%	49%	48%	41%
English Learner	143,446	281	45	28%	46%	18%	6%	1%	42%	36%	37%	30%
Reclassified Fluent Eng.	123,926	322	60	10%	32%	31%	23%	5%	59%	48%	47%	38%
English Prof. unknown	1,586	288	55	27%	42%	19%	9%	2%	45%	38%	37%	32%
Not in NSLP	397,420	323	66	13%	30%	27%	24%	7%	59%	48%	47%	40%
In NSLP	338,685	297	53	20%	40%	25%	13%	2%	50%	40%	40%	33%
NSLP status unknown	2,126	291	55	26%	39%	22%	11%	2%	47%	39%	38%	32%
No Special Ed Services	682,659	314	61	14%	34%	27%	20%	5%	56%	45%	45%	37%
Special Ed Services	55,506	270	43	38%	44%	12%	4%	1%	38%	33%	33%	29%
Special Ed unknown	66	273	40	33%	47%	14%	6%	0%	41%	32%	34%	30%

Table 6.A.22 Demographic Summary for Geometry

				Percent in Proficiency Level					Mean Percent Correct in Content Area			
	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	369,311	310	68	15%	35%	25%	17%	7%	56%	50%	47%	51%
Grade 8	15,846	418	73	0%	4%	13%	36%	47%	84%	80%	78%	79%
Grade 9	115,839	345	70	6%	21%	28%	30%	14%	67%	61%	58%	61%
Grade 10	155,628	292	53	18%	42%	26%	11%	2%	51%	44%	41%	45%
Grade 11	81,998	275	44	26%	49%	19%	5%	1%	45%	39%	36%	40%
Male	179,762	313	70	16%	33%	25%	18%	8%	57%	50%	48%	51%
Female	189,447	308	66	15%	37%	25%	16%	7%	55%	49%	46%	50%
Gender unknown	102	283	50	22%	47%	21%	10%	1%	47%	41%	40%	43%
American Indian	2,633	307	59	13%	36%	29%	17%	4%	56%	49%	46%	50%
Asian American	40,974	361	84	6%	21%	23%	27%	24%	69%	65%	62%	65%
Pacific Islander	2,529	300	61	17%	39%	26%	14%	4%	53%	46%	44%	48%
Filipino	13,298	321	64	9%	33%	29%	21%	8%	59%	53%	51%	55%
Hispanic	153,947	284	52	23%	45%	21%	9%	2%	48%	42%	39%	43%
African American	26,230	276	50	28%	45%	18%	7%	1%	45%	39%	37%	39%
White	126,516	332	67	7%	27%	30%	25%	10%	64%	56%	53%	57%
Ethnicity unknown	3,184	317	70	14%	32%	27%	19%	9%	59%	52%	49%	52%
English Only	214,034	318	68	12%	32%	27%	20%	8%	59%	52%	49%	53%
Initially Fluent English Prof.	35,098	327	78	11%	32%	25%	19%	13%	60%	54%	52%	55%
English Learner	45,968	269	51	35%	45%	13%	5%	2%	41%	37%	35%	38%
Reclassified Fluent Eng.	73,786	304	64	15%	40%	25%	14%	6%	54%	48%	45%	49%
English Prof. unknown	425	290	58	22%	44%	20%	12%	3%	49%	44%	41%	45%
Not in NSLP	230,287	324	71	11%	31%	27%	21%	10%	61%	54%	51%	55%
In NSLP	138,373	287	56	23%	43%	21%	10%	3%	48%	42%	40%	43%
NSLP status unknown	651	293	59	19%	42%	23%	12%	3%	51%	44%	42%	45%
No Special Ed Services	354,665	312	68	14%	35%	25%	18%	8%	57%	50%	47%	51%
Special Ed Services	14,637	265	51	40%	41%	12%	5%	2%	41%	37%	34%	36%
Special Ed unknown	9	291	62	22%	56%	11%	0%	11%	49%	44%	42%	44%

Table 6.A.23 Demographic Summary for Algebra II

				Percent in Proficiency Level					Mean Percent Correct in Content Area			
	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	230,757	314	64	17%	28%	28%	20%	7%	59%	49%	51%	43%
Grade 8	600	411	97	6%	4%	15%	30%	45%	80%	72%	74%	67%
Grade 9	18,415	378	75	4%	10%	21%	37%	28%	77%	66%	69%	59%
Grade 10	102,505	329	62	11%	23%	31%	27%	8%	64%	53%	56%	47%
Grade 11	109,237	289	49	26%	36%	26%	11%	1%	51%	42%	43%	37%
Male	108,128	318	67	17%	26%	27%	22%	8%	59%	50%	52%	45%
Female	122,587	311	61	18%	29%	29%	19%	6%	59%	48%	50%	42%
Gender unknown	42	290	69	36%	31%	17%	10%	7%	48%	43%	45%	38%
American Indian	1,439	307	55	17%	32%	31%	17%	4%	57%	47%	49%	42%
Asian American	35,243	355	74	7%	16%	26%	31%	19%	72%	59%	62%	52%
Pacific Islander	1,433	303	57	21%	30%	29%	16%	4%	56%	46%	48%	39%
Filipino	9,450	314	56	14%	30%	31%	21%	4%	60%	49%	51%	42%
Hispanic	77,462	289	51	27%	35%	25%	11%	2%	52%	42%	43%	36%
African American	13,830	279	51	36%	33%	21%	9%	1%	47%	40%	41%	34%
White	89,988	325	60	11%	25%	32%	25%	7%	62%	52%	55%	47%
Ethnicity unknown	1,912	317	63	16%	27%	29%	22%	7%	59%	50%	52%	44%
English Only	140,259	317	61	15%	27%	30%	22%	6%	60%	50%	52%	45%
Initially Fluent English Prof.	25,347	329	72	13%	25%	27%	23%	12%	64%	52%	55%	47%
English Learner	16,113	283	62	38%	31%	17%	10%	4%	50%	41%	41%	34%
Reclassified Fluent Eng.	48,822	306	62	21%	31%	26%	17%	6%	57%	46%	49%	40%
English Prof. unknown	216	291	57	27%	35%	21%	12%	4%	52%	42%	46%	37%
Not in NSLP	159,100	323	65	13%	26%	30%	23%	8%	62%	51%	54%	46%
In NSLP	71,309	293	57	27%	33%	24%	13%	3%	53%	43%	45%	37%
NSLP status unknown	348	299	59	23%	32%	26%	13%	5%	53%	45%	48%	39%
No Special Ed Services	226,934	314	64	17%	28%	28%	20%	7%	59%	49%	51%	43%
Special Ed Services	3,818	282	60	38%	29%	19%	10%	3%	48%	41%	41%	36%
Special Ed unknown	5	301	69	40%	0%	20%	40%	0%	42%	40%	56%	57%

Table 6.A.24 Demographic Summary for Summative High School Mathematics

				Percent in Proficiency Level					Mean Percent Correct in Content Area			
	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	108,750	347	75	5%	23%	24%	30%	17%	72%	68%	69%	61%
Grade 9	708	396	98	10%	5%	10%	31%	43%	80%	78%	79%	70%
Grade 10	15,934	377	74	2%	12%	20%	37%	28%	80%	75%	77%	68%
Grade 11	92,108	341	73	6%	25%	25%	29%	15%	71%	66%	67%	59%
Male	51,251	357	77	5%	19%	23%	32%	21%	75%	70%	71%	65%
Female	57,485	338	71	6%	25%	26%	29%	14%	71%	66%	67%	57%
Gender unknown	14	295	59	14%	50%	14%	21%	0%	64%	52%	53%	47%
American Indian	536	332	67	5%	30%	26%	28%	10%	69%	64%	65%	61%
Asian American	27,423	382	75	2%	12%	19%	36%	31%	81%	76%	78%	67%
Pacific Islander	515	328	66	6%	29%	28%	27%	10%	68%	64%	64%	54%
Filipino	5,043	330	63	6%	28%	29%	28%	9%	68%	64%	66%	54%
Hispanic	23,467	307	62	11%	37%	27%	20%	5%	63%	57%	58%	48%
African American	3,760	297	63	17%	37%	24%	18%	4%	60%	54%	56%	47%
White	47,151	352	70	4%	20%	25%	34%	17%	74%	70%	70%	65%
Ethnicity unknown	855	348	76	7%	20%	25%	31%	17%	73%	69%	68%	63%
English Only	67,611	348	72	5%	21%	25%	32%	17%	73%	69%	69%	63%
Initially Fluent English Prof.	15,843	366	79	4%	18%	21%	31%	25%	77%	72%	74%	63%
English Learner	2,922	317	79	15%	30%	21%	21%	11%	64%	59%	61%	45%
Reclassified Fluent Eng.	22,309	333	74	8%	28%	24%	26%	14%	69%	64%	66%	53%
English Prof. unknown	65	328	78	14%	22%	28%	25%	12%	69%	62%	62%	55%
Not in NSLP	84,633	355	74	4%	19%	24%	33%	20%	75%	70%	71%	64%
In NSLP	23,994	317	68	10%	33%	26%	23%	8%	65%	60%	61%	49%
NSLP status unknown	123	316	81	17%	30%	21%	20%	11%	63%	60%	58%	50%
No Special Ed Services	107,951	347	74	5%	23%	24%	31%	17%	73%	68%	69%	61%
Special Ed Services	798	318	89	22%	22%	20%	21%	15%	64%	59%	60%	54%
Special Ed unknown	1	294	--	0%	100%	0%	0%	0%	67%	53%	52%	40%

Table 6.A.25 Demographic Summary for Integrated Mathematics 1

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	6,901	282	51	28%	42%	21%	8%	1%	50%	42%	39%	36%	33%
Grade 8	70	258	50	50%	37%	7%	4%	1%	38%	34%	29%	31%	32%
Grade 9	1,207	298	69	28%	33%	19%	15%	5%	55%	49%	42%	40%	37%
Grade 10	2,132	279	46	29%	42%	23%	7%	0%	49%	41%	38%	37%	32%
Grade 11	3,492	278	44	27%	46%	21%	6%	0%	49%	41%	39%	34%	32%
Male	3,728	280	51	30%	41%	20%	8%	1%	49%	41%	37%	36%	33%
Female	3,167	284	50	25%	44%	22%	8%	1%	51%	43%	41%	37%	32%
Gender unknown	6	248	37	67%	17%	17%	0%	0%	39%	33%	30%	24%	25%
American Indian	65	284	56	29%	42%	20%	8%	2%	50%	42%	40%	37%	33%
Asian American	421	315	71	18%	31%	27%	16%	8%	59%	53%	49%	47%	39%
Pacific Islander	41	280	51	27%	44%	22%	7%	0%	51%	40%	39%	35%	33%
Filipino	335	291	53	20%	44%	25%	10%	2%	52%	45%	42%	36%	36%
Hispanic	2,930	273	44	33%	44%	18%	5%	0%	46%	39%	37%	34%	31%
African American	687	266	47	41%	42%	11%	5%	1%	43%	39%	35%	31%	30%
White	2,364	290	50	21%	42%	26%	10%	1%	55%	45%	41%	38%	34%
Ethnicity unknown	58	278	47	33%	41%	16%	10%	0%	46%	44%	38%	39%	31%
English Only	4,229	284	51	26%	41%	22%	9%	1%	51%	43%	39%	37%	33%
Initially Fluent English Prof.	636	285	55	27%	43%	20%	8%	2%	52%	42%	40%	36%	34%
English Learner	1,017	261	38	43%	42%	12%	2%	0%	39%	36%	34%	32%	29%
Reclassified Fluent Eng.	1,003	291	51	19%	45%	25%	10%	1%	54%	46%	42%	38%	34%
English Prof. unknown	16	259	29	50%	38%	13%	0%	0%	41%	33%	33%	29%	29%
Not in NSLP	3,919	286	52	24%	42%	23%	8%	2%	52%	43%	40%	37%	34%
In NSLP	2,962	276	49	32%	42%	18%	7%	1%	47%	41%	38%	35%	32%
NSLP status unknown	20	256	38	50%	40%	5%	5%	0%	41%	37%	32%	26%	27%
No Special Ed Services	6,133	285	51	25%	43%	23%	9%	1%	52%	43%	40%	37%	33%
Special Ed Services	768	254	38	52%	39%	8%	1%	0%	37%	34%	31%	30%	28%
Special Ed unknown	0	--	--	--	--	--	--	--	--	--	--	--	--

Table 6.A.26 Demographic Summary for Integrated Mathematics 2

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	3,615	312	57	15%	35%	29%	16%	5%	43%	43%	39%	42%	39%
Grade 8	138	403	55	1%	0%	17%	45%	37%	73%	72%	59%	66%	69%
Grade 9	592	332	62	11%	25%	29%	26%	9%	48%	51%	44%	47%	44%
Grade 10	1,545	315	57	14%	34%	29%	17%	6%	44%	43%	40%	44%	39%
Grade 11	1,340	292	38	19%	44%	29%	8%	0%	36%	37%	34%	36%	33%
Male	1,858	314	59	15%	34%	28%	16%	7%	44%	44%	39%	43%	40%
Female	1,756	310	54	14%	36%	29%	17%	4%	42%	43%	39%	42%	37%
Gender unknown	1	255	--	100%	0%	0%	0%	0%	30%	14%	38%	10%	60%
American Indian	33	309	57	15%	36%	33%	12%	3%	42%	43%	37%	39%	39%
Asian American	494	343	76	11%	23%	26%	21%	19%	52%	52%	49%	50%	47%
Pacific Islander	26	302	50	12%	46%	27%	12%	4%	38%	38%	42%	40%	38%
Filipino	123	328	69	10%	38%	19%	20%	13%	46%	49%	44%	47%	43%
Hispanic	1,301	297	44	18%	42%	28%	11%	1%	38%	38%	36%	38%	34%
African American	360	290	43	21%	48%	23%	7%	2%	36%	35%	34%	37%	32%
White	1,203	322	55	10%	28%	33%	23%	5%	46%	48%	39%	45%	42%
Ethnicity unknown	75	300	50	16%	39%	32%	9%	4%	40%	39%	35%	39%	35%
English Only	2,199	314	54	14%	33%	31%	18%	4%	43%	44%	39%	43%	39%
Initially Fluent English Prof.	302	330	73	14%	30%	25%	17%	15%	47%	48%	45%	47%	44%
English Learner	481	287	40	22%	49%	22%	5%	1%	35%	34%	33%	35%	30%
Reclassified Fluent Eng.	625	319	61	12%	34%	29%	18%	8%	45%	45%	42%	44%	40%
English Prof. unknown	8	299	52	25%	38%	25%	13%	0%	39%	36%	36%	45%	33%
Not in NSLP	2,056	322	60	12%	30%	31%	20%	7%	46%	47%	41%	45%	42%
In NSLP	1,553	299	50	18%	42%	26%	11%	3%	39%	39%	37%	38%	35%
NSLP status unknown	6	303	46	17%	33%	33%	17%	0%	40%	36%	42%	43%	40%
No Special Ed Services	3,451	314	57	14%	34%	29%	17%	6%	43%	44%	40%	43%	39%
Special Ed Services	164	283	35	24%	49%	19%	7%	0%	35%	33%	31%	32%	30%
Special Ed unknown	0	--	--	--	--	--	--	--	--	--	--	--	--

Table 6.A.27 Demographic Summary for Integrated Mathematics 3

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	1,657	304	64	21%	29%	29%	17%	4%	51%	45%	43%	44%	33%
Grade 8	8	225	31	75%	25%	0%	0%	0%	25%	22%	21%	29%	19%
Grade 9	111	345	45	4%	8%	44%	41%	3%	70%	54%	53%	57%	44%
Grade 10	476	308	59	17%	28%	34%	18%	3%	53%	46%	44%	45%	33%
Grade 11	1,062	299	67	24%	31%	26%	14%	5%	48%	44%	42%	42%	32%
Male	815	306	68	23%	27%	28%	18%	5%	51%	45%	43%	45%	33%
Female	839	303	61	20%	31%	30%	16%	3%	50%	45%	43%	43%	33%
Gender unknown	3	327	81	0%	67%	0%	33%	0%	53%	58%	39%	44%	52%
American Indian	8	295	57	25%	13%	50%	13%	0%	55%	42%	40%	40%	32%
Asian American	259	335	77	14%	19%	28%	29%	10%	58%	55%	49%	53%	39%
Pacific Islander	10	284	28	10%	50%	40%	0%	0%	36%	37%	40%	37%	33%
Filipino	115	308	69	23%	30%	19%	23%	3%	51%	47%	43%	45%	31%
Hispanic	393	295	65	25%	34%	24%	13%	4%	44%	44%	41%	41%	30%
African American	139	274	61	43%	31%	14%	10%	1%	39%	36%	35%	37%	27%
White	698	305	55	16%	28%	38%	15%	2%	54%	44%	43%	44%	35%
Ethnicity unknown	35	277	56	37%	37%	17%	6%	3%	41%	37%	37%	36%	27%
English Only	1,090	304	62	20%	29%	32%	16%	4%	52%	44%	43%	44%	34%
Initially Fluent English Prof.	168	317	81	21%	28%	20%	22%	9%	53%	49%	45%	48%	35%
English Learner	115	281	70	41%	27%	15%	17%	1%	40%	40%	37%	36%	30%
Reclassified Fluent Eng.	283	309	59	16%	30%	31%	18%	4%	48%	49%	45%	44%	30%
English Prof. unknown	1	241	--	100%	0%	0%	0%	0%	0%	26%	29%	27%	33%
Not in NSLP	1,140	305	61	19%	29%	33%	16%	3%	52%	44%	43%	44%	33%
In NSLP	516	303	72	25%	29%	22%	19%	5%	46%	46%	42%	44%	32%
NSLP status unknown	1	248	--	100%	0%	0%	0%	0%	60%	37%	29%	13%	11%
No Special Ed Services	1,604	306	64	20%	29%	29%	17%	4%	51%	45%	43%	44%	33%
Special Ed Services	52	260	49	48%	27%	23%	2%	0%	33%	34%	33%	29%	28%
Special Ed unknown	1	248	--	100%	0%	0%	0%	0%	60%	37%	29%	13%	11%

Table 6.A.28 Demographic Summary for Science Grade 5

				Percent in Proficiency Level					Mean Percent Correct in Content Area					
	Number Tested	Mean Scale Score	Std. Dev. of Scale Scores	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Physical Science 5	Physical Science 4	Life Science 5	Life Science 4	Earth Science 5	Earth Science 4
All valid scores	467,541	334	55	11%	15%	36%	28%	9%	63%	64%	60%	64%	58%	51%
Male	238,539	336	59	13%	15%	33%	29%	10%	63%	64%	60%	64%	58%	52%
Female	228,787	333	51	10%	16%	40%	28%	7%	62%	65%	59%	63%	58%	49%
Gender unknown	215	311	56	24%	19%	35%	18%	5%	56%	55%	52%	53%	51%	45%
American Indian	3,839	329	51	12%	15%	40%	27%	6%	62%	62%	58%	63%	56%	49%
Asian American	39,520	366	59	5%	8%	27%	38%	22%	72%	74%	70%	74%	66%	60%
Pacific Islander	2,880	328	50	12%	18%	40%	25%	6%	62%	62%	58%	61%	56%	47%
Filipino	13,078	353	48	4%	9%	36%	40%	11%	70%	71%	66%	71%	63%	56%
Hispanic	234,128	316	47	15%	21%	42%	20%	3%	56%	58%	54%	56%	53%	44%
African American	34,927	314	49	18%	21%	39%	19%	3%	57%	57%	53%	56%	52%	43%
White	134,907	360	54	5%	8%	30%	41%	17%	71%	73%	68%	74%	65%	60%
Ethnicity unknown	4,262	348	57	8%	11%	32%	35%	13%	67%	68%	64%	69%	61%	56%
English Only	254,325	346	56	8%	12%	34%	34%	12%	67%	68%	63%	69%	61%	55%
Initially Fluent English Prof.	31,891	356	54	4%	9%	34%	37%	15%	70%	72%	67%	72%	64%	57%
English Learner	128,624	299	42	23%	27%	39%	10%	1%	50%	53%	49%	48%	48%	39%
Reclassified Fluent Eng.	51,967	351	43	2%	7%	44%	38%	9%	69%	71%	66%	71%	64%	55%
English Prof. unknown	734	314	54	21%	19%	35%	21%	4%	56%	57%	53%	55%	52%	44%
Not in NSLP	208,268	358	55	5%	8%	31%	39%	16%	70%	72%	67%	73%	64%	59%
In NSLP	257,899	315	48	16%	21%	41%	19%	3%	56%	58%	54%	56%	53%	44%
NSLP status unknown	1,374	312	55	23%	19%	36%	18%	5%	55%	55%	52%	55%	51%	45%
No Special Ed Services	420,163	338	54	9%	14%	38%	30%	9%	64%	66%	61%	65%	59%	52%
Special Ed Services	47,274	297	54	33%	23%	27%	13%	4%	48%	50%	48%	49%	46%	40%
Special Ed unknown	104	292	49	37%	18%	31%	13%	1%	49%	47%	45%	49%	44%	39%

Table 6.A.29 Demographic Summary for Science Grade 8

				Percent in Proficiency Level					Mean Percent Correct in Content Area					
	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	477,974	340	78	12%	21%	24%	22%	20%	57%	58%	53%	60%	51%	57%
Male	244,310	342	83	14%	20%	22%	22%	23%	58%	58%	53%	62%	52%	55%
Female	233,445	337	72	10%	22%	27%	23%	18%	57%	57%	53%	58%	51%	58%
Gender unknown	219	294	69	28%	34%	19%	12%	7%	45%	48%	41%	48%	40%	43%
American Indian	3,844	326	73	15%	24%	26%	21%	14%	53%	55%	50%	58%	48%	52%
Asian American	41,375	392	83	4%	10%	17%	26%	44%	68%	69%	66%	71%	63%	70%
Pacific Islander	3,099	329	72	14%	23%	26%	22%	15%	55%	55%	51%	57%	48%	55%
Filipino	13,206	365	69	4%	12%	25%	30%	28%	62%	64%	60%	67%	57%	64%
Hispanic	229,377	315	65	16%	28%	28%	19%	9%	51%	52%	47%	54%	46%	51%
African American	37,771	308	66	20%	29%	26%	17%	8%	51%	50%	45%	52%	44%	48%
White	145,290	371	79	6%	12%	21%	27%	33%	64%	66%	60%	68%	58%	64%
Ethnicity unknown	4,012	340	83	14%	20%	23%	22%	21%	56%	58%	52%	60%	51%	57%
English Only	264,529	352	80	10%	17%	23%	25%	25%	60%	61%	56%	63%	54%	59%
Initially Fluent English Prof.	38,580	364	80	7%	15%	23%	26%	29%	63%	63%	59%	66%	57%	63%
English Learner	91,463	285	55	27%	37%	24%	9%	3%	43%	44%	40%	46%	39%	45%
Reclassified Fluent Eng.	82,502	350	66	5%	17%	31%	28%	19%	60%	61%	55%	63%	54%	61%
English Prof. unknown	900	304	73	24%	30%	21%	15%	10%	47%	49%	44%	52%	43%	47%
Not in NSLP	243,669	364	80	7%	15%	22%	26%	30%	63%	64%	59%	66%	57%	62%
In NSLP	232,954	314	67	17%	28%	27%	19%	10%	51%	52%	47%	54%	46%	51%
NSLP status unknown	1,351	309	72	21%	28%	24%	17%	10%	49%	51%	45%	52%	44%	50%
No Special Ed Services	436,374	346	77	10%	20%	25%	24%	22%	59%	59%	54%	61%	53%	58%
Special Ed Services	41,552	278	64	37%	33%	17%	8%	5%	40%	41%	39%	46%	37%	41%
Special Ed unknown	48	252	43	52%	35%	8%	4%	0%	32%	37%	33%	36%	29%	36%

Table 6.A.30 Demographic Summary for Grade 10 Life Science

				Percent in Proficiency Level					Mean Percent Correct in Content Area					
	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	463,572	328	59	18%	19%	28%	22%	13%	51%	52%	57%	58%	52%	60%
Male	235,491	328	63	20%	18%	25%	21%	15%	51%	52%	57%	58%	52%	59%
Female	227,866	328	55	15%	20%	31%	23%	11%	50%	53%	57%	58%	52%	61%
Gender unknown	215	289	46	38%	26%	27%	8%	2%	37%	38%	42%	43%	38%	49%
American Indian	3,949	323	57	20%	20%	29%	21%	11%	49%	50%	56%	56%	50%	58%
Asian American	42,839	363	65	8%	11%	23%	30%	28%	63%	63%	67%	69%	64%	70%
Pacific Islander	3,128	319	53	20%	21%	31%	21%	8%	48%	50%	53%	55%	48%	56%
Filipino	13,956	345	52	7%	13%	33%	31%	16%	57%	58%	64%	66%	58%	66%
Hispanic	206,728	308	49	24%	25%	30%	15%	5%	44%	46%	50%	50%	44%	53%
African American	35,303	304	49	27%	25%	29%	14%	4%	43%	45%	48%	48%	42%	51%
White	153,147	350	61	10%	12%	26%	30%	21%	58%	58%	65%	66%	62%	67%
Ethnicity unknown	4,522	328	63	21%	18%	25%	21%	14%	51%	51%	56%	57%	52%	59%
English Only	270,397	337	61	15%	16%	28%	26%	16%	54%	55%	60%	61%	56%	63%
Initially Fluent English Prof.	39,984	345	62	11%	14%	29%	27%	18%	56%	57%	63%	63%	58%	65%
English Learner	74,999	284	37	39%	34%	21%	5%	1%	36%	39%	40%	40%	33%	43%
Reclassified Fluent Eng.	77,313	332	51	10%	18%	37%	24%	10%	52%	54%	58%	59%	53%	62%
English Prof. unknown	879	302	50	31%	24%	27%	13%	4%	41%	42%	48%	48%	42%	51%
Not in NSLP	278,568	341	62	13%	15%	27%	27%	18%	55%	56%	61%	62%	58%	64%
In NSLP	183,718	308	50	24%	25%	30%	15%	5%	44%	46%	50%	50%	44%	53%
NSLP status unknown	1,286	301	51	32%	25%	27%	12%	4%	42%	42%	48%	47%	42%	51%
No Special Ed Services	426,719	332	59	15%	18%	29%	23%	14%	52%	54%	58%	59%	54%	61%
Special Ed Services	36,818	282	43	46%	29%	17%	6%	2%	36%	37%	40%	39%	34%	42%
Special Ed unknown	35	280	43	46%	37%	11%	3%	3%	35%	39%	38%	34%	36%	39%

Table 6.A.31 Demographic Summary for Biology

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	505,229	336	51	12%	16%	35%	24%	13%	51%	54%	53%	59%	56%
Grade 9	163,962	348	52	8%	12%	33%	28%	19%	57%	59%	58%	63%	62%
Grade 10	246,805	328	47	14%	18%	38%	21%	9%	47%	51%	50%	56%	52%
Grade 11	94,462	335	55	14%	17%	33%	21%	15%	50%	54%	53%	59%	55%
Male	250,650	335	54	14%	16%	32%	23%	15%	52%	53%	53%	58%	55%
Female	254,390	336	48	10%	16%	38%	24%	12%	50%	55%	53%	59%	57%
Gender unknown	189	303	42	28%	29%	30%	11%	3%	38%	41%	39%	44%	43%
American Indian	4,023	332	48	13%	16%	36%	24%	11%	48%	53%	53%	58%	54%
Asian American	50,928	366	56	4%	8%	28%	30%	30%	64%	65%	64%	68%	68%
Pacific Islander	3,381	325	45	14%	18%	40%	20%	7%	47%	51%	48%	54%	51%
Filipino	16,318	346	44	5%	10%	40%	32%	14%	56%	59%	58%	64%	62%
Hispanic	221,608	317	42	17%	22%	40%	16%	5%	44%	48%	45%	51%	48%
African American	37,646	314	42	20%	23%	38%	15%	4%	42%	46%	44%	51%	47%
White	166,727	355	51	6%	9%	31%	32%	22%	58%	61%	62%	67%	64%
Ethnicity unknown	4,598	338	54	13%	16%	31%	25%	16%	51%	54%	55%	59%	57%
English Only	292,913	344	51	9%	13%	33%	28%	17%	53%	57%	57%	63%	60%
Initially Fluent English Prof.	46,038	349	53	7%	12%	34%	27%	19%	56%	59%	58%	64%	62%
English Learner	75,827	296	32	29%	33%	32%	5%	1%	37%	40%	35%	41%	37%
Reclassified Fluent Eng.	89,655	336	44	7%	14%	44%	24%	10%	51%	55%	53%	59%	57%
English Prof. unknown	796	311	42	22%	24%	37%	12%	5%	42%	44%	43%	49%	46%
Not in NSLP	308,151	347	52	8%	12%	33%	28%	19%	55%	58%	58%	64%	61%
In NSLP	195,929	317	42	17%	22%	39%	16%	5%	44%	48%	45%	51%	48%
NSLP status unknown	1,149	312	43	22%	24%	35%	15%	5%	42%	45%	44%	49%	46%
No Special Ed Services	472,565	338	50	10%	15%	36%	25%	14%	52%	55%	54%	60%	57%
Special Ed Services	32,618	295	39	35%	31%	25%	7%	3%	36%	38%	36%	42%	38%
Special Ed unknown	46	300	49	35%	30%	24%	2%	9%	38%	38%	37%	44%	41%

Table 6.A.32 Demographic Summary for Chemistry

				Percent in Proficiency Level					Mean Percent Correct in Content Area					
	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	227,375	330	49	14%	14%	41%	21%	10%	64%	61%	54%	50%	55%	65%
Grade 9	3,988	334	57	19%	10%	31%	26%	14%	66%	61%	56%	51%	58%	65%
Grade 10	98,258	338	49	10%	11%	40%	26%	13%	67%	64%	57%	54%	59%	69%
Grade 11	125,129	323	48	16%	17%	42%	18%	8%	61%	59%	52%	48%	52%	62%
Male	105,142	334	53	14%	12%	37%	23%	13%	65%	63%	57%	53%	56%	65%
Female	122,185	326	45	13%	16%	44%	20%	7%	63%	60%	52%	49%	54%	65%
Gender unknown	48	314	43	17%	25%	42%	10%	6%	55%	53%	50%	45%	48%	59%
American Indian	1,359	327	44	14%	13%	45%	22%	7%	63%	60%	55%	50%	53%	66%
Asian American	34,532	355	54	6%	8%	35%	29%	22%	73%	70%	62%	60%	67%	73%
Pacific Islander	1,454	319	43	16%	18%	43%	17%	5%	60%	58%	49%	47%	50%	60%
Filipino	9,748	331	42	9%	13%	48%	22%	7%	66%	64%	53%	51%	55%	67%
Hispanic	80,110	309	41	22%	21%	42%	12%	3%	57%	54%	46%	42%	46%	56%
African American	14,757	303	40	28%	22%	38%	10%	2%	54%	51%	44%	41%	43%	52%
White	83,676	344	47	7%	9%	42%	29%	14%	69%	66%	61%	56%	60%	73%
Ethnicity unknown	1,739	335	48	11%	13%	41%	25%	10%	65%	63%	57%	53%	56%	68%
English Only	135,166	336	48	10%	12%	42%	25%	11%	66%	64%	57%	53%	57%	69%
Initially Fluent English Prof.	26,136	340	52	10%	12%	40%	23%	15%	68%	65%	57%	54%	59%	69%
English Learner	16,200	290	38	41%	25%	26%	6%	2%	49%	44%	38%	35%	41%	42%
Reclassified Fluent Eng.	49,667	321	45	16%	18%	43%	17%	6%	62%	58%	50%	47%	51%	61%
English Prof. unknown	206	321	46	16%	17%	44%	17%	7%	60%	59%	50%	47%	51%	62%
Not in NSLP	154,372	339	49	9%	11%	41%	25%	13%	67%	65%	58%	54%	59%	70%
In NSLP	72,738	310	42	22%	21%	40%	13%	4%	57%	54%	46%	43%	47%	55%
NSLP status unknown	265	320	47	17%	18%	42%	17%	7%	60%	59%	50%	46%	52%	62%
No Special Ed Services	222,846	331	49	13%	14%	41%	22%	10%	64%	62%	55%	51%	55%	66%
Special Ed Services	4,527	295	45	42%	21%	25%	9%	3%	48%	46%	41%	38%	40%	45%
Special Ed unknown	2	290	40	50%	0%	50%	0%	0%	44%	56%	25%	23%	75%	33%

Table 6.A.33 Demographic Summary for Earth Science

				Percent in Proficiency Level					Mean Percent Correct in Content Area			
	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	206,118	320	44	17%	19%	38%	20%	6%	53%	54%	49%	56%
Grade 9	136,781	323	44	15%	18%	39%	21%	6%	55%	56%	50%	58%
Grade 10	31,440	311	43	23%	21%	36%	16%	4%	49%	51%	46%	52%
Grade 11	37,897	316	45	20%	20%	36%	19%	5%	50%	53%	48%	55%
Male	110,050	322	47	18%	17%	35%	22%	7%	55%	55%	50%	57%
Female	95,955	317	41	16%	20%	42%	18%	4%	51%	54%	48%	55%
Gender unknown	113	297	36	34%	19%	38%	10%	0%	46%	45%	39%	44%
American Indian	2,264	321	42	16%	18%	39%	22%	5%	53%	55%	49%	57%
Asian American	11,975	333	46	11%	14%	38%	28%	9%	58%	59%	55%	63%
Pacific Islander	1,399	315	42	18%	21%	40%	17%	3%	52%	52%	47%	54%
Filipino	4,314	332	41	9%	13%	44%	28%	6%	58%	60%	54%	62%
Hispanic	99,854	308	39	22%	23%	40%	13%	2%	49%	49%	44%	51%
African American	16,319	304	39	26%	24%	36%	12%	2%	47%	48%	42%	48%
White	67,842	337	46	10%	12%	36%	30%	11%	60%	62%	56%	64%
Ethnicity unknown	2,151	320	46	19%	18%	35%	22%	6%	53%	54%	49%	57%
English Only	123,213	327	46	15%	16%	37%	24%	8%	56%	58%	52%	59%
Initially Fluent English Prof.	14,181	326	43	13%	16%	42%	23%	6%	56%	57%	52%	59%
English Learner	41,491	293	32	32%	30%	33%	5%	0%	42%	42%	38%	43%
Reclassified Fluent Eng.	26,728	326	38	9%	15%	49%	23%	4%	57%	57%	52%	60%
English Prof. unknown	505	306	41	25%	22%	38%	11%	3%	48%	47%	43%	49%
Not in NSLP	115,949	329	46	14%	15%	38%	25%	8%	57%	58%	53%	60%
In NSLP	89,570	308	39	22%	23%	39%	13%	2%	49%	49%	44%	51%
NSLP status unknown	599	303	40	29%	23%	34%	11%	3%	47%	47%	42%	49%
No Special Ed Services	184,106	323	44	15%	18%	40%	22%	6%	55%	56%	50%	58%
Special Ed Services	21,989	292	37	38%	27%	27%	7%	1%	42%	42%	38%	42%
Special Ed unknown	23	295	41	35%	26%	26%	9%	4%	40%	46%	39%	48%

Table 6.A.34 Demographic Summary for Physics

				Percent in Proficiency Level					Mean Percent Correct in Content Area					
	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	63,322	335	49	11%	15%	38%	22%	13%	57%	53%	61%	57%	52%	57%
Grade 9	13,596	317	44	18%	22%	39%	14%	6%	48%	45%	52%	50%	46%	50%
Grade 10	8,163	327	49	15%	18%	38%	19%	11%	53%	49%	58%	54%	48%	54%
Grade 11	41,563	343	49	8%	12%	38%	26%	16%	60%	56%	65%	60%	54%	60%
Male	33,204	342	53	11%	13%	35%	24%	17%	60%	55%	63%	60%	54%	59%
Female	30,106	328	44	12%	17%	42%	21%	8%	54%	51%	58%	54%	49%	54%
Gender unknown	12	296	48	42%	8%	42%	0%	8%	44%	35%	46%	36%	40%	42%
American Indian	369	337	50	12%	11%	38%	24%	14%	56%	53%	63%	58%	52%	58%
Asian American	10,535	359	49	4%	8%	33%	31%	25%	67%	63%	70%	65%	61%	63%
Pacific Islander	387	320	45	17%	19%	41%	17%	7%	51%	48%	54%	52%	46%	50%
Filipino	2,786	334	40	6%	15%	48%	24%	9%	56%	53%	61%	57%	52%	57%
Hispanic	20,140	311	39	20%	23%	42%	12%	3%	47%	44%	50%	47%	43%	47%
African American	4,086	304	38	25%	26%	37%	9%	2%	44%	40%	47%	44%	40%	45%
White	24,478	350	48	6%	9%	37%	29%	19%	63%	58%	68%	63%	57%	64%
Ethnicity unknown	541	339	50	10%	13%	37%	26%	14%	59%	54%	64%	59%	53%	58%
English Only	37,840	342	49	9%	12%	38%	26%	15%	60%	55%	64%	60%	54%	61%
Initially Fluent English Prof.	7,480	345	50	7%	12%	38%	25%	18%	61%	57%	65%	60%	56%	60%
English Learner	4,986	291	36	39%	31%	23%	5%	2%	39%	36%	38%	40%	37%	35%
Reclassified Fluent Eng.	12,962	327	43	10%	18%	46%	18%	8%	54%	51%	58%	53%	49%	53%
English Prof. unknown	54	322	50	20%	19%	33%	22%	6%	51%	46%	55%	52%	47%	53%
Not in NSLP	43,657	346	49	7%	11%	37%	27%	17%	61%	57%	66%	61%	56%	62%
In NSLP	19,546	312	41	20%	23%	41%	12%	4%	47%	44%	50%	48%	43%	47%
NSLP status unknown	119	319	44	19%	17%	39%	21%	3%	50%	47%	55%	51%	43%	52%
No Special Ed Services	61,444	336	49	10%	15%	39%	23%	13%	57%	53%	62%	57%	52%	57%
Special Ed Services	1,878	295	44	40%	26%	23%	6%	4%	40%	36%	40%	41%	38%	39%
Special Ed unknown	0	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 6.A.35 Demographic Summary for Integrated Science 1

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	96,209	300	36	28%	23%	38%	9%	1%	47%	40%	50%	36%	49%
Grade 9	74,652	302	37	26%	23%	40%	10%	1%	47%	41%	51%	36%	50%
Grade 10	11,301	292	34	36%	25%	32%	6%	1%	44%	36%	46%	33%	43%
Grade 11	10,256	295	34	32%	24%	36%	7%	1%	47%	36%	48%	34%	45%
Male	50,911	302	39	29%	21%	37%	11%	2%	47%	40%	51%	36%	49%
Female	45,244	299	33	26%	26%	40%	7%	1%	46%	40%	50%	35%	48%
Gender unknown	54	290	31	35%	33%	26%	6%	0%	42%	36%	44%	33%	42%
American Indian	808	301	35	26%	24%	39%	10%	1%	48%	38%	51%	36%	52%
Asian American	5,431	321	39	13%	15%	47%	20%	4%	55%	48%	61%	43%	60%
Pacific Islander	671	298	34	29%	25%	37%	8%	1%	45%	39%	48%	35%	48%
Filipino	2,720	316	34	13%	18%	52%	16%	2%	53%	46%	59%	41%	58%
Hispanic	55,878	292	32	33%	27%	35%	5%	0%	42%	37%	46%	33%	44%
African American	8,712	289	32	38%	26%	31%	4%	0%	41%	37%	44%	31%	42%
White	21,162	319	39	16%	15%	46%	20%	3%	57%	45%	60%	42%	61%
Ethnicity unknown	827	307	40	26%	19%	41%	12%	2%	51%	41%	53%	38%	52%
English Only	47,315	307	38	24%	20%	42%	13%	2%	51%	41%	54%	38%	53%
Initially Fluent English Prof.	7,379	310	37	19%	20%	46%	13%	2%	51%	43%	55%	38%	55%
English Learner	21,807	279	27	49%	30%	20%	1%	0%	35%	33%	39%	30%	34%
Reclassified Fluent Eng.	19,528	304	32	19%	25%	48%	8%	1%	48%	42%	52%	36%	52%
English Prof. unknown	180	292	33	36%	25%	33%	6%	1%	43%	39%	45%	33%	42%
Not in NSLP	46,015	309	38	22%	19%	43%	14%	2%	51%	42%	55%	39%	54%
In NSLP	49,943	292	32	34%	27%	34%	5%	0%	42%	38%	46%	33%	44%
NSLP status unknown	251	289	32	40%	25%	31%	4%	0%	42%	37%	44%	31%	42%
No Special Ed Services	86,510	303	36	25%	23%	41%	10%	1%	48%	41%	52%	36%	50%
Special Ed Services	9,685	279	30	54%	25%	18%	3%	0%	36%	32%	39%	30%	35%
Special Ed unknown	14	260	17	79%	14%	7%	0%	0%	32%	29%	28%	23%	18%

Table 6.A.36 Demographic Summary for Integrated Science 2

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	13,785	298	34	27%	26%	39%	6%	1%	49%	40%	48%	35%	42%
Grade 9	4,434	303	37	25%	25%	38%	10%	2%	51%	42%	49%	38%	43%
Grade 10	7,016	298	31	26%	26%	42%	5%	0%	49%	40%	48%	34%	42%
Grade 11	2,335	290	30	35%	28%	34%	3%	0%	45%	37%	44%	32%	39%
Male	7,387	298	35	29%	24%	38%	7%	1%	48%	40%	49%	35%	42%
Female	6,392	298	31	25%	29%	40%	5%	1%	49%	41%	47%	35%	42%
Gender unknown	6	311	24	0%	33%	67%	0%	0%	62%	31%	54%	38%	50%
American Indian	89	297	30	21%	30%	43%	6%	0%	48%	39%	50%	32%	41%
Asian American	1,028	321	39	12%	17%	47%	17%	6%	60%	49%	58%	44%	53%
Pacific Islander	117	292	32	38%	20%	39%	2%	1%	47%	38%	43%	32%	42%
Filipino	323	305	32	17%	23%	52%	6%	1%	52%	43%	53%	36%	46%
Hispanic	7,525	291	29	33%	30%	34%	3%	0%	46%	37%	44%	33%	38%
African American	1,068	286	28	38%	31%	30%	2%	0%	43%	37%	40%	32%	36%
White	3,485	310	36	18%	19%	49%	12%	2%	54%	46%	55%	38%	49%
Ethnicity unknown	150	299	33	28%	23%	40%	7%	2%	49%	41%	49%	34%	45%
English Only	6,721	303	35	23%	23%	44%	8%	1%	51%	43%	51%	36%	45%
Initially Fluent English Prof.	1,348	303	37	23%	25%	41%	8%	3%	51%	43%	51%	36%	43%
English Learner	2,981	280	25	48%	31%	20%	1%	0%	40%	32%	37%	31%	33%
Reclassified Fluent Eng.	2,716	303	30	17%	28%	48%	6%	1%	52%	42%	50%	37%	44%
English Prof. unknown	19	279	24	47%	37%	16%	0%	0%	40%	33%	32%	30%	40%
Not in NSLP	7,164	305	36	22%	22%	44%	10%	2%	52%	43%	52%	37%	46%
In NSLP	6,574	291	29	33%	30%	34%	3%	0%	45%	37%	43%	33%	38%
NSLP status unknown	47	285	27	34%	43%	21%	2%	0%	40%	38%	41%	31%	40%
No Special Ed Services	12,406	300	33	24%	26%	42%	7%	1%	50%	41%	49%	36%	43%
Special Ed Services	1,379	276	28	56%	26%	17%	2%	0%	37%	31%	37%	29%	33%
Special Ed unknown	0	--	--	--	--	--	--	--	--	--	--	--	--

Table 6.A.37 Demographic Summary for Integrated Science 3

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	1,973	304	33	17%	31%	41%	9%	1%	41%	36%	48%	32%	47%
Grade 9	236	295	27	24%	33%	40%	3%	0%	34%	32%	42%	30%	49%
Grade 10	257	298	28	19%	35%	39%	7%	0%	39%	32%	46%	31%	43%
Grade 11	1,480	306	34	16%	31%	42%	10%	1%	42%	37%	49%	32%	48%
Male	1,076	306	36	18%	29%	40%	12%	2%	42%	36%	50%	33%	48%
Female	896	301	29	17%	34%	43%	6%	0%	39%	35%	46%	30%	46%
Gender unknown	1	322	--	0%	0%	100%	0%	0%	31%	48%	43%	50%	83%
American Indian	25	309	38	12%	32%	36%	16%	4%	45%	38%	46%	31%	55%
Asian American	180	304	32	18%	31%	39%	12%	0%	40%	37%	48%	29%	48%
Pacific Islander	4	324	31	0%	25%	50%	25%	0%	50%	48%	50%	28%	67%
Filipino	40	310	32	10%	33%	43%	15%	0%	44%	40%	44%	34%	48%
Hispanic	869	297	29	21%	35%	38%	6%	0%	38%	33%	46%	30%	42%
African American	151	299	29	19%	36%	40%	6%	0%	39%	34%	44%	31%	43%
White	692	312	36	13%	26%	46%	13%	2%	45%	38%	52%	35%	53%
Ethnicity unknown	12	313	41	8%	33%	42%	8%	8%	44%	42%	42%	35%	58%
English Only	1,148	308	34	14%	29%	45%	11%	1%	43%	37%	50%	34%	50%
Initially Fluent English Prof.	160	304	32	18%	28%	43%	11%	1%	43%	35%	52%	30%	47%
English Learner	281	282	21	36%	47%	16%	1%	0%	29%	29%	36%	25%	34%
Reclassified Fluent Eng.	379	306	29	12%	30%	48%	9%	0%	43%	36%	50%	31%	48%
English Prof. unknown	5	332	56	20%	0%	40%	20%	20%	48%	48%	57%	50%	73%
Not in NSLP	1,229	306	35	16%	30%	42%	11%	1%	42%	37%	49%	32%	49%
In NSLP	735	299	29	19%	35%	40%	6%	0%	39%	34%	46%	30%	44%
NSLP status unknown	9	303	53	44%	11%	22%	11%	11%	39%	37%	48%	33%	46%
No Special Ed Services	1,767	306	33	15%	30%	44%	10%	1%	42%	36%	49%	32%	49%
Special Ed Services	206	283	23	37%	42%	18%	2%	0%	30%	28%	38%	25%	33%
Special Ed unknown	0	--	--	--	--	--	--	--	--	--	--	--	--

Table 6.A.38 Demographic Summary for Integrated Science 4

				Percent in Proficiency Level					Mean Percent Correct in Content Area				
	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	951	292	34	34%	26%	33%	5%	1%	45%	36%	42%	37%	40%
Grade 9	209	282	29	48%	22%	28%	1%	0%	41%	33%	36%	33%	39%
Grade 10	400	289	29	34%	32%	31%	5%	0%	43%	35%	40%	36%	39%
Grade 11	342	302	40	27%	22%	40%	8%	3%	50%	40%	48%	41%	43%
Male	527	292	35	35%	26%	33%	5%	1%	46%	36%	43%	37%	40%
Female	424	292	32	34%	27%	34%	5%	1%	44%	36%	41%	38%	41%
Gender unknown	0	--	--	--	--	--	--	--	--	--	--	--	--
American Indian	17	279	24	47%	29%	24%	0%	0%	43%	29%	36%	30%	36%
Asian American	60	293	28	27%	33%	37%	3%	0%	42%	38%	41%	42%	38%
Pacific Islander	6	290	31	33%	17%	50%	0%	0%	50%	23%	49%	30%	44%
Filipino	34	305	30	15%	24%	56%	6%	0%	48%	39%	49%	45%	48%
Hispanic	561	288	29	35%	29%	32%	3%	0%	43%	35%	40%	36%	39%
African American	57	280	28	51%	21%	26%	2%	0%	40%	32%	35%	32%	40%
White	208	303	45	32%	18%	34%	12%	4%	51%	41%	47%	41%	44%
Ethnicity unknown	8	295	42	50%	13%	25%	13%	0%	50%	38%	43%	38%	40%
English Only	473	295	39	36%	22%	32%	8%	2%	47%	37%	44%	38%	42%
Initially Fluent English Prof.	63	291	36	40%	16%	41%	3%	0%	46%	32%	45%	35%	42%
English Learner	272	283	24	37%	39%	23%	1%	0%	40%	35%	36%	36%	34%
Reclassified Fluent Eng.	142	299	28	21%	20%	54%	4%	0%	49%	38%	47%	38%	47%
English Prof. unknown	1	331	--	0%	0%	100%	0%	0%	69%	10%	67%	63%	83%
Not in NSLP	551	293	37	35%	25%	31%	7%	2%	46%	37%	43%	38%	41%
In NSLP	394	290	29	33%	28%	36%	3%	0%	44%	36%	41%	37%	40%
NSLP status unknown	6	289	36	50%	17%	33%	0%	0%	45%	17%	46%	41%	44%
No Special Ed Services	846	293	35	33%	26%	35%	6%	1%	45%	37%	43%	38%	41%
Special Ed Services	105	280	25	47%	30%	24%	0%	0%	42%	32%	36%	32%	33%
Special Ed unknown	0	--	--	--	--	--	--	--	--	--	--	--	--

Appendix 6.B—2007 Test Variations, Accommodations, and Modifications

Table 6.B.1 Matrix of Test Variations, Accommodations, and Modifications

Test Variation (1) / Accommodation (2) / Modification (3) *		Provision
A.	Test administration directions that are simplified or clarified (does not apply to test questions)	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 or American Sign Language to present directions for administration (does not apply to test questions)	1
	Student marks in test booklet (other than responses)	All (For grades 2, 3 – marks must be erased to avoid scanning interference)
B. 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
C. Responses dictated [orally, or in Manually Coded English or American Sign Language] to a scribe for selected-response items (multiple-choice questions)		2
D. Word processing software with spell and grammar check tools turned off for the essay responses (writing portion of the test)		2
E. Essay responses dictated orally or in Manually Coded English to a scribe, audio recorder, or speech-to-text converter and the student provides all spelling and language conventions.		2
F. 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
G. Braille transcriptions provided by the test contractor		2
H. Large-print versions [Test items enlarged if font larger than required on large-print versions]		2
I. Extra time on a test within a testing day		All
J. Test over more than one day for a test or test part to be administered in a single sitting		2
K. Supervised breaks within a section of the test		2
L. Administration of the test at the most beneficial time of day to the student		2
M. Test administered at home or in hospital by a test examiner		2

Test Variation (1) / Accommodation (2) / Modification (3) *	Provision
N. Dictionary	3
O. Manually Coded English or American Sign Language to present test questions	2 (Math, science, history–social science) 3 (ELA)
P. Test questions read aloud to student or audio presentation (CD)	2 (Math, science, history–social science) 3 (ELA)
Q. Calculators on the mathematics or science tests	3
R. Arithmetic table on the mathematics or science tests	3
S. Math manipulatives on the mathematics or science tests	3
T. Word processing software with spell and grammar check tools enabled on the essay responses writing portion of test	3
U. Essay responses dictated orally, in Manually Coded English, or in American Sign Language to a scribe, [audio recorder, or speech-to-text converter] (scribe provides spelling, grammar, and language conventions).	3
V. Assistive device that interferes with the independent work of the student on the multiple-choice and/or essay responses	3

* All = These test variations may be provided to all students.

Test Variation (1) = Eligible students may have testing variations if regularly used in the classroom.

Accommodation (2) = 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.

Modification (3) = Eligible students shall be permitted to take the tests with modifications if specified in the eligible student's IEP or Section 504 Plan.

Table 6.B.2 Matrix of Test Variations for English Learners

Test Variation	Provision
A. 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
B. 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
C. 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
D. 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

Appendix 6.C—Accommodation Summary Tables[10]

Table 6.C.1 Accommodation Summary for English–Language Arts Grade 2

Accommodation Summary for English–Language Arts Grade 2		
All Tested	**Grade 2**	**Pct. of Total**
B: Marked in test booklet	125	0.03%
C: Dictated responses to a scribe	95	0.02%
F: Used non-interfering assistive device	40	0.01%
G: Used braille test	51	0.01%
H: Used large-print test	168	0.04%
J: Tested over more than one day	947	0.21%
K: Had supervised breaks	2,708	0.59%
L: Most beneficial time of day	1,129	0.25%
M: Administered at home or in a hospital	58	0.01%
N: Used a dictionary	7	0.00%
O: Examiner presented with MCE or ASL	34	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,561	0.34%
V: Used interfering assistive device	3	0.00%
W: Used an unlisted modification	99	0.02%
X: Used an unlisted accommodation	1,000	0.22%
Accom. or Mod. is in Section 504 Plan	115	0.03%
Accom. or Mod. is in IEP	4,460	0.98%
English Learner Test Variation A	1,780	0.39%
English Learner Test Variation B	130	0.03%
English Learner Test Variation C	438	0.10%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	7,381	1.62%
No Accom., Mod., or EL Variation	448,259	98.38%
Students Not in Special Education	**Grade 2**	**Pct. of Total**
B: Marked in test booklet	23	0.01%
C: Dictated responses to a scribe	16	0.00%
F: Used non-interfering assistive device	6	0.00%
G: Used braille test	12	0.00%
H: Used large-print test	26	0.01%
J: Tested over more than one day	179	0.04%
K: Had supervised breaks	545	0.13%
L: Most beneficial time of day	226	0.05%
M: Administered at home or in a hospital	33	0.01%
N: Used a dictionary	0	0.00%

[10] The sum of the numbers of students across subgroups may not match exactly to the total testing population. For example, Students in Special Education + Students not in Special Education ≠ All Tested for the provision of an accommodation. This occurred due to the fact that only valid Primary Disability codes were chosen to identify those subgroups.

Accommodation Summary for English–Language Arts Grade 2		
O: Examiner presented with MCE or ASL	3	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	284	0.07%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	15	0.00%
X: Used an unlisted accommodation	247	0.06%
Accom. or Mod. is in Section 504 Plan	101	0.02%
Accom. or Mod. is in IEP	828	0.20%
English Learner Test Variation A	1,676	0.40%
English Learner Test Variation B	99	0.02%
English Learner Test Variation C	399	0.10%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	3,018	0.72%
No Accom., Mod., or EL Variation	416,670	99.28%
Students in Special Education	**Grade 2**	**Pct. of Total**
B: Marked in test booklet	99	0.28%
C: Dictated responses to a scribe	79	0.22%
F: Used non-interfering assistive device	34	0.09%
G: Used braille test	38	0.11%
H: Used large-print test	135	0.38%
J: Tested over more than one day	768	2.14%
K: Had supervised breaks	2,156	6.01%
L: Most beneficial time of day	900	2.51%
M: Administered at home or in a hospital	25	0.07%
N: Used a dictionary	7	0.02%
O: Examiner presented with MCE or ASL	31	0.09%
P: Examiner read test questions aloud or used audio presentation (CD)	1,268	3.53%
V: Used interfering assistive device	2	0.01%
W: Used an unlisted modification	84	0.23%
X: Used an unlisted accommodation	746	2.08%
Accom. or Mod. is in Section 504 Plan	14	0.04%
Accom. or Mod. is in IEP	3,605	10.05%
English Learner Test Variation A	104	0.29%
English Learner Test Variation B	30	0.08%
English Learner Test Variation C	39	0.11%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	4,335	12.08%
No Accom., Mod., or EL Variation	31,548	87.92%
English-Only Students	**Grade 2**	**Pct. of Total**
B: Marked in test booklet	79	0.03%
C: Dictated responses to a scribe	74	0.03%
F: Used non-interfering assistive device	26	0.01%

Accommodation Summary for English–Language Arts Grade 2		
G: Used braille test	31	0.01%
H: Used large-print test	113	0.05%
J: Tested over more than one day	630	0.25%
K: Had supervised breaks	1,718	0.69%
L: Most beneficial time of day	743	0.30%
M: Administered at home or in a hospital	44	0.02%
N: Used a dictionary	4	0.00%
O: Examiner presented with MCE or ASL	25	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	993	0.40%
V: Used interfering assistive device	3	0.00%
W: Used an unlisted modification	60	0.02%
X: Used an unlisted accommodation	623	0.25%
Accom. or Mod. is in Section 504 Plan	96	0.04%
Accom. or Mod. is in IEP	2,869	1.14%
English Learner Test Variation A	27	0.01%
English Learner Test Variation B	9	0.00%
English Learner Test Variation C	15	0.01%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	3,505	1.40%
No Accom., Mod., or EL Variation	247,177	98.60%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 2**	**Pct. of Total**
B: Marked in test booklet	8	0.02%
C: Dictated responses to a scribe	4	0.01%
F: Used non-interfering assistive device	2	0.01%
G: Used braille test	4	0.01%
H: Used large-print test	8	0.02%
J: Tested over more than one day	19	0.06%
K: Had supervised breaks	76	0.22%
L: Most beneficial time of day	23	0.07%
M: Administered at home or in a hospital	4	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	33	0.10%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	25	0.07%
Accom. or Mod. is in Section 504 Plan	5	0.01%
Accom. or Mod. is in IEP	116	0.34%
English Learner Test Variation A	31	0.09%
English Learner Test Variation B	1	0.00%

Accommodation Summary for English–Language Arts Grade 2		
English Learner Test Variation C	5	0.01%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	174	0.51%
No Accom., Mod., or EL Variation	33,697	99.49%
English Learner (EL) Students	**Grade 2**	**Pct. of Total**
B: Marked in test booklet	34	0.02%
C: Dictated responses to a scribe	17	0.01%
F: Used non-interfering assistive device	12	0.01%
G: Used braille test	15	0.01%
H: Used large-print test	39	0.02%
J: Tested over more than one day	289	0.18%
K: Had supervised breaks	899	0.54%
L: Most beneficial time of day	354	0.21%
M: Administered at home or in a hospital	10	0.01%
N: Used a dictionary	3	0.00%
O: Examiner presented with MCE or ASL	8	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	521	0.32%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	36	0.02%
X: Used an unlisted accommodation	347	0.21%
Accom. or Mod. is in Section 504 Plan	13	0.01%
Accom. or Mod. is in IEP	1,437	0.87%
English Learner Test Variation A	1,718	1.04%
English Learner Test Variation B	119	0.07%
English Learner Test Variation C	416	0.25%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	3,651	2.21%
No Accom., Mod., or EL Variation	161,321	97.79%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 2**	**Pct. of Total**
B: Marked in test booklet	0	0.00%
C: Dictated responses to a scribe	0	0.00%
F: Used non-interfering assistive device	0	0.00%
G: Used braille test	0	0.00%
H: Used large-print test	1	0.02%
J: Tested over more than one day	3	0.06%
K: Had supervised breaks	8	0.15%
L: Most beneficial time of day	5	0.09%
M: Administered at home or in a hospital	0	0.00%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	6	0.11%

Accommodation Summary for English–Language Arts Grade 2		
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	0	0.00%
X: Used an unlisted accommodation	3	0.06%
Accom. or Mod. is in Section 504 Plan	0	0.00%
Accom. or Mod. is in IEP	16	0.30%
English Learner Test Variation A	3	0.06%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	1	0.02%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	23	0.43%
No Accom., Mod., or EL Variation	5,268	99.57%

Table 6.C.2 Accommodation Summary for English–Language Arts Grade 3

Accommodation Summary for English–Language Arts Grade 3		
All Tested	**Grade 3**	**Pct. Of Total**
B: Marked in test booklet	201	0.04%
C: Dictated responses to a scribe	89	0.02%
F: Used non-interfering assistive device	43	0.01%
G: Used braille test	41	0.01%
H: Used large-print test	204	0.04%
J: Tested over more than one day	1,216	0.27%
K: Had supervised breaks	3,608	0.79%
L: Most beneficial time of day	1,427	0.31%
M: Administered at home or in a hospital	60	0.01%
N: Used a dictionary	18	0.00%
O: Examiner presented with MCE or ASL	17	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	1,788	0.39%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	112	0.02%
X: Used an unlisted accommodation	1,196	0.26%
Accom. Or Mod. Is in Section 504 Plan	155	0.03%
Accom. Or Mod. Is in IEP	5,763	1.26%
English Learner Test Variation A	1,301	0.28%
English Learner Test Variation B	80	0.02%
English Learner Test Variation C	343	0.07%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	8,296	1.81%
No Accom., Mod., or EL Variation	449,768	98.19%
Students Not in Special Education	**Grade 3**	**Pct. Of Total**
B: Marked in test booklet	39	0.01%
C: Dictated responses to a scribe	20	0.00%
F: Used non-interfering assistive device	5	0.00%
G: Used braille test	3	0.00%
H: Used large-print test	32	0.01%
J: Tested over more than one day	169	0.04%
K: Had supervised breaks	622	0.15%
L: Most beneficial time of day	220	0.05%
M: Administered at home or in a hospital	35	0.01%
N: Used a dictionary	1	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	287	0.07%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	16	0.00%
X: Used an unlisted accommodation	266	0.06%

Accommodation Summary for English–Language Arts Grade 3		
Accom. Or Mod. Is in Section 504 Plan	132	0.03%
Accom. Or Mod. Is in IEP	909	0.22%
English Learner Test Variation A	1,225	0.29%
English Learner Test Variation B	44	0.01%
English Learner Test Variation C	293	0.07%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	2,627	0.63%
No Accom., Mod., or EL Variation	412,699	99.37%
Students in Special Education	**Grade 3**	**Pct. Of Total**
B: Marked in test booklet	158	0.37%
C: Dictated responses to a scribe	67	0.16%
F: Used non-interfering assistive device	38	0.09%
G: Used braille test	36	0.08%
H: Used large-print test	162	0.38%
J: Tested over more than one day	1,041	2.44%
K: Had supervised breaks	2,971	6.96%
L: Most beneficial time of day	1,201	2.82%
M: Administered at home or in a hospital	25	0.06%
N: Used a dictionary	17	0.04%
O: Examiner presented with MCE or ASL	17	0.04%
P: Examiner read test questions aloud or used audio presentation (CD)	1,494	3.50%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	95	0.22%
X: Used an unlisted accommodation	926	2.17%
Accom. Or Mod. Is in Section 504 Plan	23	0.05%
Accom. Or Mod. Is in IEP	4,819	11.30%
English Learner Test Variation A	75	0.18%
English Learner Test Variation B	36	0.08%
English Learner Test Variation C	50	0.12%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	5,633	13.21%
No Accom., Mod., or EL Variation	37,025	86.79%
English-Only Students	**Grade 3**	**Pct. Of Total**
B: Marked in test booklet	123	0.05%
C: Dictated responses to a scribe	62	0.02%
F: Used non-interfering assistive device	22	0.01%
G: Used braille test	29	0.01%
H: Used large-print test	114	0.05%
J: Tested over more than one day	784	0.31%
K: Had supervised breaks	2,265	0.90%
L: Most beneficial time of day	923	0.37%

Accommodation Summary for English–Language Arts Grade 3		
M: Administered at home or in a hospital	37	0.01%
N: Used a dictionary	12	0.00%
O: Examiner presented with MCE or ASL	15	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,139	0.45%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	63	0.02%
X: Used an unlisted accommodation	742	0.29%
Accom. Or Mod. Is in Section 504 Plan	126	0.05%
Accom. Or Mod. Is in IEP	3,644	1.45%
English Learner Test Variation A	19	0.01%
English Learner Test Variation B	3	0.00%
English Learner Test Variation C	12	0.00%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	4,330	1.72%
No Accom., Mod., or EL Variation	247,847	98.28%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 3**	**Pct. Of Total**
B: Marked in test booklet	7	0.02%
C: Dictated responses to a scribe	2	0.01%
F: Used non-interfering assistive device	2	0.01%
G: Used braille test	1	0.00%
H: Used large-print test	7	0.02%
J: Tested over more than one day	28	0.08%
K: Had supervised breaks	89	0.24%
L: Most beneficial time of day	28	0.08%
M: Administered at home or in a hospital	4	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	51	0.14%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	3	0.01%
X: Used an unlisted accommodation	42	0.11%
Accom. Or Mod. Is in Section 504 Plan	4	0.01%
Accom. Or Mod. Is in IEP	158	0.43%
English Learner Test Variation A	14	0.04%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	1	0.00%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	201	0.54%
No Accom., Mod., or EL Variation	36,763	99.46%

Accommodation Summary for English–Language Arts Grade 3		
English Learner (EL) Students	**Grade 3**	**Pct. Of Total**
B: Marked in test booklet	61	0.04%
C: Dictated responses to a scribe	25	0.02%
F: Used non-interfering assistive device	19	0.01%
G: Used braille test	9	0.01%
H: Used large-print test	68	0.04%
J: Tested over more than one day	391	0.26%
K: Had supervised breaks	1,225	0.81%
L: Most beneficial time of day	463	0.31%
M: Administered at home or in a hospital	19	0.01%
N: Used a dictionary	6	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	584	0.39%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	44	0.03%
X: Used an unlisted accommodation	395	0.26%
Accom. Or Mod. Is in Section 504 Plan	21	0.01%
Accom. Or Mod. Is in IEP	1,908	1.26%
English Learner Test Variation A	1,253	0.83%
English Learner Test Variation B	76	0.05%
English Learner Test Variation C	329	0.22%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	3,680	2.43%
No Accom., Mod., or EL Variation	147,720	97.57%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 3**	**Pct. Of Total**
B: Marked in test booklet	2	0.01%
C: Dictated responses to a scribe	0	0.00%
F: Used non-interfering assistive device	0	0.00%
G: Used braille test	0	0.00%
H: Used large-print test	4	0.02%
J: Tested over more than one day	3	0.02%
K: Had supervised breaks	9	0.05%
L: Most beneficial time of day	5	0.03%
M: Administered at home or in a hospital	0	0.00%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	7	0.04%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	0	0.00%
X: Used an unlisted accommodation	9	0.05%

Accommodation Summary for English–Language Arts Grade 3		
Accom. Or Mod. Is in Section 504 Plan	1	0.01%
Accom. Or Mod. Is in IEP	20	0.12%
English Learner Test Variation A	11	0.07%
English Learner Test Variation B	1	0.01%
English Learner Test Variation C	0	0.00%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	37	0.22%
No Accom., Mod., or EL Variation	16,614	99.78%

Table 6.C.3 Accommodation Summary for English–Language Arts Grade 4

Accommodation Summary for English–Language Arts Grade 4		
All Tested	**Grade 4**	**Pct. of Total**
B: Marked in test booklet	805	0.17%
C: Dictated responses to a scribe	71	0.02%
D: Used word processing with tools off	190	0.04%
E: Dictated essay with conventions	88	0.02%
F: Used non-interfering assistive device	145	0.03%
G: Used braille test	46	0.01%
H: Used large-print test	257	0.06%
J: Tested over more than one day	1,614	0.35%
K: Had supervised breaks	6,072	1.32%
L: Most beneficial time of day	2,391	0.52%
M: Administered at home or in a hospital	90	0.02%
N: Used a dictionary	192	0.04%
O: Examiner presented with MCE or ASL	64	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	4,802	1.04%
T: Used word processing with tools on	19	0.00%
U: Dictated essay without conventions	75	0.02%
V: Used interfering assistive device	5	0.00%
W: Used an unlisted modification	1,438	0.31%
X: Used an unlisted accommodation	1,556	0.34%
Accom. or Mod. is in Section 504 Plan	236	0.05%
Accom. or Mod. is in IEP	8,962	1.94%
English Learner Test Variation A	3,077	0.67%
English Learner Test Variation B	336	0.07%
English Learner Test Variation C	874	0.19%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	15,739	3.42%
No Accom., Mod., or EL Variation	445,061	96.58%
Students Not in Special Education	**Grade 4**	**Pct. of Total**
B: Marked in test booklet	115	0.03%
C: Dictated responses to a scribe	12	0.00%
D: Used word processing with tools off	39	0.01%
E: Dictated essay with conventions	27	0.01%
F: Used non-interfering assistive device	21	0.01%
G: Used braille test	3	0.00%
H: Used large-print test	48	0.01%
J: Tested over more than one day	219	0.05%
K: Had supervised breaks	919	0.22%
L: Most beneficial time of day	341	0.08%
M: Administered at home or in a hospital	47	0.01%

Accommodation Summary for English–Language Arts Grade 4		
N: Used a dictionary	28	0.01%
O: Examiner presented with MCE or ASL	7	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	603	0.15%
T: Used word processing with tools on	5	0.00%
U: Dictated essay without conventions	10	0.00%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	194	0.05%
X: Used an unlisted accommodation	280	0.07%
Accom. or Mod. is in Section 504 Plan	214	0.05%
Accom. or Mod. is in IEP	1,149	0.28%
English Learner Test Variation A	2,859	0.69%
English Learner Test Variation B	233	0.06%
English Learner Test Variation C	689	0.17%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	5,116	1.23%
No Accom., Mod., or EL Variation	409,478	98.77%
Students in Special Education	**Grade 4**	**Pct. of Total**
B: Marked in test booklet	682	1.48%
C: Dictated responses to a scribe	59	0.13%
D: Used word processing with tools off	151	0.33%
E: Dictated essay with conventions	61	0.13%
F: Used non-interfering assistive device	123	0.27%
G: Used braille test	43	0.09%
H: Used large-print test	208	0.45%
J: Tested over more than one day	1,384	3.00%
K: Had supervised breaks	5,136	11.13%
L: Most beneficial time of day	2,041	4.42%
M: Administered at home or in a hospital	42	0.09%
N: Used a dictionary	164	0.36%
O: Examiner presented with MCE or ASL	57	0.12%
P: Examiner read test questions aloud or used audio presentation (CD)	4,189	9.08%
T: Used word processing with tools on	14	0.03%
U: Dictated essay without conventions	65	0.14%
V: Used interfering assistive device	4	0.01%
W: Used an unlisted modification	1,244	2.70%
X: Used an unlisted accommodation	1,274	2.76%
Accom. or Mod. is in Section 504 Plan	22	0.05%
Accom. or Mod. is in IEP	7,786	16.88%
English Learner Test Variation A	217	0.47%
English Learner Test Variation B	103	0.22%
English Learner Test Variation C	185	0.40%

Accommodation Summary for English–Language Arts Grade 4		
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	10,596	22.97%
No Accom., Mod., or EL Variation	35,541	77.03%
English-Only Students	**Grade 4**	**Pct. of Total**
B: Marked in test booklet	565	0.23%
C: Dictated responses to a scribe	46	0.02%
D: Used word processing with tools off	168	0.07%
E: Dictated essay with conventions	70	0.03%
F: Used non-interfering assistive device	90	0.04%
G: Used braille test	25	0.01%
H: Used large-print test	154	0.06%
J: Tested over more than one day	1,020	0.41%
K: Had supervised breaks	3,771	1.51%
L: Most beneficial time of day	1,489	0.59%
M: Administered at home or in a hospital	61	0.02%
N: Used a dictionary	115	0.05%
O: Examiner presented with MCE or ASL	38	0.02%
P: Examiner read test questions aloud or used audio presentation (CD)	2,799	1.12%
T: Used word processing with tools on	13	0.01%
U: Dictated essay without conventions	50	0.02%
V: Used interfering assistive device	4	0.00%
W: Used an unlisted modification	943	0.38%
X: Used an unlisted accommodation	947	0.38%
Accom. or Mod. is in Section 504 Plan	179	0.07%
Accom. or Mod. is in IEP	5,502	2.20%
English Learner Test Variation A	63	0.03%
English Learner Test Variation B	21	0.01%
English Learner Test Variation C	36	0.01%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	7,663	3.06%
No Accom., Mod., or EL Variation	242,835	96.94%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 4**	**Pct. of Total**
B: Marked in test booklet	17	0.05%
C: Dictated responses to a scribe	5	0.02%
D: Used word processing with tools off	4	0.01%
E: Dictated essay with conventions	1	0.00%
F: Used non-interfering assistive device	5	0.02%
G: Used braille test	3	0.01%
H: Used large-print test	11	0.03%
J: Tested over more than one day	40	0.12%
K: Had supervised breaks	136	0.41%

Accommodation Summary for English–Language Arts Grade 4		
L: Most beneficial time of day	60	0.18%
M: Administered at home or in a hospital	3	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	6	0.02%
P: Examiner read test questions aloud or used audio presentation (CD)	107	0.33%
T: Used word processing with tools on	2	0.01%
U: Dictated essay without conventions	2	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	41	0.13%
X: Used an unlisted accommodation	44	0.13%
Accom. or Mod. is in Section 504 Plan	6	0.02%
Accom. or Mod. is in IEP	226	0.69%
English Learner Test Variation A	36	0.11%
English Learner Test Variation B	10	0.03%
English Learner Test Variation C	6	0.02%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	356	1.09%
No Accom., Mod., or EL Variation	32,417	98.91%
English Learner (EL) Students	**Grade 4**	**Pct. of Total**
B: Marked in test booklet	210	0.14%
C: Dictated responses to a scribe	20	0.01%
D: Used word processing with tools off	15	0.01%
E: Dictated essay with conventions	15	0.01%
F: Used non-interfering assistive device	49	0.03%
G: Used braille test	15	0.01%
H: Used large-print test	80	0.05%
J: Tested over more than one day	533	0.37%
K: Had supervised breaks	2,114	1.45%
L: Most beneficial time of day	820	0.56%
M: Administered at home or in a hospital	21	0.01%
N: Used a dictionary	77	0.05%
O: Examiner presented with MCE or ASL	17	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,854	1.27%
T: Used word processing with tools on	4	0.00%
U: Dictated essay without conventions	22	0.02%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	444	0.30%
X: Used an unlisted accommodation	549	0.38%
Accom. or Mod. is in Section 504 Plan	47	0.03%
Accom. or Mod. is in IEP	3,148	2.16%

Accommodation Summary for English–Language Arts Grade 4		
English Learner Test Variation A	2,930	2.01%
English Learner Test Variation B	301	0.21%
English Learner Test Variation C	827	0.57%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	7,542	5.17%
No Accom., Mod., or EL Variation	138,464	94.83%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 4**	**Pct. of Total**
B: Marked in test booklet	10	0.03%
C: Dictated responses to a scribe	0	0.00%
D: Used word processing with tools off	3	0.01%
E: Dictated essay with conventions	2	0.01%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	3	0.01%
H: Used large-print test	11	0.04%
J: Tested over more than one day	11	0.04%
K: Had supervised breaks	33	0.11%
L: Most beneficial time of day	14	0.05%
M: Administered at home or in a hospital	3	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	30	0.10%
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	5	0.02%
X: Used an unlisted accommodation	10	0.03%
Accom. or Mod. is in Section 504 Plan	3	0.01%
Accom. or Mod. is in IEP	58	0.19%
English Learner Test Variation A	46	0.15%
English Learner Test Variation B	3	0.01%
English Learner Test Variation C	2	0.01%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	139	0.45%
No Accom., Mod., or EL Variation	30,722	99.55%

Table 6.C.4 Accommodation Summary for English–Language Arts Grade 5

Accommodation Summary for English–Language Arts Grade 5		
All Tested	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	681	0.15%
C: Dictated responses to a scribe	68	0.01%
F: Used non-interfering assistive device	65	0.01%
G: Used braille test	36	0.01%
H: Used large-print test	232	0.05%
J: Tested over more than one day	1,788	0.38%
K: Had supervised breaks	5,441	1.16%
L: Most beneficial time of day	1,896	0.40%
M: Administered at home or in a hospital	80	0.02%
N: Used a dictionary	41	0.01%
O: Examiner presented with MCE or ASL	26	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,848	0.39%
V: Used interfering assistive device	2	0.00%
W: Used an unlisted modification	138	0.03%
X: Used an unlisted accommodation	1,634	0.35%
Accom. or Mod. is in Section 504 Plan	189	0.04%
Accom. or Mod. is in IEP	8,172	1.74%
English Learner Test Variation A	1,094	0.23%
English Learner Test Variation B	147	0.03%
English Learner Test Variation C	405	0.09%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	10,837	2.31%
No Accom., Mod., or EL Variation	458,532	97.69%
Students Not in Special Education	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	94	0.02%
C: Dictated responses to a scribe	6	0.00%
F: Used non-interfering assistive device	7	0.00%
G: Used braille test	2	0.00%
H: Used large-print test	42	0.01%
J: Tested over more than one day	233	0.06%
K: Had supervised breaks	773	0.18%
L: Most beneficial time of day	238	0.06%
M: Administered at home or in a hospital	36	0.01%
N: Used a dictionary	1	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	190	0.05%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	18	0.00%
X: Used an unlisted accommodation	246	0.06%

Accommodation Summary for English–Language Arts Grade 5		
Accom. or Mod. is in Section 504 Plan	170	0.04%
Accom. or Mod. is in IEP	940	0.22%
English Learner Test Variation A	1,021	0.24%
English Learner Test Variation B	89	0.02%
English Learner Test Variation C	335	0.08%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	2,478	0.59%
No Accom., Mod., or EL Variation	418,917	99.41%
Students in Special Education	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	585	1.22%
C: Dictated responses to a scribe	62	0.13%
F: Used non-interfering assistive device	58	0.12%
G: Used braille test	34	0.07%
H: Used large-print test	188	0.39%
J: Tested over more than one day	1,549	3.24%
K: Had supervised breaks	4,649	9.71%
L: Most beneficial time of day	1,654	3.46%
M: Administered at home or in a hospital	44	0.09%
N: Used a dictionary	40	0.08%
O: Examiner presented with MCE or ASL	26	0.05%
P: Examiner read test questions aloud or used audio presentation (CD)	1,649	3.44%
V: Used interfering assistive device	2	0.00%
W: Used an unlisted modification	120	0.25%
X: Used an unlisted accommodation	1,386	2.90%
Accom. or Mod. is in Section 504 Plan	19	0.04%
Accom. or Mod. is in IEP	7,201	15.04%
English Learner Test Variation A	73	0.15%
English Learner Test Variation B	58	0.12%
English Learner Test Variation C	70	0.15%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	8,328	17.40%
No Accom., Mod., or EL Variation	39,541	82.60%
English-Only Students	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	494	0.19%
C: Dictated responses to a scribe	44	0.02%
F: Used non-interfering assistive device	38	0.01%
G: Used braille test	23	0.01%
H: Used large-print test	158	0.06%
J: Tested over more than one day	1,143	0.45%
K: Had supervised breaks	3,368	1.32%
L: Most beneficial time of day	1,175	0.46%

Accommodation Summary for English–Language Arts Grade 5		
M: Administered at home or in a hospital	52	0.02%
N: Used a dictionary	28	0.01%
O: Examiner presented with MCE or ASL	23	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,059	0.41%
V: Used interfering assistive device	2	0.00%
W: Used an unlisted modification	90	0.04%
X: Used an unlisted accommodation	1,016	0.40%
Accom. or Mod. is in Section 504 Plan	162	0.06%
Accom. or Mod. is in IEP	5,042	1.97%
English Learner Test Variation A	29	0.01%
English Learner Test Variation B	10	0.00%
English Learner Test Variation C	11	0.00%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	5,971	2.34%
No Accom., Mod., or EL Variation	249,575	97.66%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	25	0.08%
C: Dictated responses to a scribe	3	0.01%
F: Used non-interfering assistive device	5	0.02%
G: Used braille test	3	0.01%
H: Used large-print test	5	0.02%
J: Tested over more than one day	48	0.15%
K: Had supervised breaks	141	0.44%
L: Most beneficial time of day	43	0.13%
M: Administered at home or in a hospital	4	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	41	0.13%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	5	0.02%
X: Used an unlisted accommodation	61	0.19%
Accom. or Mod. is in Section 504 Plan	3	0.01%
Accom. or Mod. is in IEP	223	0.70%
English Learner Test Variation A	8	0.03%
English Learner Test Variation B	7	0.02%
English Learner Test Variation C	9	0.03%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	275	0.86%
No Accom., Mod., or EL Variation	31,671	99.14%

Accommodation Summary for English–Language Arts Grade 5		
English Learner (EL) Students	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	155	0.12%
C: Dictated responses to a scribe	18	0.01%
F: Used non-interfering assistive device	18	0.01%
G: Used braille test	10	0.01%
H: Used large-print test	56	0.04%
J: Tested over more than one day	582	0.45%
K: Had supervised breaks	1,866	1.45%
L: Most beneficial time of day	650	0.50%
M: Administered at home or in a hospital	22	0.02%
N: Used a dictionary	11	0.01%
O: Examiner presented with MCE or ASL	3	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	721	0.56%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	41	0.03%
X: Used an unlisted accommodation	539	0.42%
Accom. or Mod. is in Section 504 Plan	22	0.02%
Accom. or Mod. is in IEP	2,795	2.17%
English Learner Test Variation A	1,038	0.80%
English Learner Test Variation B	130	0.10%
English Learner Test Variation C	385	0.30%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	4,437	3.44%
No Accom., Mod., or EL Variation	124,661	96.56%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	6	0.01%
C: Dictated responses to a scribe	3	0.01%
F: Used non-interfering assistive device	4	0.01%
G: Used braille test	0	0.00%
H: Used large-print test	12	0.02%
J: Tested over more than one day	10	0.02%
K: Had supervised breaks	45	0.09%
L: Most beneficial time of day	22	0.04%
M: Administered at home or in a hospital	2	0.00%
N: Used a dictionary	1	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	18	0.03%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	12	0.02%

Accommodation Summary for English–Language Arts Grade 5		
Accom. or Mod. is in Section 504 Plan	2	0.00%
Accom. or Mod. is in IEP	82	0.16%
English Learner Test Variation A	19	0.04%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	0	0.00%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	117	0.22%
No Accom., Mod., or EL Variation	51,907	99.78%

Table 6.C.5 Accommodation Summary for English–Language Arts Grade 6

Accommodation Summary for English–Language Arts Grade 6		
All Tested	**Grade 6**	**Pct. of Total**
B: Marked in test booklet	425	0.09%
C: Dictated responses to a scribe	67	0.01%
F: Used non-interfering assistive device	69	0.01%
G: Used braille test	33	0.01%
H: Used large-print test	186	0.04%
J: Tested over more than one day	1,440	0.30%
K: Had supervised breaks	3,751	0.79%
L: Most beneficial time of day	1,241	0.26%
M: Administered at home or in a hospital	79	0.02%
N: Used a dictionary	39	0.01%
O: Examiner presented with MCE or ASL	30	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,665	0.35%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	114	0.02%
X: Used an unlisted accommodation	1,555	0.33%
Accom. or Mod. is in Section 504 Plan	143	0.03%
Accom. or Mod. is in IEP	6,438	1.35%
English Learner Test Variation A	1,501	0.31%
English Learner Test Variation B	108	0.02%
English Learner Test Variation C	723	0.15%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	9,258	1.94%
No Accom., Mod., or EL Variation	467,991	98.06%
Students Not in Special Education	**Grade 6**	**Pct. of Total**
B: Marked in test booklet	58	0.01%
C: Dictated responses to a scribe	13	0.00%
F: Used non-interfering assistive device	15	0.00%
G: Used braille test	3	0.00%
H: Used large-print test	37	0.01%
J: Tested over more than one day	168	0.04%
K: Had supervised breaks	468	0.11%
L: Most beneficial time of day	145	0.03%
M: Administered at home or in a hospital	43	0.01%
N: Used a dictionary	2	0.00%
O: Examiner presented with MCE or ASL	3	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	160	0.04%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	10	0.00%
X: Used an unlisted accommodation	207	0.05%

Accommodation Summary for English–Language Arts Grade 6		
Accom. or Mod. is in Section 504 Plan	124	0.03%
Accom. or Mod. is in IEP	694	0.16%
English Learner Test Variation A	1,409	0.33%
English Learner Test Variation B	85	0.02%
English Learner Test Variation C	685	0.16%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	2,694	0.63%
No Accom., Mod., or EL Variation	428,278	99.37%
Students in Special Education	**Grade 6**	**Pct. of Total**
B: Marked in test booklet	367	0.79%
C: Dictated responses to a scribe	54	0.12%
F: Used non-interfering assistive device	54	0.12%
G: Used braille test	30	0.06%
H: Used large-print test	148	0.32%
J: Tested over more than one day	1,270	2.75%
K: Had supervised breaks	3,271	7.08%
L: Most beneficial time of day	1,089	2.36%
M: Administered at home or in a hospital	36	0.08%
N: Used a dictionary	37	0.08%
O: Examiner presented with MCE or ASL	27	0.06%
P: Examiner read test questions aloud or used audio presentation (CD)	1,500	3.25%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	104	0.22%
X: Used an unlisted accommodation	1,342	2.90%
Accom. or Mod. is in Section 504 Plan	19	0.04%
Accom. or Mod. is in IEP	5,715	12.36%
English Learner Test Variation A	92	0.20%
English Learner Test Variation B	23	0.05%
English Learner Test Variation C	38	0.08%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	6,535	14.14%
No Accom., Mod., or EL Variation	39,689	85.86%
English-Only Students	**Grade 6**	**Pct. of Total**
B: Marked in test booklet	302	0.12%
C: Dictated responses to a scribe	52	0.02%
F: Used non-interfering assistive device	56	0.02%
G: Used braille test	14	0.01%
H: Used large-print test	130	0.05%
J: Tested over more than one day	924	0.35%
K: Had supervised breaks	2,402	0.92%
L: Most beneficial time of day	794	0.30%

Accommodation Summary for English–Language Arts Grade 6		
M: Administered at home or in a hospital	65	0.02%
N: Used a dictionary	24	0.01%
O: Examiner presented with MCE or ASL	25	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	983	0.38%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	72	0.03%
X: Used an unlisted accommodation	960	0.37%
Accom. or Mod. is in Section 504 Plan	113	0.04%
Accom. or Mod. is in IEP	4,061	1.55%
English Learner Test Variation A	40	0.02%
English Learner Test Variation B	3	0.00%
English Learner Test Variation C	16	0.01%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	4,789	1.83%
No Accom., Mod., or EL Variation	256,769	98.17%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 6**	**Pct. of Total**
B: Marked in test booklet	12	0.03%
C: Dictated responses to a scribe	1	0.00%
F: Used non-interfering assistive device	0	0.00%
G: Used braille test	3	0.01%
H: Used large-print test	9	0.02%
J: Tested over more than one day	31	0.08%
K: Had supervised breaks	91	0.23%
L: Most beneficial time of day	24	0.06%
M: Administered at home or in a hospital	3	0.01%
N: Used a dictionary	1	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	22	0.06%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	3	0.01%
X: Used an unlisted accommodation	67	0.17%
Accom. or Mod. is in Section 504 Plan	5	0.01%
Accom. or Mod. is in IEP	171	0.43%
English Learner Test Variation A	7	0.02%
English Learner Test Variation B	2	0.01%
English Learner Test Variation C	4	0.01%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	206	0.52%
No Accom., Mod., or EL Variation	39,363	99.48%

Accommodation Summary for English–Language Arts Grade 6		
English Learner (EL) Students	**Grade 6**	**Pct. of Total**
B: Marked in test booklet	100	0.09%
C: Dictated responses to a scribe	13	0.01%
F: Used non-interfering assistive device	12	0.01%
G: Used braille test	14	0.01%
H: Used large-print test	39	0.04%
J: Tested over more than one day	461	0.43%
K: Had supervised breaks	1,192	1.11%
L: Most beneficial time of day	402	0.38%
M: Administered at home or in a hospital	10	0.01%
N: Used a dictionary	13	0.01%
O: Examiner presented with MCE or ASL	4	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	618	0.58%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	35	0.03%
X: Used an unlisted accommodation	478	0.45%
Accom. or Mod. is in Section 504 Plan	20	0.02%
Accom. or Mod. is in IEP	2,064	1.93%
English Learner Test Variation A	1,442	1.35%
English Learner Test Variation B	95	0.09%
English Learner Test Variation C	675	0.63%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	4,060	3.80%
No Accom., Mod., or EL Variation	102,867	96.20%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 6**	**Pct. of Total**
B: Marked in test booklet	11	0.02%
C: Dictated responses to a scribe	0	0.00%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	2	0.00%
H: Used large-print test	8	0.01%
J: Tested over more than one day	21	0.03%
K: Had supervised breaks	56	0.08%
L: Most beneficial time of day	16	0.02%
M: Administered at home or in a hospital	1	0.00%
N: Used a dictionary	1	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	34	0.05%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	40	0.06%

Accommodation Summary for English–Language Arts Grade 6		
Accom. or Mod. is in Section 504 Plan	5	0.01%
Accom. or Mod. is in IEP	116	0.17%
English Learner Test Variation A	8	0.01%
English Learner Test Variation B	5	0.01%
English Learner Test Variation C	25	0.04%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	171	0.25%
No Accom., Mod., or EL Variation	68,272	99.75%

Table 6.C.6 Accommodation Summary for English–Language Arts Grade 7

Accommodation Summary for English–Language Arts Grade 7		
All Tested	**Grade 7**	**Pct. of Total**
B: Marked in test booklet	275	0.06%
C: Dictated responses to a scribe	44	0.01%
D: Used word processing with tools off	290	0.06%
E: Dictated essay with conventions	73	0.02%
F: Used non-interfering assistive device	121	0.03%
G: Used braille test	67	0.01%
H: Used large-print test	218	0.05%
J: Tested over more than one day	660	0.14%
K: Had supervised breaks	2,699	0.56%
L: Most beneficial time of day	1,079	0.22%
M: Administered at home or in a hospital	137	0.03%
N: Used a dictionary	208	0.04%
O: Examiner presented with MCE or ASL	50	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	3,581	0.74%
T: Used word processing with tools on	34	0.01%
U: Dictated essay without conventions	39	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1,254	0.26%
X: Used an unlisted accommodation	1,261	0.26%
Accom. or Mod. is in Section 504 Plan	121	0.03%
Accom. or Mod. is in IEP	5,342	1.11%
English Learner Test Variation A	3,696	0.77%
English Learner Test Variation B	176	0.04%
English Learner Test Variation C	2,714	0.56%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	13,418	2.78%
No Accom., Mod., or EL Variation	469,126	97.22%
Students Not in Special Education	**Grade 7**	**Pct. of Total**
B: Marked in test booklet	48	0.01%
C: Dictated responses to a scribe	3	0.00%
D: Used word processing with tools off	90	0.02%
E: Dictated essay with conventions	21	0.00%
F: Used non-interfering assistive device	21	0.00%
G: Used braille test	5	0.00%
H: Used large-print test	36	0.01%
J: Tested over more than one day	63	0.01%
K: Had supervised breaks	321	0.07%
L: Most beneficial time of day	141	0.03%
M: Administered at home or in a hospital	77	0.02%

Accommodation Summary for English–Language Arts Grade 7		
N: Used a dictionary	49	0.01%
O: Examiner presented with MCE or ASL	3	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	368	0.08%
T: Used word processing with tools on	9	0.00%
U: Dictated essay without conventions	5	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	172	0.04%
X: Used an unlisted accommodation	175	0.04%
Accom. or Mod. is in Section 504 Plan	89	0.02%
Accom. or Mod. is in IEP	533	0.12%
English Learner Test Variation A	3,536	0.81%
English Learner Test Variation B	147	0.03%
English Learner Test Variation C	2,559	0.58%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	5,876	1.34%
No Accom., Mod., or EL Variation	432,211	98.66%
Students in Special Education	**Grade 7**	**Pct. of Total**
B: Marked in test booklet	227	0.51%
C: Dictated responses to a scribe	41	0.09%
D: Used word processing with tools off	199	0.45%
E: Dictated essay with conventions	52	0.12%
F: Used non-interfering assistive device	100	0.23%
G: Used braille test	62	0.14%
H: Used large-print test	182	0.41%
J: Tested over more than one day	594	1.34%
K: Had supervised breaks	2,361	5.32%
L: Most beneficial time of day	931	2.10%
M: Administered at home or in a hospital	60	0.14%
N: Used a dictionary	159	0.36%
O: Examiner presented with MCE or ASL	47	0.11%
P: Examiner read test questions aloud or used audio presentation (CD)	3,200	7.21%
T: Used word processing with tools on	25	0.06%
U: Dictated essay without conventions	34	0.08%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1,082	2.44%
X: Used an unlisted accommodation	1,081	2.43%
Accom. or Mod. is in Section 504 Plan	32	0.07%
Accom. or Mod. is in IEP	4,782	10.77%
English Learner Test Variation A	159	0.36%
English Learner Test Variation B	29	0.07%
English Learner Test Variation C	155	0.35%

Accommodation Summary for English–Language Arts Grade 7		
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	7,515	16.93%
No Accom., Mod., or EL Variation	36,886	83.07%
English-Only Students	**Grade 7**	**Pct. of Total**
B: Marked in test booklet	202	0.08%
C: Dictated responses to a scribe	35	0.01%
D: Used word processing with tools off	263	0.10%
E: Dictated essay with conventions	50	0.02%
F: Used non-interfering assistive device	82	0.03%
G: Used braille test	39	0.01%
H: Used large-print test	142	0.05%
J: Tested over more than one day	452	0.17%
K: Had supervised breaks	1,823	0.69%
L: Most beneficial time of day	777	0.29%
M: Administered at home or in a hospital	89	0.03%
N: Used a dictionary	101	0.04%
O: Examiner presented with MCE or ASL	36	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	2,028	0.77%
T: Used word processing with tools on	26	0.01%
U: Dictated essay without conventions	26	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	762	0.29%
X: Used an unlisted accommodation	810	0.31%
Accom. or Mod. is in Section 504 Plan	103	0.04%
Accom. or Mod. is in IEP	3,352	1.27%
English Learner Test Variation A	86	0.03%
English Learner Test Variation B	2	0.00%
English Learner Test Variation C	48	0.02%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	5,429	2.05%
No Accom., Mod., or EL Variation	259,436	97.95%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 7**	**Pct. of Total**
B: Marked in test booklet	11	0.03%
C: Dictated responses to a scribe	1	0.00%
D: Used word processing with tools off	5	0.01%
E: Dictated essay with conventions	7	0.02%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	6	0.02%
H: Used large-print test	14	0.04%
J: Tested over more than one day	11	0.03%
K: Had supervised breaks	54	0.14%

Accommodation Summary for English–Language Arts Grade 7		
L: Most beneficial time of day	20	0.05%
M: Administered at home or in a hospital	10	0.03%
N: Used a dictionary	5	0.01%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	75	0.19%
T: Used word processing with tools on	0	0.00%
U: Dictated essay without conventions	2	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	33	0.09%
X: Used an unlisted accommodation	41	0.11%
Accom. or Mod. is in Section 504 Plan	1	0.00%
Accom. or Mod. is in IEP	140	0.36%
English Learner Test Variation A	23	0.06%
English Learner Test Variation B	3	0.01%
English Learner Test Variation C	13	0.03%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	240	0.62%
No Accom., Mod., or EL Variation	38,324	99.38%
English Learner (EL) Students	**Grade 7**	**Pct. of Total**
B: Marked in test booklet	49	0.05%
C: Dictated responses to a scribe	7	0.01%
D: Used word processing with tools off	12	0.01%
E: Dictated essay with conventions	12	0.01%
F: Used non-interfering assistive device	32	0.03%
G: Used braille test	18	0.02%
H: Used large-print test	48	0.05%
J: Tested over more than one day	185	0.18%
K: Had supervised breaks	759	0.75%
L: Most beneficial time of day	255	0.25%
M: Administered at home or in a hospital	31	0.03%
N: Used a dictionary	98	0.10%
O: Examiner presented with MCE or ASL	13	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,383	1.37%
T: Used word processing with tools on	5	0.00%
U: Dictated essay without conventions	11	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	420	0.42%
X: Used an unlisted accommodation	381	0.38%
Accom. or Mod. is in Section 504 Plan	13	0.01%
Accom. or Mod. is in IEP	1,723	1.71%

Accommodation Summary for English–Language Arts Grade 7		
English Learner Test Variation A	3,525	3.49%
English Learner Test Variation B	170	0.17%
English Learner Test Variation C	2,591	2.57%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	7,417	7.35%
No Accom., Mod., or EL Variation	93,544	92.65%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 7**	**Pct. of Total**
B: Marked in test booklet	12	0.02%
C: Dictated responses to a scribe	1	0.00%
D: Used word processing with tools off	9	0.01%
E: Dictated essay with conventions	4	0.01%
F: Used non-interfering assistive device	6	0.01%
G: Used braille test	4	0.01%
H: Used large-print test	14	0.02%
J: Tested over more than one day	10	0.01%
K: Had supervised breaks	50	0.06%
L: Most beneficial time of day	20	0.03%
M: Administered at home or in a hospital	7	0.01%
N: Used a dictionary	4	0.01%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	86	0.11%
T: Used word processing with tools on	3	0.00%
U: Dictated essay without conventions	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	38	0.05%
X: Used an unlisted accommodation	22	0.03%
Accom. or Mod. is in Section 504 Plan	4	0.01%
Accom. or Mod. is in IEP	102	0.13%
English Learner Test Variation A	48	0.06%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	56	0.07%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	288	0.37%
No Accom., Mod., or EL Variation	76,854	99.63%

Table 6.C.7 Accommodation Summary for English–Language Arts Grade 8

Accommodation Summary for English–Language Arts Grade 8		
All Tested	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	290	0.06%
C: Dictated responses to a scribe	42	0.01%
F: Used non-interfering assistive device	68	0.01%
G: Used braille test	57	0.01%
H: Used large-print test	203	0.04%
J: Tested over more than one day	656	0.14%
K: Had supervised breaks	1,925	0.40%
L: Most beneficial time of day	664	0.14%
M: Administered at home or in a hospital	130	0.03%
N: Used a dictionary	33	0.01%
O: Examiner presented with MCE or ASL	29	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,052	0.22%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	110	0.02%
X: Used an unlisted accommodation	1,247	0.26%
Accom. or Mod. is in Section 504 Plan	80	0.02%
Accom. or Mod. is in IEP	4,257	0.88%
English Learner Test Variation A	1,612	0.33%
English Learner Test Variation B	62	0.01%
English Learner Test Variation C	1,175	0.24%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	7,182	1.49%
No Accom., Mod., or EL Variation	475,024	98.51%
Students Not in Special Education	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	34	0.01%
C: Dictated responses to a scribe	5	0.00%
F: Used non-interfering assistive device	6	0.00%
G: Used braille test	6	0.00%
H: Used large-print test	33	0.01%
J: Tested over more than one day	46	0.01%
K: Had supervised breaks	234	0.05%
L: Most beneficial time of day	70	0.02%
M: Administered at home or in a hospital	66	0.02%
N: Used a dictionary	4	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	91	0.02%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	12	0.00%
X: Used an unlisted accommodation	121	0.03%

Accommodation Summary for English–Language Arts Grade 8		
Accom. or Mod. is in Section 504 Plan	71	0.02%
Accom. or Mod. is in IEP	385	0.09%
English Learner Test Variation A	1,572	0.36%
English Learner Test Variation B	46	0.01%
English Learner Test Variation C	1,142	0.26%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	2,740	0.62%
No Accom., Mod., or EL Variation	436,830	99.38%
Students in Special Education	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	255	0.60%
C: Dictated responses to a scribe	37	0.09%
F: Used non-interfering assistive device	61	0.14%
G: Used braille test	51	0.12%
H: Used large-print test	170	0.40%
J: Tested over more than one day	608	1.43%
K: Had supervised breaks	1,683	3.95%
L: Most beneficial time of day	590	1.39%
M: Administered at home or in a hospital	62	0.15%
N: Used a dictionary	29	0.07%
O: Examiner presented with MCE or ASL	28	0.07%
P: Examiner read test questions aloud or used audio presentation (CD)	955	2.24%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	97	0.23%
X: Used an unlisted accommodation	1,121	2.63%
Accom. or Mod. is in Section 504 Plan	9	0.02%
Accom. or Mod. is in IEP	3,850	9.04%
English Learner Test Variation A	40	0.09%
English Learner Test Variation B	16	0.04%
English Learner Test Variation C	33	0.08%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	4,420	10.38%
No Accom., Mod., or EL Variation	38,166	89.62%
English-Only Students	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	214	0.08%
C: Dictated responses to a scribe	32	0.01%
F: Used non-interfering assistive device	43	0.02%
G: Used braille test	31	0.01%
H: Used large-print test	144	0.05%
J: Tested over more than one day	418	0.16%
K: Had supervised breaks	1,273	0.48%
L: Most beneficial time of day	452	0.17%

Accommodation Summary for English–Language Arts Grade 8		
M: Administered at home or in a hospital	81	0.03%
N: Used a dictionary	19	0.01%
O: Examiner presented with MCE or ASL	21	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	601	0.22%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	59	0.02%
X: Used an unlisted accommodation	780	0.29%
Accom. or Mod. is in Section 504 Plan	62	0.02%
Accom. or Mod. is in IEP	2,671	1.00%
English Learner Test Variation A	40	0.01%
English Learner Test Variation B	2	0.00%
English Learner Test Variation C	19	0.01%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	3,199	1.20%
No Accom., Mod., or EL Variation	264,027	98.80%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	10	0.03%
C: Dictated responses to a scribe	0	0.00%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	3	0.01%
H: Used large-print test	9	0.02%
J: Tested over more than one day	12	0.03%
K: Had supervised breaks	47	0.12%
L: Most beneficial time of day	21	0.05%
M: Administered at home or in a hospital	7	0.02%
N: Used a dictionary	4	0.01%
O: Examiner presented with MCE or ASL	3	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	15	0.04%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	5	0.01%
X: Used an unlisted accommodation	38	0.10%
Accom. or Mod. is in Section 504 Plan	4	0.01%
Accom. or Mod. is in IEP	110	0.28%
English Learner Test Variation A	8	0.02%
English Learner Test Variation B	3	0.01%
English Learner Test Variation C	9	0.02%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	152	0.39%
No Accom., Mod., or EL Variation	38,610	99.61%

Accommodation Summary for English–Language Arts Grade 8		
English Learner (EL) Students	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	51	0.06%
C: Dictated responses to a scribe	6	0.01%
F: Used non-interfering assistive device	21	0.02%
G: Used braille test	19	0.02%
H: Used large-print test	36	0.04%
J: Tested over more than one day	198	0.21%
K: Had supervised breaks	538	0.58%
L: Most beneficial time of day	158	0.17%
M: Administered at home or in a hospital	33	0.04%
N: Used a dictionary	9	0.01%
O: Examiner presented with MCE or ASL	5	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	410	0.44%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	40	0.04%
X: Used an unlisted accommodation	392	0.42%
Accom. or Mod. is in Section 504 Plan	12	0.01%
Accom. or Mod. is in IEP	1,330	1.44%
English Learner Test Variation A	1,552	1.68%
English Learner Test Variation B	56	0.06%
English Learner Test Variation C	1,119	1.21%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	3,615	3.91%
No Accom., Mod., or EL Variation	88,832	96.09%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	14	0.02%
C: Dictated responses to a scribe	4	0.00%
F: Used non-interfering assistive device	3	0.00%
G: Used braille test	4	0.00%
H: Used large-print test	14	0.02%
J: Tested over more than one day	23	0.03%
K: Had supervised breaks	56	0.07%
L: Most beneficial time of day	25	0.03%
M: Administered at home or in a hospital	6	0.01%
N: Used a dictionary	1	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	20	0.02%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	4	0.00%
X: Used an unlisted accommodation	33	0.04%

Accommodation Summary for English–Language Arts Grade 8		
Accom. or Mod. is in Section 504 Plan	1	0.00%
Accom. or Mod. is in IEP	123	0.15%
English Learner Test Variation A	8	0.01%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	25	0.03%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	184	0.22%
No Accom., Mod., or EL Variation	82,653	99.78%

Table 6.C.8 Accommodation Summary for English–Language Arts Grade 9

Accommodation Summary for English–Language Arts Grade 9		
All Tested	**Grade 9**	**Pct. of Total**
B: Marked in test booklet	99	0.02%
C: Dictated responses to a scribe	42	0.01%
F: Used non-interfering assistive device	14	0.00%
G: Used braille test	45	0.01%
H: Used large-print test	113	0.02%
J: Tested over more than one day	233	0.05%
K: Had supervised breaks	1,046	0.21%
L: Most beneficial time of day	253	0.05%
M: Administered at home or in a hospital	133	0.03%
N: Used a dictionary	86	0.02%
O: Examiner presented with MCE or ASL	14	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	788	0.16%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	37	0.01%
X: Used an unlisted accommodation	444	0.09%
Accom. or Mod. is in Section 504 Plan	24	0.00%
Accom. or Mod. is in IEP	2,192	0.43%
English Learner Test Variation A	2,057	0.40%
English Learner Test Variation B	176	0.03%
English Learner Test Variation C	2,017	0.40%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	5,496	1.08%
No Accom., Mod., or EL Variation	502,671	98.92%
Students Not in Special Education	**Grade 9**	**Pct. of Total**
B: Marked in test booklet	17	0.00%
C: Dictated responses to a scribe	4	0.00%
F: Used non-interfering assistive device	2	0.00%
G: Used braille test	9	0.00%
H: Used large-print test	22	0.00%
J: Tested over more than one day	12	0.00%
K: Had supervised breaks	91	0.02%
L: Most beneficial time of day	16	0.00%
M: Administered at home or in a hospital	67	0.01%
N: Used a dictionary	31	0.01%
O: Examiner presented with MCE or ASL	2	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	79	0.02%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	2	0.00%
X: Used an unlisted accommodation	35	0.01%

Accommodation Summary for English–Language Arts Grade 9		
Accom. or Mod. is in Section 504 Plan	19	0.00%
Accom. or Mod. is in IEP	191	0.04%
English Learner Test Variation A	2,023	0.43%
English Learner Test Variation B	168	0.04%
English Learner Test Variation C	1,969	0.42%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	3,086	0.66%
No Accom., Mod., or EL Variation	462,976	99.34%
Students in Special Education	**Grade 9**	**Pct. of Total**
B: Marked in test booklet	81	0.19%
C: Dictated responses to a scribe	38	0.09%
F: Used non-interfering assistive device	12	0.03%
G: Used braille test	36	0.09%
H: Used large-print test	91	0.22%
J: Tested over more than one day	219	0.52%
K: Had supervised breaks	948	2.25%
L: Most beneficial time of day	236	0.56%
M: Administered at home or in a hospital	66	0.16%
N: Used a dictionary	55	0.13%
O: Examiner presented with MCE or ASL	12	0.03%
P: Examiner read test questions aloud or used audio presentation (CD)	709	1.69%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	35	0.08%
X: Used an unlisted accommodation	407	0.97%
Accom. or Mod. is in Section 504 Plan	5	0.01%
Accom. or Mod. is in IEP	1,991	4.73%
English Learner Test Variation A	34	0.08%
English Learner Test Variation B	8	0.02%
English Learner Test Variation C	48	0.11%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	2,400	5.71%
No Accom., Mod., or EL Variation	39,666	94.29%
English-Only Students	**Grade 9**	**Pct. of Total**
B: Marked in test booklet	77	0.03%
C: Dictated responses to a scribe	30	0.01%
F: Used non-interfering assistive device	8	0.00%
G: Used braille test	38	0.01%
H: Used large-print test	84	0.03%
J: Tested over more than one day	202	0.07%
K: Had supervised breaks	795	0.28%
L: Most beneficial time of day	220	0.08%

Accommodation Summary for English–Language Arts Grade 9		
M: Administered at home or in a hospital	104	0.04%
N: Used a dictionary	56	0.02%
O: Examiner presented with MCE or ASL	7	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	450	0.16%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	23	0.01%
X: Used an unlisted accommodation	297	0.10%
Accom. or Mod. is in Section 504 Plan	19	0.01%
Accom. or Mod. is in IEP	1,512	0.53%
English Learner Test Variation A	53	0.02%
English Learner Test Variation B	2	0.00%
English Learner Test Variation C	46	0.02%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	1,883	0.66%
No Accom., Mod., or EL Variation	285,475	99.34%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 9**	**Pct. of Total**
B: Marked in test booklet	4	0.01%
C: Dictated responses to a scribe	3	0.01%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	0	0.00%
H: Used large-print test	6	0.01%
J: Tested over more than one day	5	0.01%
K: Had supervised breaks	33	0.08%
L: Most beneficial time of day	1	0.00%
M: Administered at home or in a hospital	2	0.00%
N: Used a dictionary	1	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	16	0.04%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	20	0.05%
Accom. or Mod. is in Section 504 Plan	1	0.00%
Accom. or Mod. is in IEP	61	0.15%
English Learner Test Variation A	6	0.01%
English Learner Test Variation B	1	0.00%
English Learner Test Variation C	16	0.04%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	100	0.24%
No Accom., Mod., or EL Variation	41,370	99.76%

Accommodation Summary for English–Language Arts Grade 9		
English Learner (EL) Students	**Grade 9**	**Pct. of Total**
B: Marked in test booklet	15	0.02%
C: Dictated responses to a scribe	6	0.01%
F: Used non-interfering assistive device	5	0.01%
G: Used braille test	1	0.00%
H: Used large-print test	12	0.01%
J: Tested over more than one day	24	0.03%
K: Had supervised breaks	179	0.19%
L: Most beneficial time of day	24	0.03%
M: Administered at home or in a hospital	18	0.02%
N: Used a dictionary	19	0.02%
O: Examiner presented with MCE or ASL	7	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	289	0.31%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	11	0.01%
X: Used an unlisted accommodation	114	0.12%
Accom. or Mod. is in Section 504 Plan	1	0.00%
Accom. or Mod. is in IEP	530	0.56%
English Learner Test Variation A	1,985	2.10%
English Learner Test Variation B	170	0.18%
English Learner Test Variation C	1,940	2.06%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	3,375	3.58%
No Accom., Mod., or EL Variation	90,988	96.42%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 9**	**Pct. of Total**
B: Marked in test booklet	3	0.00%
C: Dictated responses to a scribe	2	0.00%
F: Used non-interfering assistive device	0	0.00%
G: Used braille test	6	0.01%
H: Used large-print test	11	0.01%
J: Tested over more than one day	1	0.00%
K: Had supervised breaks	32	0.04%
L: Most beneficial time of day	6	0.01%
M: Administered at home or in a hospital	8	0.01%
N: Used a dictionary	10	0.01%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	29	0.03%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	6	0.01%

Accommodation Summary for English–Language Arts Grade 9		
Accom. or Mod. is in Section 504 Plan	3	0.00%
Accom. or Mod. is in IEP	72	0.09%
English Learner Test Variation A	9	0.01%
English Learner Test Variation B	2	0.00%
English Learner Test Variation C	13	0.02%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	114	0.14%
No Accom., Mod., or EL Variation	83,716	99.86%

Table 6.C.9 Accommodation Summary for English–Language Arts Grade 10

Accommodation Summary for English–Language Arts Grade 10		
All Tested	**Grade 10**	**Pct. of Total**
B: Marked in test booklet	120	0.02%
C: Dictated responses to a scribe	42	0.01%
F: Used non-interfering assistive device	20	0.00%
G: Used braille test	42	0.01%
H: Used large-print test	114	0.02%
J: Tested over more than one day	212	0.04%
K: Had supervised breaks	946	0.20%
L: Most beneficial time of day	246	0.05%
M: Administered at home or in a hospital	117	0.02%
N: Used a dictionary	96	0.02%
O: Examiner presented with MCE or ASL	7	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	738	0.15%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	30	0.01%
X: Used an unlisted accommodation	330	0.07%
Accom. or Mod. is in Section 504 Plan	30	0.01%
Accom. or Mod. is in IEP	1,926	0.40%
English Learner Test Variation A	1,499	0.31%
English Learner Test Variation B	198	0.04%
English Learner Test Variation C	1,703	0.35%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	4,775	0.99%
No Accom., Mod., or EL Variation	477,104	99.01%
Students Not in Special Education	**Grade 10**	**Pct. of Total**
B: Marked in test booklet	14	0.00%
C: Dictated responses to a scribe	12	0.00%
F: Used non-interfering assistive device	10	0.00%
G: Used braille test	4	0.00%
H: Used large-print test	14	0.00%
J: Tested over more than one day	12	0.00%
K: Had supervised breaks	66	0.01%
L: Most beneficial time of day	6	0.00%
M: Administered at home or in a hospital	55	0.01%
N: Used a dictionary	11	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	73	0.02%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	0	0.00%
X: Used an unlisted accommodation	29	0.01%

Accommodation Summary for English–Language Arts Grade 10		
Accom. or Mod. is in Section 504 Plan	26	0.01%
Accom. or Mod. is in IEP	125	0.03%
English Learner Test Variation A	1,478	0.33%
English Learner Test Variation B	187	0.04%
English Learner Test Variation C	1,682	0.38%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	2,605	0.59%
No Accom., Mod., or EL Variation	439,284	99.41%
Students in Special Education	**Grade 10**	**Pct. of Total**
B: Marked in test booklet	105	0.26%
C: Dictated responses to a scribe	30	0.08%
F: Used non-interfering assistive device	9	0.02%
G: Used braille test	37	0.09%
H: Used large-print test	99	0.25%
J: Tested over more than one day	199	0.50%
K: Had supervised breaks	880	2.20%
L: Most beneficial time of day	240	0.60%
M: Administered at home or in a hospital	61	0.15%
N: Used a dictionary	85	0.21%
O: Examiner presented with MCE or ASL	7	0.02%
P: Examiner read test questions aloud or used audio presentation (CD)	663	1.66%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	30	0.08%
X: Used an unlisted accommodation	299	0.75%
Accom. or Mod. is in Section 504 Plan	4	0.01%
Accom. or Mod. is in IEP	1,792	4.49%
English Learner Test Variation A	21	0.05%
English Learner Test Variation B	11	0.03%
English Learner Test Variation C	21	0.05%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	2,161	5.41%
No Accom., Mod., or EL Variation	37,785	94.59%
English-Only Students	**Grade 10**	**Pct. of Total**
B: Marked in test booklet	89	0.03%
C: Dictated responses to a scribe	31	0.01%
F: Used non-interfering assistive device	13	0.00%
G: Used braille test	30	0.01%
H: Used large-print test	81	0.03%
J: Tested over more than one day	181	0.06%
K: Had supervised breaks	736	0.26%
L: Most beneficial time of day	211	0.08%

Accommodation Summary for English–Language Arts Grade 10		
M: Administered at home or in a hospital	87	0.03%
N: Used a dictionary	51	0.02%
O: Examiner presented with MCE or ASL	7	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	433	0.15%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	21	0.01%
X: Used an unlisted accommodation	225	0.08%
Accom. or Mod. is in Section 504 Plan	27	0.01%
Accom. or Mod. is in IEP	1,337	0.48%
English Learner Test Variation A	29	0.01%
English Learner Test Variation B	9	0.00%
English Learner Test Variation C	35	0.01%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	1,720	0.61%
No Accom., Mod., or EL Variation	279,423	99.39%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 10**	**Pct. of Total**
B: Marked in test booklet	4	0.01%
C: Dictated responses to a scribe	1	0.00%
F: Used non-interfering assistive device	2	0.00%
G: Used braille test	3	0.01%
H: Used large-print test	6	0.01%
J: Tested over more than one day	3	0.01%
K: Had supervised breaks	36	0.09%
L: Most beneficial time of day	5	0.01%
M: Administered at home or in a hospital	6	0.01%
N: Used a dictionary	4	0.01%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	18	0.04%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	0	0.00%
X: Used an unlisted accommodation	11	0.03%
Accom. or Mod. is in Section 504 Plan	2	0.00%
Accom. or Mod. is in IEP	54	0.13%
English Learner Test Variation A	14	0.03%
English Learner Test Variation B	4	0.01%
English Learner Test Variation C	19	0.05%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	95	0.23%
No Accom., Mod., or EL Variation	41,079	99.77%

Accommodation Summary for English–Language Arts Grade 10		
English Learner (EL) Students	**Grade 10**	**Pct. of Total**
B: Marked in test booklet	21	0.03%
C: Dictated responses to a scribe	8	0.01%
F: Used non-interfering assistive device	5	0.01%
G: Used braille test	7	0.01%
H: Used large-print test	15	0.02%
J: Tested over more than one day	23	0.03%
K: Had supervised breaks	150	0.19%
L: Most beneficial time of day	21	0.03%
M: Administered at home or in a hospital	15	0.02%
N: Used a dictionary	33	0.04%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	251	0.32%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	8	0.01%
X: Used an unlisted accommodation	84	0.11%
Accom. or Mod. is in Section 504 Plan	1	0.00%
Accom. or Mod. is in IEP	456	0.58%
English Learner Test Variation A	1,433	1.81%
English Learner Test Variation B	183	0.23%
English Learner Test Variation C	1,611	2.04%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	2,814	3.56%
No Accom., Mod., or EL Variation	76,276	96.44%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 10**	**Pct. of Total**
B: Marked in test booklet	6	0.01%
C: Dictated responses to a scribe	1	0.00%
F: Used non-interfering assistive device	0	0.00%
G: Used braille test	2	0.00%
H: Used large-print test	12	0.02%
J: Tested over more than one day	4	0.01%
K: Had supervised breaks	20	0.03%
L: Most beneficial time of day	6	0.01%
M: Administered at home or in a hospital	6	0.01%
N: Used a dictionary	8	0.01%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	36	0.05%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	9	0.01%

Accommodation Summary for English–Language Arts Grade 10		
Accom. or Mod. is in Section 504 Plan	0	0.00%
Accom. or Mod. is in IEP	75	0.09%
English Learner Test Variation A	22	0.03%
English Learner Test Variation B	2	0.00%
English Learner Test Variation C	33	0.04%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	132	0.17%
No Accom., Mod., or EL Variation	79,366	99.83%

Table 6.C.10 Accommodation Summary for English–Language Arts Grade 11

Accommodation Summary for English–Language Arts Grade 11		
All Tested	**Grade 11**	**Pct. of Total**
B: Marked in test booklet	100	0.02%
C: Dictated responses to a scribe	30	0.01%
F: Used non-interfering assistive device	13	0.00%
G: Used braille test	26	0.01%
H: Used large-print test	92	0.02%
J: Tested over more than one day	198	0.04%
K: Had supervised breaks	897	0.20%
L: Most beneficial time of day	189	0.04%
M: Administered at home or in a hospital	126	0.03%
N: Used a dictionary	126	0.03%
O: Examiner presented with MCE or ASL	8	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	800	0.18%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	35	0.01%
X: Used an unlisted accommodation	276	0.06%
Accom. or Mod. is in Section 504 Plan	15	0.00%
Accom. or Mod. is in IEP	1,801	0.41%
English Learner Test Variation A	804	0.18%
English Learner Test Variation B	138	0.03%
English Learner Test Variation C	932	0.21%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	3,575	0.81%
No Accom., Mod., or EL Variation	437,165	99.19%
Students Not in Special Education	**Grade 11**	**Pct. of Total**
B: Marked in test booklet	7	0.00%
C: Dictated responses to a scribe	5	0.00%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	4	0.00%
H: Used large-print test	8	0.00%
J: Tested over more than one day	8	0.00%
K: Had supervised breaks	44	0.01%
L: Most beneficial time of day	10	0.00%
M: Administered at home or in a hospital	71	0.02%
N: Used a dictionary	11	0.00%
O: Examiner presented with MCE or ASL	2	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	49	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	15	0.00%

Accommodation Summary for English–Language Arts Grade 11		
Accom. or Mod. is in Section 504 Plan	13	0.00%
Accom. or Mod. is in IEP	98	0.02%
English Learner Test Variation A	790	0.20%
English Learner Test Variation B	132	0.03%
English Learner Test Variation C	908	0.22%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	1,452	0.36%
No Accom., Mod., or EL Variation	403,236	99.64%
Students in Special Education	**Grade 11**	**Pct. of Total**
B: Marked in test booklet	93	0.26%
C: Dictated responses to a scribe	25	0.07%
F: Used non-interfering assistive device	12	0.03%
G: Used braille test	22	0.06%
H: Used large-print test	84	0.23%
J: Tested over more than one day	188	0.52%
K: Had supervised breaks	850	2.36%
L: Most beneficial time of day	177	0.49%
M: Administered at home or in a hospital	55	0.15%
N: Used a dictionary	115	0.32%
O: Examiner presented with MCE or ASL	6	0.02%
P: Examiner read test questions aloud or used audio presentation (CD)	750	2.08%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	34	0.09%
X: Used an unlisted accommodation	260	0.72%
Accom. or Mod. is in Section 504 Plan	2	0.01%
Accom. or Mod. is in IEP	1,698	4.72%
English Learner Test Variation A	14	0.04%
English Learner Test Variation B	6	0.02%
English Learner Test Variation C	24	0.07%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	2,118	5.88%
No Accom., Mod., or EL Variation	33,885	94.12%
English-Only Students	**Grade 11**	**Pct. of Total**
B: Marked in test booklet	81	0.03%
C: Dictated responses to a scribe	18	0.01%
F: Used non-interfering assistive device	7	0.00%
G: Used braille test	23	0.01%
H: Used large-print test	69	0.03%
J: Tested over more than one day	160	0.06%
K: Had supervised breaks	685	0.26%
L: Most beneficial time of day	153	0.06%

Accommodation Summary for English–Language Arts Grade 11		
M: Administered at home or in a hospital	101	0.04%
N: Used a dictionary	76	0.03%
O: Examiner presented with MCE or ASL	6	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	491	0.18%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	21	0.01%
X: Used an unlisted accommodation	209	0.08%
Accom. or Mod. is in Section 504 Plan	15	0.01%
Accom. or Mod. is in IEP	1,272	0.48%
English Learner Test Variation A	12	0.00%
English Learner Test Variation B	8	0.00%
English Learner Test Variation C	15	0.01%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	1,634	0.61%
No Accom., Mod., or EL Variation	264,234	99.39%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 11**	**Pct. of Total**
B: Marked in test booklet	5	0.01%
C: Dictated responses to a scribe	1	0.00%
F: Used non-interfering assistive device	2	0.01%
G: Used braille test	0	0.00%
H: Used large-print test	7	0.02%
J: Tested over more than one day	6	0.02%
K: Had supervised breaks	36	0.09%
L: Most beneficial time of day	7	0.02%
M: Administered at home or in a hospital	7	0.02%
N: Used a dictionary	4	0.01%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	27	0.07%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	0	0.00%
X: Used an unlisted accommodation	7	0.02%
Accom. or Mod. is in Section 504 Plan	0	0.00%
Accom. or Mod. is in IEP	73	0.18%
English Learner Test Variation A	2	0.01%
English Learner Test Variation B	1	0.00%
English Learner Test Variation C	3	0.01%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	96	0.24%
No Accom., Mod., or EL Variation	39,729	99.76%

Accommodation Summary for English–Language Arts Grade 11		
English Learner (EL) Students	**Grade 11**	**Pct. of Total**
B: Marked in test booklet	8	0.01%
C: Dictated responses to a scribe	7	0.01%
F: Used non-interfering assistive device	3	0.00%
G: Used braille test	1	0.00%
H: Used large-print test	9	0.01%
J: Tested over more than one day	25	0.04%
K: Had supervised breaks	151	0.25%
L: Most beneficial time of day	21	0.03%
M: Administered at home or in a hospital	11	0.02%
N: Used a dictionary	34	0.06%
O: Examiner presented with MCE or ASL	2	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	248	0.40%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	13	0.02%
X: Used an unlisted accommodation	49	0.08%
Accom. or Mod. is in Section 504 Plan	0	0.00%
Accom. or Mod. is in IEP	383	0.62%
English Learner Test Variation A	782	1.28%
English Learner Test Variation B	125	0.20%
English Learner Test Variation C	899	1.47%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	1,728	2.82%
No Accom., Mod., or EL Variation	59,604	97.18%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 11**	**Pct. of Total**
B: Marked in test booklet	6	0.01%
C: Dictated responses to a scribe	4	0.01%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	2	0.00%
H: Used large-print test	7	0.01%
J: Tested over more than one day	4	0.01%
K: Had supervised breaks	20	0.03%
L: Most beneficial time of day	3	0.00%
M: Administered at home or in a hospital	5	0.01%
N: Used a dictionary	12	0.02%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	31	0.04%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	6	0.01%

Accommodation Summary for English–Language Arts Grade 11		
Accom. or Mod. is in Section 504 Plan	0	0.00%
Accom. or Mod. is in IEP	61	0.08%
English Learner Test Variation A	8	0.01%
English Learner Test Variation B	4	0.01%
English Learner Test Variation C	15	0.02%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	102	0.14%
No Accom., Mod., or EL Variation	72,764	99.86%

Table 6.C.11 Accommodation Summary for History–Social Science Grade 8

Accommodation Summary for History–Social Science Grade 8		
All Tested	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	269	0.06%
C: Dictated responses to a scribe	41	0.01%
F: Used non-interfering assistive device	41	0.01%
G: Used braille test	57	0.01%
H: Used large-print test	195	0.04%
J: Tested over more than one day	466	0.10%
K: Had supervised breaks	1,532	0.32%
L: Most beneficial time of day	566	0.12%
M: Administered at home or in a hospital	125	0.03%
N: Used a dictionary	21	0.00%
O: Examiner presented with MCE or ASL	42	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	2,613	0.54%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	94	0.02%
X: Used an unlisted accommodation	1,133	0.24%
Accom. or Mod. is in Section 504 Plan	72	0.01%
Accom. or Mod. is in IEP	4,794	1.00%
English Learner Test Variation A	1,444	0.30%
English Learner Test Variation B	46	0.01%
English Learner Test Variation C	1,071	0.22%
English Learner Test Variation D	573	0.12%
Any Accom., Mod., or EL Variation	7,800	1.62%
No Accom., Mod., or EL Variation	472,522	98.38%
Students Not in Special Education	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	32	0.01%
C: Dictated responses to a scribe	6	0.00%
F: Used non-interfering assistive device	6	0.00%
G: Used braille test	6	0.00%
H: Used large-print test	29	0.01%
J: Tested over more than one day	40	0.01%
K: Had supervised breaks	172	0.04%
L: Most beneficial time of day	57	0.01%
M: Administered at home or in a hospital	65	0.01%
N: Used a dictionary	5	0.00%
O: Examiner presented with MCE or ASL	2	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	181	0.04%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	8	0.00%
X: Used an unlisted accommodation	109	0.02%

Accommodation Summary for History–Social Science Grade 8		
Accom. or Mod. is in Section 504 Plan	64	0.01%
Accom. or Mod. is in IEP	370	0.08%
English Learner Test Variation A	1,409	0.32%
English Learner Test Variation B	30	0.01%
English Learner Test Variation C	1,044	0.24%
English Learner Test Variation D	560	0.13%
Any Accom., Mod., or EL Variation	2,700	0.62%
No Accom., Mod., or EL Variation	435,327	99.38%
Students in Special Education	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	236	0.56%
C: Dictated responses to a scribe	35	0.08%
F: Used non-interfering assistive device	34	0.08%
G: Used braille test	51	0.12%
H: Used large-print test	166	0.39%
J: Tested over more than one day	425	1.01%
K: Had supervised breaks	1,355	3.21%
L: Most beneficial time of day	505	1.20%
M: Administered at home or in a hospital	58	0.14%
N: Used a dictionary	16	0.04%
O: Examiner presented with MCE or ASL	40	0.09%
P: Examiner read test questions aloud or used audio presentation (CD)	2,420	5.73%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	85	0.20%
X: Used an unlisted accommodation	1,020	2.41%
Accom. or Mod. is in Section 504 Plan	8	0.02%
Accom. or Mod. is in IEP	4,401	10.42%
English Learner Test Variation A	35	0.08%
English Learner Test Variation B	16	0.04%
English Learner Test Variation C	27	0.06%
English Learner Test Variation D	13	0.03%
Any Accom., Mod., or EL Variation	5,077	12.02%
No Accom., Mod., or EL Variation	37,169	87.98%
English-Only Students	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	198	0.07%
C: Dictated responses to a scribe	33	0.01%
F: Used non-interfering assistive device	29	0.01%
G: Used braille test	31	0.01%
H: Used large-print test	138	0.05%
J: Tested over more than one day	290	0.11%
K: Had supervised breaks	1,019	0.38%
L: Most beneficial time of day	401	0.15%

Accommodation Summary for History–Social Science Grade 8		
M: Administered at home or in a hospital	78	0.03%
N: Used a dictionary	12	0.00%
O: Examiner presented with MCE or ASL	25	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,490	0.56%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	47	0.02%
X: Used an unlisted accommodation	721	0.27%
Accom. or Mod. is in Section 504 Plan	57	0.02%
Accom. or Mod. is in IEP	2,954	1.11%
English Learner Test Variation A	38	0.01%
English Learner Test Variation B	2	0.00%
English Learner Test Variation C	17	0.01%
English Learner Test Variation D	9	0.00%
Any Accom., Mod., or EL Variation	3,536	1.33%
No Accom., Mod., or EL Variation	262,443	98.67%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	9	0.02%
C: Dictated responses to a scribe	0	0.00%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	3	0.01%
H: Used large-print test	9	0.02%
J: Tested over more than one day	8	0.02%
K: Had supervised breaks	39	0.10%
L: Most beneficial time of day	18	0.05%
M: Administered at home or in a hospital	6	0.02%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	3	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	51	0.13%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	4	0.01%
X: Used an unlisted accommodation	33	0.09%
Accom. or Mod. is in Section 504 Plan	5	0.01%
Accom. or Mod. is in IEP	111	0.29%
English Learner Test Variation A	7	0.02%
English Learner Test Variation B	3	0.01%
English Learner Test Variation C	7	0.02%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	160	0.41%
No Accom., Mod., or EL Variation	38,523	99.59%

Accommodation Summary for History–Social Science Grade 8		
English Learner (EL) Students	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	50	0.05%
C: Dictated responses to a scribe	5	0.01%
F: Used non-interfering assistive device	8	0.01%
G: Used braille test	19	0.02%
H: Used large-print test	35	0.04%
J: Tested over more than one day	145	0.16%
K: Had supervised breaks	423	0.46%
L: Most beneficial time of day	123	0.13%
M: Administered at home or in a hospital	33	0.04%
N: Used a dictionary	9	0.01%
O: Examiner presented with MCE or ASL	13	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	998	1.08%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	37	0.04%
X: Used an unlisted accommodation	348	0.38%
Accom. or Mod. is in Section 504 Plan	8	0.01%
Accom. or Mod. is in IEP	1,568	1.70%
English Learner Test Variation A	1,387	1.51%
English Learner Test Variation B	40	0.04%
English Learner Test Variation C	1,038	1.13%
English Learner Test Variation D	557	0.61%
Any Accom., Mod., or EL Variation	3,891	4.23%
No Accom., Mod., or EL Variation	88,159	95.77%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	11	0.01%
C: Dictated responses to a scribe	3	0.00%
F: Used non-interfering assistive device	3	0.00%
G: Used braille test	4	0.00%
H: Used large-print test	13	0.02%
J: Tested over more than one day	19	0.02%
K: Had supervised breaks	41	0.05%
L: Most beneficial time of day	17	0.02%
M: Administered at home or in a hospital	6	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	63	0.08%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	4	0.00%
X: Used an unlisted accommodation	28	0.03%

Accommodation Summary for History–Social Science Grade 8		
Accom. or Mod. is in Section 504 Plan	1	0.00%
Accom. or Mod. is in IEP	136	0.16%
English Learner Test Variation A	8	0.01%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	6	0.01%
English Learner Test Variation D	5	0.01%
Any Accom., Mod., or EL Variation	178	0.22%
No Accom., Mod., or EL Variation	82,506	99.78%

Table 6.C.12 Accommodation Summary for World History

Accommodation Summary for World History					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	11	81	1	93	0.02%
C: Dictated responses to a scribe	2	14	0	16	0.00%
F: Used non-interfering assistive device	0	7	1	8	0.00%
G: Used braille test	2	36	0	38	0.01%
H: Used large-print test	5	94	1	100	0.02%
J: Tested over more than one day	23	118	35	176	0.03%
K: Had supervised breaks	93	527	86	706	0.14%
L: Most beneficial time of day	28	164	31	223	0.04%
M: Administered at home or in a hospital	29	82	21	132	0.03%
N: Used a dictionary	0	13	0	13	0.00%
O: Examiner presented with MCE or ASL	0	2	6	8	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	59	575	23	657	0.13%
V: Used interfering assistive device	0	2	0	2	0.00%
W: Used an unlisted modification	2	20	2	24	0.00%
X: Used an unlisted accommodation	24	261	20	305	0.06%
Accom. or Mod. is in Section 504 Plan	3	24	6	33	0.01%
Accom. or Mod. is in IEP	151	1,328	139	1,618	0.32%
English Learner Test Variation A	124	902	37	1,063	0.21%
English Learner Test Variation B	4	155	6	165	0.03%
English Learner Test Variation C	164	1,050	44	1,258	0.25%
English Learner Test Variation D	35	886	65	986	0.20%
Any Accom., Mod., or EL Variation	452	3,400	270	4,122	0.82%
No Accom., Mod., or EL Variation	40,394	436,963	22,449	499,806	99.18%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	1	10	0	11	0.00%
C: Dictated responses to a scribe	1	7	0	8	0.00%
F: Used non-interfering assistive device	0	3	0	3	0.00%
G: Used braille test	0	4	0	4	0.00%
H: Used large-print test	0	13	0	13	0.00%
J: Tested over more than one day	0	7	1	8	0.00%
K: Had supervised breaks	4	37	4	45	0.01%
L: Most beneficial time of day	2	3	1	6	0.00%
M: Administered at home or in a hospital	14	39	16	69	0.01%
N: Used a dictionary	0	1	0	1	0.00%
O: Examiner presented with MCE or ASL	0	1	1	2	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	5	36	2	43	0.01%

Accommodation Summary for World History					
V: Used interfering assistive device	0	1	0	1	0.00%
W: Used an unlisted modification	0	0	0	0	0.00%
X: Used an unlisted accommodation	2	25	0	27	0.01%
Accom. or Mod. is in Section 504 Plan	3	20	0	23	0.00%
Accom. or Mod. is in IEP	6	86	6	98	0.02%
English Learner Test Variation A	124	890	35	1,049	0.23%
English Learner Test Variation B	3	151	6	160	0.03%
English Learner Test Variation C	164	1,039	43	1,246	0.27%
English Learner Test Variation D	33	875	63	971	0.21%
Any Accom., Mod., or EL Variation	262	1,929	117	2,308	0.50%
No Accom., Mod., or EL Variation	36,708	403,656	19,690	460,054	99.50%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	10	70	1	81	0.20%
C: Dictated responses to a scribe	1	7	0	8	0.02%
F: Used non-interfering assistive device	0	4	1	5	0.01%
G: Used braille test	2	32	0	34	0.08%
H: Used large-print test	5	80	1	86	0.21%
J: Tested over more than one day	23	110	34	167	0.40%
K: Had supervised breaks	86	489	82	657	1.58%
L: Most beneficial time of day	26	161	30	217	0.52%
M: Administered at home or in a hospital	15	42	5	62	0.15%
N: Used a dictionary	0	12	0	12	0.03%
O: Examiner presented with MCE or ASL	0	1	5	6	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	54	537	21	612	1.47%
V: Used interfering assistive device	0	1	0	1	0.00%
W: Used an unlisted modification	2	20	2	24	0.06%
X: Used an unlisted accommodation	22	234	20	276	0.66%
Accom. or Mod. is in Section 504 Plan	0	4	6	10	0.02%
Accom. or Mod. is in IEP	142	1,235	133	1,510	3.64%
English Learner Test Variation A	0	12	2	14	0.03%
English Learner Test Variation B	1	4	0	5	0.01%
English Learner Test Variation C	0	11	1	12	0.03%
English Learner Test Variation D	2	11	2	15	0.04%
Any Accom., Mod., or EL Variation	187	1,464	153	1,804	4.35%
No Accom., Mod., or EL Variation	3,681	33,274	2,755	39,710	95.65%

Accommodation Summary for World History

English-Only Students	Grade 9	Grade 10	Grade 11	Total	Pct. of Total
B: Marked in test booklet	7	62	1	70	0.02%
C: Dictated responses to a scribe	2	12	0	14	0.00%
F: Used non-interfering assistive device	0	5	1	6	0.00%
G: Used braille test	2	26	0	28	0.01%
H: Used large-print test	4	68	1	73	0.02%
J: Tested over more than one day	18	101	34	153	0.05%
K: Had supervised breaks	76	417	76	569	0.19%
L: Most beneficial time of day	24	143	29	196	0.07%
M: Administered at home or in a hospital	15	62	18	95	0.03%
N: Used a dictionary	0	8	0	8	0.00%
O: Examiner presented with MCE or ASL	0	1	1	2	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	33	338	17	388	0.13%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	15	2	17	0.01%
X: Used an unlisted accommodation	19	180	17	216	0.07%
Accom. or Mod. is in Section 504 Plan	3	22	2	27	0.01%
Accom. or Mod. is in IEP	111	921	118	1,150	0.39%
English Learner Test Variation A	2	12	0	14	0.00%
English Learner Test Variation B	0	2	0	2	0.00%
English Learner Test Variation C	3	17	0	20	0.01%
English Learner Test Variation D	1	14	1	16	0.01%
Any Accom., Mod., or EL Variation	152	1,154	146	1,452	0.50%
No Accom., Mod., or EL Variation	21,455	256,118	13,106	290,679	99.50%

Initially–Fluent English Proficient (I-FEP) Students	Grade 9	Grade 10	Grade 11	Total	Pct. of Total
B: Marked in test booklet	0	1	0	1	0.00%
C: Dictated responses to a scribe	0	1	0	1	0.00%
F: Used non-interfering assistive device	0	2	0	2	0.00%
G: Used braille test	0	2	0	2	0.00%
H: Used large-print test	0	4	0	4	0.01%
J: Tested over more than one day	0	3	0	3	0.01%
K: Had supervised breaks	3	14	3	20	0.05%
L: Most beneficial time of day	0	1	1	2	0.00%
M: Administered at home or in a hospital	1	4	0	5	0.01%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	2	14	0	16	0.04%
V: Used interfering assistive device	0	0	0	0	0.00%

Accommodation Summary for World History					
W: Used an unlisted modification	1	0	0	1	0.00%
X: Used an unlisted accommodation	1	9	2	12	0.03%
Accom. or Mod. is in Section 504 Plan	0	1	0	1	0.00%
Accom. or Mod. is in IEP	2	33	5	40	0.09%
English Learner Test Variation A	1	11	0	12	0.03%
English Learner Test Variation B	0	4	0	4	0.01%
English Learner Test Variation C	0	13	0	13	0.03%
English Learner Test Variation D	1	9	0	10	0.02%
Any Accom., Mod., or EL Variation	8	56	6	70	0.16%
No Accom., Mod., or EL Variation	4,115	38,211	1,531	43,857	99.84%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	4	13	0	17	0.02%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	6	0	6	0.01%
H: Used large-print test	0	10	0	10	0.01%
J: Tested over more than one day	5	14	1	20	0.02%
K: Had supervised breaks	12	82	6	100	0.12%
L: Most beneficial time of day	3	15	1	19	0.02%
M: Administered at home or in a hospital	9	11	2	22	0.03%
N: Used a dictionary	0	4	0	4	0.00%
O: Examiner presented with MCE or ASL	0	1	5	6	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	21	203	6	230	0.28%
V: Used interfering assistive device	0	1	0	1	0.00%
W: Used an unlisted modification	1	4	0	5	0.01%
X: Used an unlisted accommodation	4	62	1	67	0.08%
Accom. or Mod. is in Section 504 Plan	0	1	4	5	0.01%
Accom. or Mod. is in IEP	32	322	15	369	0.44%
English Learner Test Variation A	121	858	37	1,016	1.22%
English Learner Test Variation B	4	146	6	156	0.19%
English Learner Test Variation C	161	990	44	1,195	1.44%
English Learner Test Variation D	33	838	64	935	1.13%
Any Accom., Mod., or EL Variation	282	2,087	116	2,485	2.99%
No Accom., Mod., or EL Variation	8,017	67,522	5,015	80,554	97.01%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	5	0	5	0.01%
C: Dictated responses to a scribe	0	1	0	1	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%

Accommodation Summary for World History					
G: Used braille test	0	2	0	2	0.00%
H: Used large-print test	1	11	0	12	0.01%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	1	12	1	14	0.02%
L: Most beneficial time of day	0	3	0	3	0.00%
M: Administered at home or in a hospital	4	4	1	9	0.01%
N: Used a dictionary	0	1	0	1	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	3	19	0	22	0.03%
V: Used interfering assistive device	0	1	0	1	0.00%
W: Used an unlisted modification	0	1	0	1	0.00%
X: Used an unlisted accommodation	0	9	0	9	0.01%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	5	46	1	52	0.06%
English Learner Test Variation A	0	20	0	20	0.02%
English Learner Test Variation B	0	3	0	3	0.00%
English Learner Test Variation C	0	26	0	26	0.03%
English Learner Test Variation D	0	19	0	19	0.02%
Any Accom., Mod., or EL Variation	9	88	2	99	0.12%
No Accom., Mod., or EL Variation	6,691	74,324	2,726	83,741	99.88%

Table 6.C.13 Accommodation Summary for History–Social Science Grade 11

Accommodation Summary for History–Social Science Grade 11		
All Tested	**Grade 11**	**Pct. of Total**
B: Marked in test booklet	87	0.02%
C: Dictated responses to a scribe	22	0.01%
F: Used non-interfering assistive device	12	0.00%
G: Used braille test	24	0.01%
H: Used large-print test	90	0.02%
J: Tested over more than one day	144	0.03%
K: Had supervised breaks	580	0.14%
L: Most beneficial time of day	160	0.04%
M: Administered at home or in a hospital	97	0.02%
N: Used a dictionary	16	0.00%
O: Examiner presented with MCE or ASL	4	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	780	0.18%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	31	0.01%
X: Used an unlisted accommodation	237	0.06%
Accom. or Mod. is in Section 504 Plan	12	0.00%
Accom. or Mod. is in IEP	1,456	0.34%
English Learner Test Variation A	585	0.14%
English Learner Test Variation B	117	0.03%
English Learner Test Variation C	742	0.17%
English Learner Test Variation D	744	0.17%
Any Accom., Mod., or EL Variation	3,098	0.72%
No Accom., Mod., or EL Variation	426,076	99.28%
Students Not in Special Education	**Grade 11**	**Pct. of Total**
B: Marked in test booklet	7	0.00%
C: Dictated responses to a scribe	5	0.00%
F: Used non-interfering assistive device	3	0.00%
G: Used braille test	3	0.00%
H: Used large-print test	6	0.00%
J: Tested over more than one day	6	0.00%
K: Had supervised breaks	28	0.01%
L: Most beneficial time of day	7	0.00%
M: Administered at home or in a hospital	53	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	49	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	13	0.00%

Accommodation Summary for History–Social Science Grade 11		
Accom. or Mod. is in Section 504 Plan	11	0.00%
Accom. or Mod. is in IEP	77	0.02%
English Learner Test Variation A	573	0.14%
English Learner Test Variation B	114	0.03%
English Learner Test Variation C	717	0.18%
English Learner Test Variation D	714	0.18%
Any Accom., Mod., or EL Variation	1,419	0.36%
No Accom., Mod., or EL Variation	393,799	99.64%
Students in Special Education	**Grade 11**	**Pct. of Total**
B: Marked in test booklet	80	0.24%
C: Dictated responses to a scribe	17	0.05%
F: Used non-interfering assistive device	9	0.03%
G: Used braille test	21	0.06%
H: Used large-print test	84	0.25%
J: Tested over more than one day	138	0.41%
K: Had supervised breaks	552	1.63%
L: Most beneficial time of day	153	0.45%
M: Administered at home or in a hospital	44	0.13%
N: Used a dictionary	16	0.05%
O: Examiner presented with MCE or ASL	4	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	729	2.15%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	30	0.09%
X: Used an unlisted accommodation	224	0.66%
Accom. or Mod. is in Section 504 Plan	1	0.00%
Accom. or Mod. is in IEP	1,377	4.06%
English Learner Test Variation A	12	0.04%
English Learner Test Variation B	3	0.01%
English Learner Test Variation C	25	0.07%
English Learner Test Variation D	30	0.09%
Any Accom., Mod., or EL Variation	1,677	4.95%
No Accom., Mod., or EL Variation	32,234	95.05%
English-Only Students	**Grade 11**	**Pct. of Total**
B: Marked in test booklet	69	0.03%
C: Dictated responses to a scribe	14	0.01%
F: Used non-interfering assistive device	7	0.00%
G: Used braille test	21	0.01%
H: Used large-print test	66	0.03%
J: Tested over more than one day	121	0.05%
K: Had supervised breaks	450	0.17%
L: Most beneficial time of day	131	0.05%

Accommodation Summary for History–Social Science Grade 11		
M: Administered at home or in a hospital	82	0.03%
N: Used a dictionary	8	0.00%
O: Examiner presented with MCE or ASL	4	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	480	0.19%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	17	0.01%
X: Used an unlisted accommodation	184	0.07%
Accom. or Mod. is in Section 504 Plan	12	0.00%
Accom. or Mod. is in IEP	1,031	0.40%
English Learner Test Variation A	8	0.00%
English Learner Test Variation B	4	0.00%
English Learner Test Variation C	11	0.00%
English Learner Test Variation D	14	0.01%
Any Accom., Mod., or EL Variation	1,301	0.50%
No Accom., Mod., or EL Variation	257,721	99.50%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 11**	**Pct. of Total**
B: Marked in test booklet	4	0.01%
C: Dictated responses to a scribe	0	0.00%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	0	0.00%
H: Used large-print test	7	0.02%
J: Tested over more than one day	5	0.01%
K: Had supervised breaks	23	0.06%
L: Most beneficial time of day	7	0.02%
M: Administered at home or in a hospital	5	0.01%
N: Used a dictionary	1	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	22	0.06%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	0	0.00%
X: Used an unlisted accommodation	6	0.02%
Accom. or Mod. is in Section 504 Plan	0	0.00%
Accom. or Mod. is in IEP	57	0.15%
English Learner Test Variation A	1	0.00%
English Learner Test Variation B	1	0.00%
English Learner Test Variation C	3	0.01%
English Learner Test Variation D	2	0.01%
Any Accom., Mod., or EL Variation	70	0.18%
No Accom., Mod., or EL Variation	39,056	99.82%

Accommodation Summary for History–Social Science Grade 11		
English Learner (EL) Students	**Grade 11**	**Pct. of Total**
B: Marked in test booklet	8	0.01%
C: Dictated responses to a scribe	5	0.01%
F: Used non-interfering assistive device	3	0.01%
G: Used braille test	1	0.00%
H: Used large-print test	10	0.02%
J: Tested over more than one day	17	0.03%
K: Had supervised breaks	90	0.15%
L: Most beneficial time of day	17	0.03%
M: Administered at home or in a hospital	4	0.01%
N: Used a dictionary	7	0.01%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	237	0.40%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	13	0.02%
X: Used an unlisted accommodation	41	0.07%
Accom. or Mod. is in Section 504 Plan	0	0.00%
Accom. or Mod. is in IEP	306	0.52%
English Learner Test Variation A	568	0.97%
English Learner Test Variation B	108	0.18%
English Learner Test Variation C	713	1.22%
English Learner Test Variation D	716	1.22%
Any Accom., Mod., or EL Variation	1,632	2.79%
No Accom., Mod., or EL Variation	56,937	97.21%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 11**	**Pct. of Total**
B: Marked in test booklet	6	0.01%
C: Dictated responses to a scribe	3	0.00%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	2	0.00%
H: Used large-print test	7	0.01%
J: Tested over more than one day	1	0.00%
K: Had supervised breaks	15	0.02%
L: Most beneficial time of day	2	0.00%
M: Administered at home or in a hospital	4	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	38	0.05%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	3	0.00%

Accommodation Summary for History–Social Science Grade 11		
Accom. or Mod. is in Section 504 Plan	0	0.00%
Accom. or Mod. is in IEP	54	0.08%
English Learner Test Variation A	8	0.01%
English Learner Test Variation B	4	0.01%
English Learner Test Variation C	15	0.02%
English Learner Test Variation D	11	0.02%
Any Accom., Mod., or EL Variation	84	0.12%
No Accom., Mod., or EL Variation	71,609	99.88%

Table 6.C. 14 Accommodation Summary for Mathematics Grade 2

Accommodation Summary for Mathematics Grade 2		
All Tested	**Grade 2**	**Pct. of Total**
B: Marked in test booklet	124	0.03%
C: Dictated responses to a scribe	95	0.02%
F: Used non-interfering assistive device	40	0.01%
G: Used braille test	53	0.01%
H: Used large-print test	168	0.04%
J: Tested over more than one day	828	0.18%
K: Had supervised breaks	2,518	0.55%
L: Most beneficial time of day	1,086	0.24%
M: Administered at home or in a hospital	64	0.01%
N: Used a dictionary	8	0.00%
O: Examiner presented with MCE or ASL	67	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	3,245	0.71%
Q: Used a calculator	23	0.01%
R: Used an arithmetic table	46	0.01%
S: Used math manipulatives	46	0.01%
V: Used interfering assistive device	5	0.00%
W: Used an unlisted modification	91	0.02%
X: Used an unlisted accommodation	982	0.22%
Accom. or Mod. is in Section 504 Plan	117	0.03%
Accom. or Mod. is in IEP	5,248	1.15%
English Learner Test Variation A	1,623	0.36%
English Learner Test Variation B	126	0.03%
English Learner Test Variation C	429	0.09%
English Learner Test Variation D	377	0.08%
Any Accom., Mod., or EL Variation	8,388	1.84%
No Accom., Mod., or EL Variation	446,936	98.16%
Students Not in Special Education	**Grade 2**	**Pct. of Total**
B: Marked in test booklet	18	0.00%
C: Dictated responses to a scribe	19	0.00%
F: Used non-interfering assistive device	9	0.00%
G: Used braille test	13	0.00%
H: Used large-print test	26	0.01%
J: Tested over more than one day	159	0.04%
K: Had supervised breaks	493	0.12%
L: Most beneficial time of day	212	0.05%
M: Administered at home or in a hospital	38	0.01%
N: Used a dictionary	3	0.00%
O: Examiner presented with MCE or ASL	4	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	619	0.15%

Accommodation Summary for Mathematics Grade 2		
Q: Used a calculator	5	0.00%
R: Used an arithmetic table	15	0.00%
S: Used math manipulatives	2	0.00%
V: Used interfering assistive device	2	0.00%
W: Used an unlisted modification	13	0.00%
X: Used an unlisted accommodation	251	0.06%
Accom. or Mod. is in Section 504 Plan	103	0.02%
Accom. or Mod. is in IEP	954	0.23%
English Learner Test Variation A	1,531	0.37%
English Learner Test Variation B	92	0.02%
English Learner Test Variation C	391	0.09%
English Learner Test Variation D	366	0.09%
Any Accom., Mod., or EL Variation	3,299	0.79%
No Accom., Mod., or EL Variation	416,102	99.21%
Students in Special Education	**Grade 2**	**Pct. of Total**
B: Marked in test booklet	103	0.29%
C: Dictated responses to a scribe	76	0.21%
F: Used non-interfering assistive device	31	0.09%
G: Used braille test	39	0.11%
H: Used large-print test	135	0.38%
J: Tested over more than one day	669	1.87%
K: Had supervised breaks	2,018	5.63%
L: Most beneficial time of day	871	2.43%
M: Administered at home or in a hospital	26	0.07%
N: Used a dictionary	5	0.01%
O: Examiner presented with MCE or ASL	63	0.18%
P: Examiner read test questions aloud or used audio presentation (CD)	2,607	7.27%
Q: Used a calculator	18	0.05%
R: Used an arithmetic table	31	0.09%
S: Used math manipulatives	44	0.12%
V: Used interfering assistive device	3	0.01%
W: Used an unlisted modification	78	0.22%
X: Used an unlisted accommodation	723	2.02%
Accom. or Mod. is in Section 504 Plan	14	0.04%
Accom. or Mod. is in IEP	4,261	11.88%
English Learner Test Variation A	92	0.26%
English Learner Test Variation B	33	0.09%
English Learner Test Variation C	38	0.11%
English Learner Test Variation D	11	0.03%
Any Accom., Mod., or EL Variation	5,055	14.10%
No Accom., Mod., or EL Variation	30,799	85.90%

Accommodation Summary for Mathematics Grade 2		
English-Only Students	**Grade 2**	**Pct. of Total**
B: Marked in test booklet	77	0.03%
C: Dictated responses to a scribe	77	0.03%
F: Used non-interfering assistive device	26	0.01%
G: Used braille test	32	0.01%
H: Used large-print test	113	0.05%
J: Tested over more than one day	546	0.22%
K: Had supervised breaks	1,600	0.64%
L: Most beneficial time of day	722	0.29%
M: Administered at home or in a hospital	47	0.02%
N: Used a dictionary	5	0.00%
O: Examiner presented with MCE or ASL	42	0.02%
P: Examiner read test questions aloud or used audio presentation (CD)	2,025	0.81%
Q: Used a calculator	7	0.00%
R: Used an arithmetic table	32	0.01%
S: Used math manipulatives	30	0.01%
V: Used interfering assistive device	2	0.00%
W: Used an unlisted modification	57	0.02%
X: Used an unlisted accommodation	606	0.24%
Accom. or Mod. is in Section 504 Plan	98	0.04%
Accom. or Mod. is in IEP	3,361	1.34%
English Learner Test Variation A	36	0.01%
English Learner Test Variation B	10	0.00%
English Learner Test Variation C	10	0.00%
English Learner Test Variation D	8	0.00%
Any Accom., Mod., or EL Variation	4,082	1.63%
No Accom., Mod., or EL Variation	246,395	98.37%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 2**	**Pct. of Total**
B: Marked in test booklet	8	0.02%
C: Dictated responses to a scribe	4	0.01%
F: Used non-interfering assistive device	3	0.01%
G: Used braille test	4	0.01%
H: Used large-print test	8	0.02%
J: Tested over more than one day	18	0.05%
K: Had supervised breaks	70	0.21%
L: Most beneficial time of day	22	0.06%
M: Administered at home or in a hospital	5	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	3	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	61	0.18%
Q: Used a calculator	0	0.00%

Accommodation Summary for Mathematics Grade 2		
R: Used an arithmetic table	1	0.00%
S: Used math manipulatives	1	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	22	0.06%
Accom. or Mod. is in Section 504 Plan	4	0.01%
Accom. or Mod. is in IEP	126	0.37%
English Learner Test Variation A	31	0.09%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	4	0.01%
English Learner Test Variation D	1	0.00%
Any Accom., Mod., or EL Variation	186	0.55%
No Accom., Mod., or EL Variation	33,676	99.45%
English Learner (EL) Students	**Grade 2**	**Pct. of Total**
B: Marked in test booklet	35	0.02%
C: Dictated responses to a scribe	14	0.01%
F: Used non-interfering assistive device	10	0.01%
G: Used braille test	16	0.01%
H: Used large-print test	39	0.02%
J: Tested over more than one day	256	0.16%
K: Had supervised breaks	832	0.50%
L: Most beneficial time of day	334	0.20%
M: Administered at home or in a hospital	12	0.01%
N: Used a dictionary	3	0.00%
O: Examiner presented with MCE or ASL	22	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,132	0.69%
Q: Used a calculator	16	0.01%
R: Used an arithmetic table	13	0.01%
S: Used math manipulatives	15	0.01%
V: Used interfering assistive device	3	0.00%
W: Used an unlisted modification	31	0.02%
X: Used an unlisted accommodation	349	0.21%
Accom. or Mod. is in Section 504 Plan	14	0.01%
Accom. or Mod. is in IEP	1,717	1.04%
English Learner Test Variation A	1,552	0.94%
English Learner Test Variation B	115	0.07%
English Learner Test Variation C	412	0.25%
English Learner Test Variation D	367	0.22%
Any Accom., Mod., or EL Variation	4,060	2.46%
No Accom., Mod., or EL Variation	160,815	97.54%

Accommodation Summary for Mathematics Grade 2		
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 2**	**Pct. of Total**
B: Marked in test booklet	0	0.00%
C: Dictated responses to a scribe	0	0.00%
F: Used non-interfering assistive device	0	0.00%
G: Used braille test	0	0.00%
H: Used large-print test	1	0.02%
J: Tested over more than one day	3	0.06%
K: Had supervised breaks	8	0.15%
L: Most beneficial time of day	5	0.09%
M: Administered at home or in a hospital	0	0.00%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	12	0.23%
Q: Used a calculator	0	0.00%
R: Used an arithmetic table	0	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	0	0.00%
X: Used an unlisted accommodation	3	0.06%
Accom. or Mod. is in Section 504 Plan	0	0.00%
Accom. or Mod. is in IEP	18	0.34%
English Learner Test Variation A	3	0.06%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	1	0.02%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	26	0.49%
No Accom., Mod., or EL Variation	5,261	99.51%

Table 6.C.15 Accommodation Summary for Mathematics Grade 3

Accommodation Summary for Mathematics Grade 3		
All Tested	**Grade 3**	**Pct. of Total**
B: Marked in test booklet	190	0.04%
C: Dictated responses to a scribe	79	0.02%
F: Used non-interfering assistive device	46	0.01%
G: Used braille test	40	0.01%
H: Used large-print test	203	0.04%
J: Tested over more than one day	1,028	0.22%
K: Had supervised breaks	3,173	0.69%
L: Most beneficial time of day	1,325	0.29%
M: Administered at home or in a hospital	59	0.01%
N: Used a dictionary	13	0.00%
O: Examiner presented with MCE or ASL	35	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	6,709	1.47%
Q: Used a calculator	50	0.01%
R: Used an arithmetic table	79	0.02%
S: Used math manipulatives	22	0.00%
V: Used interfering assistive device	3	0.00%
W: Used an unlisted modification	112	0.02%
X: Used an unlisted accommodation	1,162	0.25%
Accom. or Mod. is in Section 504 Plan	189	0.04%
Accom. or Mod. is in IEP	8,690	1.90%
English Learner Test Variation A	1,237	0.27%
English Learner Test Variation B	76	0.02%
English Learner Test Variation C	332	0.07%
English Learner Test Variation D	425	0.09%
Any Accom., Mod., or EL Variation	11,742	2.56%
No Accom., Mod., or EL Variation	446,052	97.44%
Students Not in Special Education	**Grade 3**	**Pct. of Total**
B: Marked in test booklet	35	0.01%
C: Dictated responses to a scribe	18	0.00%
F: Used non-interfering assistive device	7	0.00%
G: Used braille test	3	0.00%
H: Used large-print test	29	0.01%
J: Tested over more than one day	135	0.03%
K: Had supervised breaks	538	0.13%
L: Most beneficial time of day	206	0.05%
M: Administered at home or in a hospital	31	0.01%
N: Used a dictionary	4	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	1,104	0.27%

Accommodation Summary for Mathematics Grade 3		
Q: Used a calculator	9	0.00%
R: Used an arithmetic table	13	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	21	0.01%
X: Used an unlisted accommodation	257	0.06%
Accom. or Mod. is in Section 504 Plan	163	0.04%
Accom. or Mod. is in IEP	1,373	0.33%
English Learner Test Variation A	1,161	0.28%
English Learner Test Variation B	40	0.01%
English Learner Test Variation C	285	0.07%
English Learner Test Variation D	402	0.10%
Any Accom., Mod., or EL Variation	3,347	0.81%
No Accom., Mod., or EL Variation	411,762	99.19%
Students in Special Education	**Grade 3**	**Pct. of Total**
B: Marked in test booklet	151	0.35%
C: Dictated responses to a scribe	60	0.14%
F: Used non-interfering assistive device	39	0.09%
G: Used braille test	35	0.08%
H: Used large-print test	164	0.38%
J: Tested over more than one day	888	2.08%
K: Had supervised breaks	2,623	6.16%
L: Most beneficial time of day	1,113	2.61%
M: Administered at home or in a hospital	28	0.07%
N: Used a dictionary	9	0.02%
O: Examiner presented with MCE or ASL	34	0.08%
P: Examiner read test questions aloud or used audio presentation (CD)	5,584	13.11%
Q: Used a calculator	41	0.10%
R: Used an arithmetic table	66	0.15%
S: Used math manipulatives	22	0.05%
V: Used interfering assistive device	3	0.01%
W: Used an unlisted modification	90	0.21%
X: Used an unlisted accommodation	902	2.12%
Accom. or Mod. is in Section 504 Plan	26	0.06%
Accom. or Mod. is in IEP	7,277	17.08%
English Learner Test Variation A	75	0.18%
English Learner Test Variation B	36	0.08%
English Learner Test Variation C	47	0.11%
English Learner Test Variation D	23	0.05%
Any Accom., Mod., or EL Variation	8,354	19.61%
No Accom., Mod., or EL Variation	34,251	80.39%

Accommodation Summary for Mathematics Grade 3		
English-Only Students	**Grade 3**	**Pct. of Total**
B: Marked in test booklet	116	0.05%
C: Dictated responses to a scribe	56	0.02%
F: Used non-interfering assistive device	24	0.01%
G: Used braille test	28	0.01%
H: Used large-print test	115	0.05%
J: Tested over more than one day	667	0.26%
K: Had supervised breaks	1,997	0.79%
L: Most beneficial time of day	866	0.34%
M: Administered at home or in a hospital	37	0.01%
N: Used a dictionary	7	0.00%
O: Examiner presented with MCE or ASL	24	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	3,981	1.58%
Q: Used a calculator	28	0.01%
R: Used an arithmetic table	37	0.01%
S: Used math manipulatives	19	0.01%
V: Used interfering assistive device	2	0.00%
W: Used an unlisted modification	64	0.03%
X: Used an unlisted accommodation	719	0.29%
Accom. or Mod. is in Section 504 Plan	153	0.06%
Accom. or Mod. is in IEP	5,286	2.10%
English Learner Test Variation A	21	0.01%
English Learner Test Variation B	4	0.00%
English Learner Test Variation C	11	0.00%
English Learner Test Variation D	3	0.00%
Any Accom., Mod., or EL Variation	6,197	2.46%
No Accom., Mod., or EL Variation	245,798	97.54%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 3**	**Pct. of Total**
B: Marked in test booklet	7	0.02%
C: Dictated responses to a scribe	2	0.01%
F: Used non-interfering assistive device	3	0.01%
G: Used braille test	1	0.00%
H: Used large-print test	6	0.02%
J: Tested over more than one day	23	0.06%
K: Had supervised breaks	72	0.19%
L: Most beneficial time of day	25	0.07%
M: Administered at home or in a hospital	5	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	178	0.48%
Q: Used a calculator	0	0.00%

Accommodation Summary for Mathematics Grade 3		
R: Used an arithmetic table	6	0.02%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	2	0.01%
X: Used an unlisted accommodation	40	0.11%
Accom. or Mod. is in Section 504 Plan	4	0.01%
Accom. or Mod. is in IEP	230	0.62%
English Learner Test Variation A	13	0.04%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	1	0.00%
English Learner Test Variation D	7	0.02%
Any Accom., Mod., or EL Variation	288	0.78%
No Accom., Mod., or EL Variation	36,658	99.22%
English Learner (EL) Students	**Grade 3**	**Pct. of Total**
B: Marked in test booklet	57	0.04%
C: Dictated responses to a scribe	21	0.01%
F: Used non-interfering assistive device	17	0.01%
G: Used braille test	9	0.01%
H: Used large-print test	67	0.04%
J: Tested over more than one day	328	0.22%
K: Had supervised breaks	1,074	0.71%
L: Most beneficial time of day	420	0.28%
M: Administered at home or in a hospital	17	0.01%
N: Used a dictionary	6	0.00%
O: Examiner presented with MCE or ASL	9	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	2,505	1.66%
Q: Used a calculator	22	0.01%
R: Used an arithmetic table	36	0.02%
S: Used math manipulatives	3	0.00%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	44	0.03%
X: Used an unlisted accommodation	388	0.26%
Accom. or Mod. is in Section 504 Plan	27	0.02%
Accom. or Mod. is in IEP	3,103	2.05%
English Learner Test Variation A	1,188	0.79%
English Learner Test Variation B	72	0.05%
English Learner Test Variation C	319	0.21%
English Learner Test Variation D	414	0.27%
Any Accom., Mod., or EL Variation	5,149	3.40%
No Accom., Mod., or EL Variation	146,186	96.60%

Accommodation Summary for Mathematics Grade 3		
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 3**	**Pct. of Total**
B: Marked in test booklet	3	0.02%
C: Dictated responses to a scribe	0	0.00%
F: Used non-interfering assistive device	0	0.00%
G: Used braille test	1	0.01%
H: Used large-print test	5	0.03%
J: Tested over more than one day	9	0.05%
K: Had supervised breaks	14	0.09%
L: Most beneficial time of day	6	0.04%
M: Administered at home or in a hospital	1	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	26	0.16%
Q: Used a calculator	0	0.00%
R: Used an arithmetic table	0	0.00%
S: Used math manipulatives	1	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification		
X: Used an unlisted accommodation	1	0.01%
Accom. or Mod. is in Section 504 Plan	0	0.00%
Accom. or Mod. is in IEP	40	0.24%
English Learner Test Variation A	10	0.06%
English Learner Test Variation B	1	0.01%
English Learner Test Variation C	1	0.01%
English Learner Test Variation D	1	0.01%
Any Accom., Mod., or EL Variation	58	0.35%
No Accom., Mod., or EL Variation	16,355	99.65%

Table 6.C.16 Accommodation Summary for Mathematics Grade 4

Accommodation Summary for Mathematics Grade 4		
All Tested	**Grade 4**	**Pct. of Total**
B: Marked in test booklet	814	0.18%
C: Dictated responses to a scribe	72	0.02%
F: Used non-interfering assistive device	68	0.01%
G: Used braille test	40	0.01%
H: Used large-print test	231	0.05%
J: Tested over more than one day	1,456	0.32%
K: Had supervised breaks	4,655	1.01%
L: Most beneficial time of day	1,754	0.38%
M: Administered at home or in a hospital	84	0.02%
N: Used a dictionary	12	0.00%
O: Examiner presented with MCE or ASL	63	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	7,529	1.63%
Q: Used a calculator	116	0.03%
R: Used an arithmetic table	177	0.04%
S: Used math manipulatives	21	0.00%
V: Used interfering assistive device	2	0.00%
W: Used an unlisted modification	100	0.02%
X: Used an unlisted accommodation	1,566	0.34%
Accom. or Mod. is in Section 504 Plan	264	0.06%
Accom. or Mod. is in IEP	10,854	2.36%
English Learner Test Variation A	1,344	0.29%
English Learner Test Variation B	73	0.02%
English Learner Test Variation C	400	0.09%
English Learner Test Variation D	371	0.08%
Any Accom., Mod., or EL Variation	14,240	3.09%
No Accom., Mod., or EL Variation	446,291	96.91%
Students Not in Special Education	**Grade 4**	**Pct. of Total**
B: Marked in test booklet	114	0.03%
C: Dictated responses to a scribe	15	0.00%
F: Used non-interfering assistive device	7	0.00%
G: Used braille test	3	0.00%
H: Used large-print test	40	0.01%
J: Tested over more than one day	206	0.05%
K: Had supervised breaks	710	0.17%
L: Most beneficial time of day	256	0.06%
M: Administered at home or in a hospital	46	0.01%
N: Used a dictionary	2	0.00%
O: Examiner presented with MCE or ASL	3	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	1,025	0.25%

Accommodation Summary for Mathematics Grade 4		
Q: Used a calculator	16	0.00%
R: Used an arithmetic table	22	0.01%
S: Used math manipulatives	1	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	15	0.00%
X: Used an unlisted accommodation	280	0.07%
Accom. or Mod. is in Section 504 Plan	239	0.06%
Accom. or Mod. is in IEP	1,360	0.33%
English Learner Test Variation A	1,286	0.31%
English Learner Test Variation B	43	0.01%
English Learner Test Variation C	345	0.08%
English Learner Test Variation D	343	0.08%
Any Accom., Mod., or EL Variation	3,525	0.85%
No Accom., Mod., or EL Variation	410,849	99.15%
Students in Special Education	**Grade 4**	**Pct. of Total**
B: Marked in test booklet	692	1.50%
C: Dictated responses to a scribe	57	0.12%
F: Used non-interfering assistive device	60	0.13%
G: Used braille test	37	0.08%
H: Used large-print test	190	0.41%
J: Tested over more than one day	1,239	2.69%
K: Had supervised breaks	3,929	8.53%
L: Most beneficial time of day	1,490	3.23%
M: Administered at home or in a hospital	37	0.08%
N: Used a dictionary	10	0.02%
O: Examiner presented with MCE or ASL	60	0.13%
P: Examiner read test questions aloud or used audio presentation (CD)	6,484	14.07%
Q: Used a calculator	99	0.21%
R: Used an arithmetic table	154	0.33%
S: Used math manipulatives	19	0.04%
V: Used interfering assistive device	2	0.00%
W: Used an unlisted modification	85	0.18%
X: Used an unlisted accommodation	1,284	2.79%
Accom. or Mod. is in Section 504 Plan	25	0.05%
Accom. or Mod. is in IEP	9,461	20.53%
English Learner Test Variation A	57	0.12%
English Learner Test Variation B	30	0.07%
English Learner Test Variation C	55	0.12%
English Learner Test Variation D	28	0.06%
Any Accom., Mod., or EL Variation	10,681	23.18%
No Accom., Mod., or EL Variation	35,406	76.82%

Accommodation Summary for Mathematics Grade 4		
English-Only Students	**Grade 4**	**Pct. of Total**
B: Marked in test booklet	556	0.22%
C: Dictated responses to a scribe	45	0.02%
F: Used non-interfering assistive device	45	0.02%
G: Used braille test	22	0.01%
H: Used large-print test	140	0.06%
J: Tested over more than one day	920	0.37%
K: Had supervised breaks	2,868	1.15%
L: Most beneficial time of day	1,109	0.44%
M: Administered at home or in a hospital	61	0.02%
N: Used a dictionary	9	0.00%
O: Examiner presented with MCE or ASL	37	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	4,374	1.75%
Q: Used a calculator	70	0.03%
R: Used an arithmetic table	99	0.04%
S: Used math manipulatives	14	0.01%
V: Used interfering assistive device	2	0.00%
W: Used an unlisted modification	74	0.03%
X: Used an unlisted accommodation	958	0.38%
Accom. or Mod. is in Section 504 Plan	196	0.08%
Accom. or Mod. is in IEP	6,537	2.61%
English Learner Test Variation A	27	0.01%
English Learner Test Variation B	5	0.00%
English Learner Test Variation C	13	0.01%
English Learner Test Variation D	3	0.00%
Any Accom., Mod., or EL Variation	7,613	3.04%
No Accom., Mod., or EL Variation	242,667	96.96%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 4**	**Pct. of Total**
B: Marked in test booklet	17	0.05%
C: Dictated responses to a scribe	5	0.02%
F: Used non-interfering assistive device	4	0.01%
G: Used braille test	3	0.01%
H: Used large-print test	10	0.03%
J: Tested over more than one day	34	0.10%
K: Had supervised breaks	92	0.28%
L: Most beneficial time of day	40	0.12%
M: Administered at home or in a hospital	2	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	161	0.49%
Q: Used a calculator	0	0.00%

Accommodation Summary for Mathematics Grade 4		
R: Used an arithmetic table	3	0.01%
S: Used math manipulatives	1	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	46	0.14%
Accom. or Mod. is in Section 504 Plan	7	0.02%
Accom. or Mod. is in IEP	257	0.78%
English Learner Test Variation A	3	0.01%
English Learner Test Variation B	1	0.00%
English Learner Test Variation C	1	0.00%
English Learner Test Variation D	1	0.00%
Any Accom., Mod., or EL Variation	295	0.90%
No Accom., Mod., or EL Variation	32,474	99.10%
English Learner (EL) Students	**Grade 4**	**Pct. of Total**
B: Marked in test booklet	228	0.16%
C: Dictated responses to a scribe	22	0.02%
F: Used non-interfering assistive device	18	0.01%
G: Used braille test	13	0.01%
H: Used large-print test	72	0.05%
J: Tested over more than one day	482	0.33%
K: Had supervised breaks	1,654	1.13%
L: Most beneficial time of day	591	0.40%
M: Administered at home or in a hospital	16	0.01%
N: Used a dictionary	3	0.00%
O: Examiner presented with MCE or ASL	24	0.02%
P: Examiner read test questions aloud or used audio presentation (CD)	2,935	2.01%
Q: Used a calculator	44	0.03%
R: Used an arithmetic table	72	0.05%
S: Used math manipulatives	3	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	24	0.02%
X: Used an unlisted accommodation	548	0.38%
Accom. or Mod. is in Section 504 Plan	56	0.04%
Accom. or Mod. is in IEP	3,959	2.71%
English Learner Test Variation A	1,295	0.89%
English Learner Test Variation B	65	0.04%
English Learner Test Variation C	380	0.26%
English Learner Test Variation D	366	0.25%
Any Accom., Mod., or EL Variation	6,191	4.24%
No Accom., Mod., or EL Variation	139,776	95.76%

Accommodation Summary for Mathematics Grade 4		
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 4**	**Pct. of Total**
B: Marked in test booklet	10	0.03%
C: Dictated responses to a scribe	0	0.00%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	2	0.01%
H: Used large-print test	8	0.03%
J: Tested over more than one day	10	0.03%
K: Had supervised breaks	26	0.08%
L: Most beneficial time of day	7	0.02%
M: Administered at home or in a hospital	2	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	39	0.13%
Q: Used a calculator	0	0.00%
R: Used an arithmetic table	1	0.00%
S: Used math manipulatives	1	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	0	0.00%
X: Used an unlisted accommodation	8	0.03%
Accom. or Mod. is in Section 504 Plan	4	0.01%
Accom. or Mod. is in IEP	68	0.22%
English Learner Test Variation A	16	0.05%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	2	0.01%
English Learner Test Variation D	0	0.00%
Any Accom., Mod., or EL Variation	98	0.32%
No Accom., Mod., or EL Variation	30,756	99.68%

Table 6.C.17 Accommodation Summary for Mathematics Grade 5

Accommodation Summary for Mathematics Grade 5		
All Tested	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	671	0.14%
C: Dictated responses to a scribe	70	0.01%
F: Used non-interfering assistive device	66	0.01%
G: Used braille test	34	0.01%
H: Used large-print test	235	0.05%
J: Tested over more than one day	1,610	0.34%
K: Had supervised breaks	4,950	1.06%
L: Most beneficial time of day	1,879	0.40%
M: Administered at home or in a hospital	85	0.02%
N: Used a dictionary	18	0.00%
O: Examiner presented with MCE or ASL	95	0.02%
P: Examiner read test questions aloud or used audio presentation (CD)	7,804	1.66%
Q: Used a calculator	188	0.04%
R: Used an arithmetic table	189	0.04%
S: Used math manipulatives	24	0.01%
V: Used interfering assistive device	5	0.00%
W: Used an unlisted modification	137	0.03%
X: Used an unlisted accommodation	1,626	0.35%
Accom. or Mod. is in Section 504 Plan	222	0.05%
Accom. or Mod. is in IEP	11,278	2.40%
English Learner Test Variation A	958	0.20%
English Learner Test Variation B	95	0.02%
English Learner Test Variation C	328	0.07%
English Learner Test Variation D	356	0.08%
Any Accom., Mod., or EL Variation	14,425	3.08%
No Accom., Mod., or EL Variation	454,667	96.92%
Students Not in Special Education	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	96	0.02%
C: Dictated responses to a scribe	6	0.00%
F: Used non-interfering assistive device	8	0.00%
G: Used braille test	2	0.00%
H: Used large-print test	43	0.01%
J: Tested over more than one day	226	0.05%
K: Had supervised breaks	722	0.17%
L: Most beneficial time of day	237	0.06%
M: Administered at home or in a hospital	37	0.01%
N: Used a dictionary	6	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	921	0.22%

Accommodation Summary for Mathematics Grade 5		
Q: Used a calculator	24	0.01%
R: Used an arithmetic table	24	0.01%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	17	0.00%
X: Used an unlisted accommodation	251	0.06%
Accom. or Mod. is in Section 504 Plan	201	0.05%
Accom. or Mod. is in IEP	1,260	0.30%
English Learner Test Variation A	895	0.21%
English Learner Test Variation B	45	0.01%
English Learner Test Variation C	269	0.06%
English Learner Test Variation D	335	0.08%
Any Accom., Mod., or EL Variation	2,952	0.70%
No Accom., Mod., or EL Variation	418,220	99.30%
Students in Special Education	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	573	1.20%
C: Dictated responses to a scribe	64	0.13%
F: Used non-interfering assistive device	58	0.12%
G: Used braille test	32	0.07%
H: Used large-print test	190	0.40%
J: Tested over more than one day	1,378	2.88%
K: Had supervised breaks	4,210	8.80%
L: Most beneficial time of day	1,636	3.42%
M: Administered at home or in a hospital	47	0.10%
N: Used a dictionary	12	0.03%
O: Examiner presented with MCE or ASL	94	0.20%
P: Examiner read test questions aloud or used audio presentation (CD)	6,848	14.32%
Q: Used a calculator	163	0.34%
R: Used an arithmetic table	165	0.35%
S: Used math manipulatives	24	0.05%
V: Used interfering assistive device	4	0.01%
W: Used an unlisted modification	120	0.25%
X: Used an unlisted accommodation	1,373	2.87%
Accom. or Mod. is in Section 504 Plan	21	0.04%
Accom. or Mod. is in IEP	9,966	20.84%
English Learner Test Variation A	63	0.13%
English Learner Test Variation B	50	0.10%
English Learner Test Variation C	59	0.12%
English Learner Test Variation D	20	0.04%
Any Accom., Mod., or EL Variation	11,420	23.88%
No Accom., Mod., or EL Variation	36,397	76.12%

Accommodation Summary for Mathematics Grade 5		
English-Only Students	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	485	0.19%
C: Dictated responses to a scribe	45	0.02%
F: Used non-interfering assistive device	40	0.02%
G: Used braille test	22	0.01%
H: Used large-print test	161	0.06%
J: Tested over more than one day	1,022	0.40%
K: Had supervised breaks	3,054	1.20%
L: Most beneficial time of day	1,160	0.45%
M: Administered at home or in a hospital	57	0.02%
N: Used a dictionary	7	0.00%
O: Examiner presented with MCE or ASL	58	0.02%
P: Examiner read test questions aloud or used audio presentation (CD)	4,520	1.77%
Q: Used a calculator	132	0.05%
R: Used an arithmetic table	116	0.05%
S: Used math manipulatives	13	0.01%
V: Used interfering assistive device	5	0.00%
W: Used an unlisted modification	91	0.04%
X: Used an unlisted accommodation	1,005	0.39%
Accom. or Mod. is in Section 504 Plan	187	0.07%
Accom. or Mod. is in IEP	6,811	2.67%
English Learner Test Variation A	27	0.01%
English Learner Test Variation B	9	0.00%
English Learner Test Variation C	8	0.00%
English Learner Test Variation D	3	0.00%
Any Accom., Mod., or EL Variation	7,992	3.13%
No Accom., Mod., or EL Variation	247,323	96.87%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	25	0.08%
C: Dictated responses to a scribe	3	0.01%
F: Used non-interfering assistive device	5	0.02%
G: Used braille test	3	0.01%
H: Used large-print test	5	0.02%
J: Tested over more than one day	43	0.13%
K: Had supervised breaks	124	0.39%
L: Most beneficial time of day	43	0.13%
M: Administered at home or in a hospital	4	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	2	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	162	0.51%
Q: Used a calculator	4	0.01%

Accommodation Summary for Mathematics Grade 5		
R: Used an arithmetic table	4	0.01%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	6	0.02%
X: Used an unlisted accommodation	60	0.19%
Accom. or Mod. is in Section 504 Plan	5	0.02%
Accom. or Mod. is in IEP	275	0.86%
English Learner Test Variation A	6	0.02%
English Learner Test Variation B	6	0.02%
English Learner Test Variation C	5	0.02%
English Learner Test Variation D	3	0.01%
Any Accom., Mod., or EL Variation	338	1.06%
No Accom., Mod., or EL Variation	31,604	98.94%
English Learner (EL) Students	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	154	0.12%
C: Dictated responses to a scribe	19	0.01%
F: Used non-interfering assistive device	17	0.01%
G: Used braille test	9	0.01%
H: Used large-print test	56	0.04%
J: Tested over more than one day	527	0.41%
K: Had supervised breaks	1,713	1.33%
L: Most beneficial time of day	646	0.50%
M: Administered at home or in a hospital	21	0.02%
N: Used a dictionary	10	0.01%
O: Examiner presented with MCE or ASL	31	0.02%
P: Examiner read test questions aloud or used audio presentation (CD)	3,033	2.35%
Q: Used a calculator	50	0.04%
R: Used an arithmetic table	66	0.05%
S: Used math manipulatives	7	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	38	0.03%
X: Used an unlisted accommodation	543	0.42%
Accom. or Mod. is in Section 504 Plan	26	0.02%
Accom. or Mod. is in IEP	4,042	3.13%
English Learner Test Variation A	912	0.71%
English Learner Test Variation B	80	0.06%
English Learner Test Variation C	315	0.24%
English Learner Test Variation D	349	0.27%
Any Accom., Mod., or EL Variation	5,899	4.57%
No Accom., Mod., or EL Variation	123,170	95.43%

Accommodation Summary for Mathematics Grade 5		
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	6	0.01%
C: Dictated responses to a scribe	3	0.01%
F: Used non-interfering assistive device	4	0.01%
G: Used braille test	0	0.00%
H: Used large-print test	12	0.02%
J: Tested over more than one day	11	0.02%
K: Had supervised breaks	40	0.08%
L: Most beneficial time of day	24	0.05%
M: Administered at home or in a hospital	3	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	4	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	71	0.14%
Q: Used a calculator	1	0.00%
R: Used an arithmetic table	3	0.01%
S: Used math manipulatives	4	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	12	0.02%
Accom. or Mod. is in Section 504 Plan	4	0.01%
Accom. or Mod. is in IEP	115	0.22%
English Learner Test Variation A	13	0.02%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	0	0.00%
English Learner Test Variation D	1	0.00%
Any Accom., Mod., or EL Variation	154	0.30%
No Accom., Mod., or EL Variation	51,860	99.70%

Table 6.C.18 Accommodation Summary for Mathematics Grade 6

Accommodation Summary for Mathematics Grade 6		
All Tested	**Grade 6**	**Pct. of Total**
B: Marked in test booklet	433	0.09%
C: Dictated responses to a scribe	62	0.01%
F: Used non-interfering assistive device	64	0.01%
G: Used braille test	34	0.01%
H: Used large-print test	185	0.04%
J: Tested over more than one day	1,287	0.27%
K: Had supervised breaks	3,439	0.72%
L: Most beneficial time of day	1,201	0.25%
M: Administered at home or in a hospital	83	0.02%
N: Used a dictionary	17	0.00%
O: Examiner presented with MCE or ASL	54	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	4,747	1.00%
Q: Used a calculator	437	0.09%
R: Used an arithmetic table	212	0.04%
S: Used math manipulatives	16	0.00%
V: Used interfering assistive device	4	0.00%
W: Used an unlisted modification	111	0.02%
X: Used an unlisted accommodation	1,531	0.32%
Accom. or Mod. is in Section 504 Plan	161	0.03%
Accom. or Mod. is in IEP	8,269	1.73%
English Learner Test Variation A	1,415	0.30%
English Learner Test Variation B	80	0.02%
English Learner Test Variation C	689	0.14%
English Learner Test Variation D	496	0.10%
Any Accom., Mod., or EL Variation	11,478	2.41%
No Accom., Mod., or EL Variation	465,448	97.59%
Students Not in Special Education	**Grade 6**	**Pct. of Total**
B: Marked in test booklet	61	0.01%
C: Dictated responses to a scribe	10	0.00%
F: Used non-interfering assistive device	9	0.00%
G: Used braille test	3	0.00%
H: Used large-print test	36	0.01%
J: Tested over more than one day	139	0.03%
K: Had supervised breaks	439	0.10%
L: Most beneficial time of day	139	0.03%
M: Administered at home or in a hospital	45	0.01%
N: Used a dictionary	2	0.00%
O: Examiner presented with MCE or ASL	6	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	500	0.12%

Accommodation Summary for Mathematics Grade 6		
Q: Used a calculator	64	0.01%
R: Used an arithmetic table	35	0.01%
S: Used math manipulatives	1	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	8	0.00%
X: Used an unlisted accommodation	202	0.05%
Accom. or Mod. is in Section 504 Plan	139	0.03%
Accom. or Mod. is in IEP	886	0.21%
English Learner Test Variation A	1,328	0.31%
English Learner Test Variation B	60	0.01%
English Learner Test Variation C	651	0.15%
English Learner Test Variation D	463	0.11%
Any Accom., Mod., or EL Variation	3,090	0.72%
No Accom., Mod., or EL Variation	427,612	99.28%
Students in Special Education	**Grade 6**	**Pct. of Total**
B: Marked in test booklet	372	0.81%
C: Dictated responses to a scribe	52	0.11%
F: Used non-interfering assistive device	55	0.12%
G: Used braille test	31	0.07%
H: Used large-print test	148	0.32%
J: Tested over more than one day	1,146	2.48%
K: Had supervised breaks	2,987	6.47%
L: Most beneficial time of day	1,055	2.28%
M: Administered at home or in a hospital	38	0.08%
N: Used a dictionary	15	0.03%
O: Examiner presented with MCE or ASL	48	0.10%
P: Examiner read test questions aloud or used audio presentation (CD)	4,239	9.18%
Q: Used a calculator	373	0.81%
R: Used an arithmetic table	177	0.38%
S: Used math manipulatives	15	0.03%
V: Used interfering assistive device	4	0.01%
W: Used an unlisted modification	103	0.22%
X: Used an unlisted accommodation	1,323	2.87%
Accom. or Mod. is in Section 504 Plan	22	0.05%
Accom. or Mod. is in IEP	7,351	15.92%
English Learner Test Variation A	87	0.19%
English Learner Test Variation B	20	0.04%
English Learner Test Variation C	38	0.08%
English Learner Test Variation D	33	0.07%
Any Accom., Mod., or EL Variation	8,356	18.10%
No Accom., Mod., or EL Variation	37,815	81.90%

Accommodation Summary for Mathematics Grade 6		
English-Only Students	**Grade 6**	**Pct. of Total**
B: Marked in test booklet	307	0.12%
C: Dictated responses to a scribe	49	0.02%
F: Used non-interfering assistive device	52	0.02%
G: Used braille test	15	0.01%
H: Used large-print test	128	0.05%
J: Tested over more than one day	811	0.31%
K: Had supervised breaks	2,186	0.84%
L: Most beneficial time of day	776	0.30%
M: Administered at home or in a hospital	66	0.03%
N: Used a dictionary	13	0.00%
O: Examiner presented with MCE or ASL	40	0.02%
P: Examiner read test questions aloud or used audio presentation (CD)	2,766	1.06%
Q: Used a calculator	297	0.11%
R: Used an arithmetic table	123	0.05%
S: Used math manipulatives	7	0.00%
V: Used interfering assistive device	3	0.00%
W: Used an unlisted modification	73	0.03%
X: Used an unlisted accommodation	949	0.36%
Accom. or Mod. is in Section 504 Plan	128	0.05%
Accom. or Mod. is in IEP	5,110	1.96%
English Learner Test Variation A	38	0.01%
English Learner Test Variation B	2	0.00%
English Learner Test Variation C	15	0.01%
English Learner Test Variation D	7	0.00%
Any Accom., Mod., or EL Variation	5,965	2.28%
No Accom., Mod., or EL Variation	255,366	97.72%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 6**	**Pct. of Total**
B: Marked in test booklet	12	0.03%
C: Dictated responses to a scribe	1	0.00%
F: Used non-interfering assistive device	0	0.00%
G: Used braille test	3	0.01%
H: Used large-print test	8	0.02%
J: Tested over more than one day	29	0.07%
K: Had supervised breaks	86	0.22%
L: Most beneficial time of day	23	0.06%
M: Administered at home or in a hospital	3	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	101	0.26%
Q: Used a calculator	10	0.03%

Accommodation Summary for Mathematics Grade 6		
R: Used an arithmetic table	3	0.01%
S: Used math manipulatives	1	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	3	0.01%
X: Used an unlisted accommodation	63	0.16%
Accom. or Mod. is in Section 504 Plan	6	0.02%
Accom. or Mod. is in IEP	216	0.55%
English Learner Test Variation A	7	0.02%
English Learner Test Variation B	2	0.01%
English Learner Test Variation C	4	0.01%
English Learner Test Variation D	2	0.01%
Any Accom., Mod., or EL Variation	258	0.65%
No Accom., Mod., or EL Variation	39,299	99.35%
English Learner (EL) Students	**Grade 6**	**Pct. of Total**
B: Marked in test booklet	103	0.10%
C: Dictated responses to a scribe	11	0.01%
F: Used non-interfering assistive device	11	0.01%
G: Used braille test	14	0.01%
H: Used large-print test	41	0.04%
J: Tested over more than one day	424	0.40%
K: Had supervised breaks	1,102	1.03%
L: Most beneficial time of day	381	0.36%
M: Administered at home or in a hospital	13	0.01%
N: Used a dictionary	4	0.00%
O: Examiner presented with MCE or ASL	13	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,795	1.68%
Q: Used a calculator	120	0.11%
R: Used an arithmetic table	82	0.08%
S: Used math manipulatives	8	0.01%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	31	0.03%
X: Used an unlisted accommodation	468	0.44%
Accom. or Mod. is in Section 504 Plan	22	0.02%
Accom. or Mod. is in IEP	2,779	2.60%
English Learner Test Variation A	1,356	1.27%
English Learner Test Variation B	70	0.07%
English Learner Test Variation C	643	0.60%
English Learner Test Variation D	481	0.45%
Any Accom., Mod., or EL Variation	5,018	4.70%
No Accom., Mod., or EL Variation	101,851	95.30%

Accommodation Summary for Mathematics Grade 6		
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 6**	**Pct. of Total**
B: Marked in test booklet	11	0.02%
C: Dictated responses to a scribe	0	0.00%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	2	0.00%
H: Used large-print test	8	0.01%
J: Tested over more than one day	20	0.03%
K: Had supervised breaks	55	0.08%
L: Most beneficial time of day	16	0.02%
M: Administered at home or in a hospital	1	0.00%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	74	0.11%
Q: Used a calculator	7	0.01%
R: Used an arithmetic table	2	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	41	0.06%
Accom. or Mod. is in Section 504 Plan	5	0.01%
Accom. or Mod. is in IEP	137	0.20%
English Learner Test Variation A	9	0.01%
English Learner Test Variation B	3	0.00%
English Learner Test Variation C	25	0.04%
English Learner Test Variation D	2	0.00%
Any Accom., Mod., or EL Variation	202	0.30%
No Accom., Mod., or EL Variation	68,216	99.70%

Table 6.C.19 Accommodation Summary for Mathematics Grade 7

Accommodation Summary for Mathematics Grade 7		
All Tested	**Grade 7**	**Pct. of Total**
B: Marked in test booklet	232	0.05%
C: Dictated responses to a scribe	43	0.01%
F: Used non-interfering assistive device	51	0.01%
G: Used braille test	62	0.01%
H: Used large-print test	188	0.04%
J: Tested over more than one day	563	0.12%
K: Had supervised breaks	1,758	0.38%
L: Most beneficial time of day	514	0.11%
M: Administered at home or in a hospital	112	0.02%
N: Used a dictionary	3	0.00%
O: Examiner presented with MCE or ASL	23	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	2,662	0.58%
Q: Used a calculator	546	0.12%
R: Used an arithmetic table	106	0.02%
S: Used math manipulatives	3	0.00%
V: Used interfering assistive device	2	0.00%
W: Used an unlisted modification	87	0.02%
X: Used an unlisted accommodation	1,200	0.26%
Accom. or Mod. is in Section 504 Plan	103	0.02%
Accom. or Mod. is in IEP	5,343	1.16%
English Learner Test Variation A	1,933	0.42%
English Learner Test Variation B	77	0.02%
English Learner Test Variation C	1,414	0.31%
English Learner Test Variation D	1,058	0.23%
Any Accom., Mod., or EL Variation	9,423	2.05%
No Accom., Mod., or EL Variation	450,913	97.95%
Students Not in Special Education	**Grade 7**	**Pct. of Total**
B: Marked in test booklet	42	0.01%
C: Dictated responses to a scribe	4	0.00%
F: Used non-interfering assistive device	9	0.00%
G: Used braille test	5	0.00%
H: Used large-print test	32	0.01%
J: Tested over more than one day	52	0.01%
K: Had supervised breaks	210	0.05%
L: Most beneficial time of day	57	0.01%
M: Administered at home or in a hospital	61	0.01%
N: Used a dictionary	2	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	229	0.05%

Accommodation Summary for Mathematics Grade 7		
Q: Used a calculator	65	0.02%
R: Used an arithmetic table	14	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	4	0.00%
X: Used an unlisted accommodation	172	0.04%
Accom. or Mod. is in Section 504 Plan	89	0.02%
Accom. or Mod. is in IEP	525	0.13%
English Learner Test Variation A	1,866	0.45%
English Learner Test Variation B	73	0.02%
English Learner Test Variation C	1,382	0.33%
English Learner Test Variation D	1,016	0.24%
Any Accom., Mod., or EL Variation	3,860	0.93%
No Accom., Mod., or EL Variation	412,615	99.07%
Students in Special Education	**Grade 7**	**Pct. of Total**
B: Marked in test booklet	190	0.43%
C: Dictated responses to a scribe	39	0.09%
F: Used non-interfering assistive device	42	0.10%
G: Used braille test	57	0.13%
H: Used large-print test	156	0.36%
J: Tested over more than one day	508	1.16%
K: Had supervised breaks	1,535	3.50%
L: Most beneficial time of day	455	1.04%
M: Administered at home or in a hospital	51	0.12%
N: Used a dictionary	1	0.00%
O: Examiner presented with MCE or ASL	23	0.05%
P: Examiner read test questions aloud or used audio presentation (CD)	2,422	5.53%
Q: Used a calculator	478	1.09%
R: Used an arithmetic table	92	0.21%
S: Used math manipulatives	3	0.01%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	83	0.19%
X: Used an unlisted accommodation	1,025	2.34%
Accom. or Mod. is in Section 504 Plan	14	0.03%
Accom. or Mod. is in IEP	4,792	10.94%
English Learner Test Variation A	67	0.15%
English Learner Test Variation B	4	0.01%
English Learner Test Variation C	32	0.07%
English Learner Test Variation D	42	0.10%
Any Accom., Mod., or EL Variation	5,537	12.64%
No Accom., Mod., or EL Variation	38,270	87.36%

Accommodation Summary for Mathematics Grade 7		
English-Only Students	**Grade 7**	**Pct. of Total**
B: Marked in test booklet	180	0.07%
C: Dictated responses to a scribe	34	0.01%
F: Used non-interfering assistive device	37	0.01%
G: Used braille test	35	0.01%
H: Used large-print test	123	0.05%
J: Tested over more than one day	381	0.15%
K: Had supervised breaks	1,210	0.48%
L: Most beneficial time of day	382	0.15%
M: Administered at home or in a hospital	73	0.03%
N: Used a dictionary	2	0.00%
O: Examiner presented with MCE or ASL	14	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,432	0.57%
Q: Used a calculator	372	0.15%
R: Used an arithmetic table	76	0.03%
S: Used math manipulatives	2	0.00%
V: Used interfering assistive device	2	0.00%
W: Used an unlisted modification	42	0.02%
X: Used an unlisted accommodation	771	0.31%
Accom. or Mod. is in Section 504 Plan	90	0.04%
Accom. or Mod. is in IEP	3,290	1.31%
English Learner Test Variation A	58	0.02%
English Learner Test Variation B	1	0.00%
English Learner Test Variation C	30	0.01%
English Learner Test Variation D	44	0.02%
Any Accom., Mod., or EL Variation	3,951	1.57%
No Accom., Mod., or EL Variation	247,580	98.43%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 7**	**Pct. of Total**
B: Marked in test booklet	7	0.02%
C: Dictated responses to a scribe	1	0.00%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	6	0.02%
H: Used large-print test	11	0.03%
J: Tested over more than one day	8	0.02%
K: Had supervised breaks	31	0.09%
L: Most beneficial time of day	6	0.02%
M: Administered at home or in a hospital	7	0.02%
N: Used a dictionary	1	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	56	0.16%
Q: Used a calculator	13	0.04%

Accommodation Summary for Mathematics Grade 7		
R: Used an arithmetic table	1	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	40	0.11%
Accom. or Mod. is in Section 504 Plan	0	0.00%
Accom. or Mod. is in IEP	129	0.37%
English Learner Test Variation A	10	0.03%
English Learner Test Variation B	2	0.01%
English Learner Test Variation C	6	0.02%
English Learner Test Variation D	20	0.06%
Any Accom., Mod., or EL Variation	186	0.53%
No Accom., Mod., or EL Variation	34,966	99.47%
English Learner (EL) Students	**Grade 7**	**Pct. of Total**
B: Marked in test booklet	32	0.03%
C: Dictated responses to a scribe	7	0.01%
F: Used non-interfering assistive device	12	0.01%
G: Used braille test	17	0.02%
H: Used large-print test	41	0.04%
J: Tested over more than one day	163	0.16%
K: Had supervised breaks	472	0.47%
L: Most beneficial time of day	109	0.11%
M: Administered at home or in a hospital	26	0.03%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	8	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,122	1.12%
Q: Used a calculator	148	0.15%
R: Used an arithmetic table	28	0.03%
S: Used math manipulatives	1	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	44	0.04%
X: Used an unlisted accommodation	365	0.36%
Accom. or Mod. is in Section 504 Plan	9	0.01%
Accom. or Mod. is in IEP	1,796	1.79%
English Learner Test Variation A	1,835	1.83%
English Learner Test Variation B	74	0.07%
English Learner Test Variation C	1,334	1.33%
English Learner Test Variation D	953	0.95%
Any Accom., Mod., or EL Variation	5,029	5.02%
No Accom., Mod., or EL Variation	95,121	94.98%

Accommodation Summary for Mathematics Grade 7		
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 7**	**Pct. of Total**
B: Marked in test booklet	12	0.02%
C: Dictated responses to a scribe	1	0.00%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	4	0.01%
H: Used large-print test	13	0.02%
J: Tested over more than one day	9	0.01%
K: Had supervised breaks	35	0.05%
L: Most beneficial time of day	14	0.02%
M: Administered at home or in a hospital	6	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	42	0.06%
Q: Used a calculator	8	0.01%
R: Used an arithmetic table	1	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	0	0.00%
X: Used an unlisted accommodation	21	0.03%
Accom. or Mod. is in Section 504 Plan	4	0.01%
Accom. or Mod. is in IEP	103	0.14%
English Learner Test Variation A	20	0.03%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	40	0.06%
English Learner Test Variation D	39	0.05%
Any Accom., Mod., or EL Variation	217	0.30%
No Accom., Mod., or EL Variation	72,302	99.70%

Table 6.C.20 Accommodation Summary for General Mathematics

Accommodation Summary for General Mathematics				
All Tested	**Grade 8**	**Grade 9**	**Total**	**Pct. of Total**
B: Marked in test booklet	193	45	238	0.08%
C: Dictated responses to a scribe	27	14	41	0.01%
F: Used non-interfering assistive device	45	7	52	0.02%
G: Used braille test	29	20	49	0.02%
H: Used large-print test	118	37	155	0.05%
J: Tested over more than one day	420	116	536	0.17%
K: Had supervised breaks	1,344	621	1,965	0.64%
L: Most beneficial time of day	491	158	649	0.21%
M: Administered at home or in a hospital	71	49	120	0.04%
N: Used a dictionary	8	9	17	0.01%
O: Examiner presented with MCE or ASL	36	2	38	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,940	417	2,357	0.77%
Q: Used a calculator	493	1,319	1,812	0.59%
R: Used an arithmetic table	99	23	122	0.04%
S: Used math manipulatives	1	7	8	0.00%
V: Used interfering assistive device	0	0	0	0.00%
W: Used an unlisted modification	78	18	96	0.03%
X: Used an unlisted accommodation	957	212	1,169	0.38%
Accom. or Mod. is in Section 504 Plan	43	8	51	0.02%
Accom. or Mod. is in IEP	4,069	2,088	6,157	2.01%
English Learner Test Variation A	1,144	599	1,743	0.57%
English Learner Test Variation B	49	39	88	0.03%
English Learner Test Variation C	807	545	1,352	0.44%
English Learner Test Variation D	694	420	1,114	0.36%
Any Accom., Mod., or EL Variation	6,599	3,327	9,926	3.24%
No Accom., Mod., or EL Variation	212,521	84,299	296,820	96.76%
Students Not in Special Education	**Grade 8**	**Grade 9**	**Total**	**Pct. of Total**
B: Marked in test booklet	14	3	17	0.01%
C: Dictated responses to a scribe	2	0	2	0.00%
F: Used non-interfering assistive device	6	0	6	0.00%
G: Used braille test	3	6	9	0.00%
H: Used large-print test	13	8	21	0.01%
J: Tested over more than one day	29	7	36	0.01%
K: Had supervised breaks	151	44	195	0.08%
L: Most beneficial time of day	46	11	57	0.02%
M: Administered at home or in a hospital	31	22	53	0.02%
N: Used a dictionary	5	4	9	0.00%

Accommodation Summary for General Mathematics				
O: Examiner presented with MCE or ASL	2	0	2	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	128	26	154	0.06%
Q: Used a calculator	66	105	171	0.07%
R: Used an arithmetic table	23	2	25	0.01%
S: Used math manipulatives	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0.00%
W: Used an unlisted modification	7	1	8	0.00%
X: Used an unlisted accommodation	80	13	93	0.04%
Accom. or Mod. is in Section 504 Plan	37	8	45	0.02%
Accom. or Mod. is in IEP	320	153	473	0.18%
English Learner Test Variation A	1,108	586	1,694	0.66%
English Learner Test Variation B	34	36	70	0.03%
English Learner Test Variation C	785	526	1,311	0.51%
English Learner Test Variation D	669	400	1,069	0.42%
Any Accom., Mod., or EL Variation	2,222	1,081	3,303	1.29%
No Accom., Mod., or EL Variation	185,143	67,878	253,021	98.71%
Students in Special Education	**Grade 8**	**Grade 9**	**Total**	**Pct. of Total**
B: Marked in test booklet	178	41	219	0.43%
C: Dictated responses to a scribe	25	14	39	0.08%
F: Used non-interfering assistive device	38	7	45	0.09%
G: Used braille test	26	14	40	0.08%
H: Used large-print test	105	29	134	0.27%
J: Tested over more than one day	390	107	497	0.99%
K: Had supervised breaks	1,189	572	1,761	3.50%
L: Most beneficial time of day	444	146	590	1.17%
M: Administered at home or in a hospital	38	27	65	0.13%
N: Used a dictionary	3	5	8	0.02%
O: Examiner presented with MCE or ASL	34	2	36	0.07%
P: Examiner read test questions aloud or used audio presentation (CD)	1,802	391	2,193	4.35%
Q: Used a calculator	426	1,212	1,638	3.25%
R: Used an arithmetic table	75	21	96	0.19%
S: Used math manipulatives	1	7	8	0.02%
V: Used interfering assistive device	0	0	0	0.00%
W: Used an unlisted modification	71	17	88	0.17%
X: Used an unlisted accommodation	874	198	1,072	2.13%
Accom. or Mod. is in Section 504 Plan	6	0	6	0.01%
Accom. or Mod. is in IEP	3,732	1,926	5,658	11.23%
English Learner Test Variation A	36	13	49	0.10%
English Learner Test Variation B	15	3	18	0.04%

Accommodation Summary for General Mathematics				
English Learner Test Variation C	22	19	41	0.08%
English Learner Test Variation D	25	20	45	0.09%
Any Accom., Mod., or EL Variation	4,360	2,237	6,597	13.10%
No Accom., Mod., or EL Variation	27,359	16,414	43,773	86.90%
English-Only Students	**Grade 8**	**Grade 9**	**Total**	**Pct. of Total**
B: Marked in test booklet	153	36	189	0.11%
C: Dictated responses to a scribe	23	11	34	0.02%
F: Used non-interfering assistive device	30	4	34	0.02%
G: Used braille test	18	19	37	0.02%
H: Used large-print test	89	33	122	0.07%
J: Tested over more than one day	255	107	362	0.21%
K: Had supervised breaks	898	473	1,371	0.81%
L: Most beneficial time of day	343	138	481	0.28%
M: Administered at home or in a hospital	42	40	82	0.05%
N: Used a dictionary	1	9	10	0.01%
O: Examiner presented with MCE or ASL	24	1	25	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,080	273	1,353	0.80%
Q: Used a calculator	364	851	1,215	0.72%
R: Used an arithmetic table	54	22	76	0.04%
S: Used math manipulatives	1	6	7	0.00%
V: Used interfering assistive device	0	0	0	0.00%
W: Used an unlisted modification	37	15	52	0.03%
X: Used an unlisted accommodation	582	143	725	0.43%
Accom. or Mod. is in Section 504 Plan	35	7	42	0.02%
Accom. or Mod. is in IEP	2,526	1,446	3,972	2.35%
English Learner Test Variation A	26	14	40	0.02%
English Learner Test Variation B	2	0	2	0.00%
English Learner Test Variation C	14	12	26	0.02%
English Learner Test Variation D	13	7	20	0.01%
Any Accom., Mod., or EL Variation	3,006	1,682	4,688	2.77%
No Accom., Mod., or EL Variation	115,193	49,194	164,387	97.23%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 8**	**Grade 9**	**Total**	**Pct. of Total**
B: Marked in test booklet	1	1	2	0.01%
C: Dictated responses to a scribe	0	1	1	0.01%
F: Used non-interfering assistive device	1	1	2	0.01%
G: Used braille test	0	0	0	0.00%
H: Used large-print test	1	1	2	0.01%
J: Tested over more than one day	7	2	9	0.05%
K: Had supervised breaks	30	21	51	0.29%

Accommodation Summary for General Mathematics				
L: Most beneficial time of day	12	0	12	0.07%
M: Administered at home or in a hospital	5	1	6	0.03%
N: Used a dictionary	0	0	0	0.00%
O: Examiner presented with MCE or ASL	2	0	2	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	38	9	47	0.26%
Q: Used a calculator	9	44	53	0.30%
R: Used an arithmetic table	3	0	3	0.02%
S: Used math manipulatives	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0.00%
W: Used an unlisted modification	2	0	2	0.01%
X: Used an unlisted accommodation	27	8	35	0.20%
Accom. or Mod. is in Section 504 Plan	0	0	0	0.00%
Accom. or Mod. is in IEP	89	71	160	0.90%
English Learner Test Variation A	5	1	6	0.03%
English Learner Test Variation B	0	0	0	0.00%
English Learner Test Variation C	3	3	6	0.03%
English Learner Test Variation D	2	0	2	0.01%
Any Accom., Mod., or EL Variation	119	84	203	1.14%
No Accom., Mod., or EL Variation	12,938	4,618	17,556	98.86%
English Learner (EL) Students	**Grade 8**	**Grade 9**	**Total**	**Pct. of Total**
B: Marked in test booklet	32	7	39	0.05%
C: Dictated responses to a scribe	3	1	4	0.00%
F: Used non-interfering assistive device	12	2	14	0.02%
G: Used braille test	10	0	10	0.01%
H: Used large-print test	23	3	26	0.03%
J: Tested over more than one day	138	6	144	0.17%
K: Had supervised breaks	371	114	485	0.59%
L: Most beneficial time of day	116	16	132	0.16%
M: Administered at home or in a hospital	20	8	28	0.03%
N: Used a dictionary	7	0	7	0.01%
O: Examiner presented with MCE or ASL	9	1	10	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	766	122	888	1.08%
Q: Used a calculator	113	366	479	0.58%
R: Used an arithmetic table	38	1	39	0.05%
S: Used math manipulatives	0	1	1	0.00%
V: Used interfering assistive device	0	0	0	0.00%
W: Used an unlisted modification	35	3	38	0.05%
X: Used an unlisted accommodation	320	53	373	0.45%
Accom. or Mod. is in Section 504 Plan	7	1	8	0.01%
Accom. or Mod. is in IEP	1,321	496	1,817	2.21%

Accommodation Summary for General Mathematics				
English Learner Test Variation A	1,104	581	1,685	2.05%
English Learner Test Variation B	47	39	86	0.10%
English Learner Test Variation C	772	525	1,297	1.57%
English Learner Test Variation D	671	413	1,084	1.32%
Any Accom., Mod., or EL Variation	3,290	1,473	4,763	5.78%
No Accom., Mod., or EL Variation	55,467	22,164	77,631	94.22%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 8**	**Grade 9**	**Total**	**Pct. of Total**
B: Marked in test booklet	6	1	7	0.02%
C: Dictated responses to a scribe	1	1	2	0.01%
F: Used non-interfering assistive device	2	0	2	0.01%
G: Used braille test	1	1	2	0.01%
H: Used large-print test	5	0	5	0.01%
J: Tested over more than one day	16	1	17	0.05%
K: Had supervised breaks	37	11	48	0.13%
L: Most beneficial time of day	14	3	17	0.05%
M: Administered at home or in a hospital	3	0	3	0.01%
N: Used a dictionary	0	0	0	0.00%
O: Examiner presented with MCE or ASL	1	0	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	48	11	59	0.16%
Q: Used a calculator	4	53	57	0.16%
R: Used an arithmetic table	3	0	3	0.01%
S: Used math manipulatives	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0.00%
W: Used an unlisted modification	4	0	4	0.01%
X: Used an unlisted accommodation	25	3	28	0.08%
Accom. or Mod. is in Section 504 Plan	1	0	1	0.00%
Accom. or Mod. is in IEP	111	63	174	0.47%
English Learner Test Variation A	6	2	8	0.02%
English Learner Test Variation B	0	0	0	0.00%
English Learner Test Variation C	16	4	20	0.05%
English Learner Test Variation D	6	0	6	0.02%
Any Accom., Mod., or EL Variation	155	73	228	0.62%
No Accom., Mod., or EL Variation	28,425	7,999	36,424	99.38%

Table 6.C.21 Accommodation Summary for Algebra I

Accommodation Summary for Algebra I							
All Tested	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	3	56	32	38	33	162	0.02%
C: Dictated responses to a scribe	0	13	25	4	7	49	0.01%
F: Used non-interfering assistive device	0	11	10	11	9	41	0.01%
G: Used braille test	1	24	19	12	6	62	0.01%
H: Used large-print test	2	63	58	39	23	185	0.02%
J: Tested over more than one day	0	93	64	88	62	307	0.04%
K: Had supervised breaks	6	266	249	355	306	1,182	0.16%
L: Most beneficial time of day	3	64	47	93	72	279	0.04%
M: Administered at home or in a hospital	2	37	56	41	29	165	0.02%
N: Used a dictionary	0	1	2	3	7	13	0.00%
O: Examiner presented with MCE or ASL	2	1	2	6	8	19	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	2	285	270	248	222	1,027	0.14%
Q: Used a calculator	0	82	790	1,075	847	2,794	0.38%
R: Used an arithmetic table	0	15	7	9	9	40	0.01%
S: Used math manipulatives	0	6	0	1	0	7	0.00%
V: Used interfering assistive device	0	0	15	35	9	59	0.01%
W: Used an unlisted modification	2	17	16	19	17	71	0.01%
X: Used an unlisted accommodation	4	154	186	157	120	621	0.08%
Accom. or Mod. is in Section 504 Plan	1	29	13	8	6	57	0.01%
Accom. or Mod. is in IEP	17	732	1,283	1,603	1,202	4,837	0.65%
English Learner Test Variation A	8	308	1,158	732	293	2,499	0.34%
English Learner Test Variation B	1	36	133	88	41	299	0.04%
English Learner Test Variation C	12	290	1,158	764	333	2,557	0.34%
English Learner Test Variation D	9	138	804	736	376	2,063	0.28%
Any Accom., Mod., or EL Variation	35	1,407	3,491	3,247	2,076	10,256	1.38%
No Accom., Mod., or EL Variation	21,626	237,451	267,519	136,843	70,023	733,462	98.62%
Students Not in Special Education	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	1	16	8	9	3	37	0.01%
C: Dictated responses to a scribe	0	6	5	1	0	12	0.00%
F: Used non-interfering assistive device	0	0	3	1	1	5	0.00%
G: Used braille test	0	3	3	1	1	8	0.00%
H: Used large-print test	0	11	12	4	1	28	0.00%
J: Tested over more than one day	0	11	6	8	0	25	0.00%
K: Had supervised breaks	1	35	35	25	15	111	0.02%
L: Most beneficial time of day	0	5	6	3	3	17	0.00%

Accommodation Summary for Algebra I

M: Administered at home or in a hospital	0	24	27	17	14	82	0.01%
N: Used a dictionary	0	1	2	1	0	4	0.00%
O: Examiner presented with MCE or ASL	0	0	1	2	1	4	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	29	27	17	12	85	0.01%
Q: Used a calculator	0	6	119	64	54	243	0.04%
R: Used an arithmetic table	0	1	2	0	1	4	0.00%
S: Used math manipulatives	0	1	0	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	5	1	0	8	0.00%
X: Used an unlisted accommodation	0	15	11	14	7	47	0.01%
Accom. or Mod. is in Section 504 Plan	1	27	10	8	1	47	0.01%
Accom. or Mod. is in IEP	1	69	158	95	59	382	0.06%
English Learner Test Variation A	8	305	1,146	721	286	2,466	0.36%
English Learner Test Variation B	1	35	129	86	39	290	0.04%
English Learner Test Variation C	11	285	1,141	755	323	2,515	0.37%
English Learner Test Variation D	9	137	789	718	360	2,013	0.29%
Any Accom., Mod., or EL Variation	15	649	2,123	1,499	706	4,992	0.73%
No Accom., Mod., or EL Variation	21,188	229,140	250,064	120,797	58,867	680,056	99.27%

Students in Special Education	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Total	Pct. of Total
B: Marked in test booklet	2	40	24	28	30	124	0.21%
C: Dictated responses to a scribe	0	7	20	3	7	37	0.06%
F: Used non-interfering assistive device	0	11	7	9	8	35	0.06%
G: Used braille test	1	21	16	11	5	54	0.09%
H: Used large-print test	2	52	46	34	22	156	0.27%
J: Tested over more than one day	0	81	58	79	61	279	0.48%
K: Had supervised breaks	5	229	213	330	289	1,066	1.82%
L: Most beneficial time of day	3	58	41	90	68	260	0.44%
M: Administered at home or in a hospital	2	13	29	24	15	83	0.14%
N: Used a dictionary	0	0	0	2	7	9	0.02%
O: Examiner presented with MCE or ASL	2	1	1	3	7	14	0.02%
P: Examiner read test questions aloud or used audio presentation (CD)	2	255	243	230	210	940	1.60%
Q: Used a calculator	0	76	668	1,009	791	2,544	4.34%
R: Used an arithmetic table	0	14	5	9	8	36	0.06%
S: Used math manipulatives	0	5	0	1	0	6	0.01%
V: Used interfering assistive device	0	0	15	35	9	59	0.10%
W: Used an unlisted modification	2	15	11	18	17	63	0.11%
X: Used an unlisted accommodation	4	138	174	142	112	570	0.97%

Accommodation Summary for Algebra I							
Accom. or Mod. is in Section 504 Plan	0	2	3	0	5	10	0.02%
Accom. or Mod. is in IEP	16	659	1,120	1,500	1,138	4,433	7.57%
English Learner Test Variation A	0	3	12	11	7	33	0.06%
English Learner Test Variation B	0	1	4	2	2	9	0.02%
English Learner Test Variation C	1	5	17	9	10	42	0.07%
English Learner Test Variation D	0	1	15	18	16	50	0.09%
Any Accom., Mod., or EL Variation	20	754	1,363	1,740	1,365	5,242	8.95%
No Accom., Mod., or EL Variation	437	8,302	17,443	16,033	11,140	53,355	91.05%
English-Only Students	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	3	40	22	23	25	113	0.03%
C: Dictated responses to a scribe	0	7	11	4	4	26	0.01%
F: Used non-interfering assistive device	0	9	7	5	8	29	0.01%
G: Used braille test	0	10	16	9	5	40	0.01%
H: Used large-print test	1	40	37	23	15	116	0.03%
J: Tested over more than one day	0	60	54	72	54	240	0.06%
K: Had supervised breaks	4	171	187	281	220	863	0.21%
L: Most beneficial time of day	1	43	44	82	61	231	0.06%
M: Administered at home or in a hospital	1	24	44	28	21	118	0.03%
N: Used a dictionary	0	1	2	3	4	10	0.00%
O: Examiner presented with MCE or ASL	2	0	0	4	2	8	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	2	164	142	154	127	589	0.14%
Q: Used a calculator	0	54	502	697	579	1,832	0.44%
R: Used an arithmetic table	0	12	3	5	7	27	0.01%
S: Used math manipulatives	0	5	0	1	0	6	0.00%
V: Used interfering assistive device	0	0	8	27	5	40	0.01%
W: Used an unlisted modification	1	13	5	14	11	44	0.01%
X: Used an unlisted accommodation	4	98	126	109	90	427	0.10%
Accom. or Mod. is in Section 504 Plan	1	23	9	7	2	42	0.01%
Accom. or Mod. is in IEP	13	449	821	1,082	824	3,189	0.77%
English Learner Test Variation A	0	10	36	19	4	69	0.02%
English Learner Test Variation B	0	2	3	2	2	9	0.00%
English Learner Test Variation C	0	4	29	19	5	57	0.01%
English Learner Test Variation D	0	2	12	14	7	35	0.01%
Any Accom., Mod., or EL Variation	16	563	1,051	1,296	994	3,920	0.95%
No Accom., Mod., or EL Variation	12,909	133,801	145,420	76,986	39,796	408,912	99.05%

Accommodation Summary for Algebra I

Initially–Fluent English Proficient (I-FEP) Students	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Total	Pct. of Total
B: Marked in test booklet	0	6	3	0	0	9	0.01%
C: Dictated responses to a scribe	0	1	0	0	0	1	0.00%
F: Used non-interfering assistive device	0	0	1	1	0	2	0.00%
G: Used braille test	0	3	0	0	0	3	0.00%
H: Used large-print test	0	6	6	1	2	15	0.02%
J: Tested over more than one day	0	4	0	2	0	6	0.01%
K: Had supervised breaks	1	9	6	7	16	39	0.06%
L: Most beneficial time of day	1	3	0	0	2	6	0.01%
M: Administered at home or in a hospital	0	1	0	2	4	7	0.01%
N: Used a dictionary	0	0	0	0	1	1	0.00%
O: Examiner presented with MCE or ASL	0	0	1	0	0	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	4	9	9	8	30	0.05%
Q: Used a calculator	0	4	33	44	36	117	0.19%
R: Used an arithmetic table	0	0	2	0	0	2	0.00%
S: Used math manipulatives	0	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	1	1	0	0	2	0.00%
X: Used an unlisted accommodation	0	6	11	6	5	28	0.05%
Accom. or Mod. is in Section 504 Plan	0	1	2	1	0	4	0.01%
Accom. or Mod. is in IEP	0	27	50	58	57	192	0.32%
English Learner Test Variation A	0	1	3	2	1	7	0.01%
English Learner Test Variation B	0	3	1	2	0	6	0.01%
English Learner Test Variation C	0	3	8	5	0	16	0.03%
English Learner Test Variation D	0	0	4	4	0	8	0.01%
Any Accom., Mod., or EL Variation	1	41	75	71	65	253	0.42%
No Accom., Mod., or EL Variation	3,394	22,548	19,742	9,413	4,759	59,856	99.58%
English Learner (EL) Students	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	4	5	11	6	26	0.02%
C: Dictated responses to a scribe	0	3	13	0	2	18	0.01%
F: Used non-interfering assistive device	0	1	2	5	1	9	0.01%
G: Used braille test	1	8	0	2	1	12	0.01%
H: Used large-print test	1	9	6	8	5	29	0.02%
J: Tested over more than one day	0	26	8	11	7	52	0.04%
K: Had supervised breaks	1	74	43	56	60	234	0.16%
L: Most beneficial time of day	1	15	2	6	7	31	0.02%
M: Administered at home or in a hospital	1	10	5	6	2	24	0.02%

Accommodation Summary for Algebra I							
N: Used a dictionary	0	0	0	0	2	2	0.00%
O: Examiner presented with MCE or ASL	0	1	1	1	5	8	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	0	105	109	75	78	367	0.25%
Q: Used a calculator	0	23	203	275	189	690	0.48%
R: Used an arithmetic table	0	3	2	4	2	11	0.01%
S: Used math manipulatives	0	1	0	0	0	1	0.00%
V: Used interfering assistive device	0	0	7	8	4	19	0.01%
W: Used an unlisted modification	1	2	7	5	6	21	0.01%
X: Used an unlisted accommodation	0	45	45	36	22	148	0.10%
Accom. or Mod. is in Section 504 Plan	0	4	0	0	4	8	0.01%
Accom. or Mod. is in IEP	4	224	345	383	270	1,226	0.85%
English Learner Test Variation A	8	295	1,112	703	287	2,405	1.66%
English Learner Test Variation B	1	31	127	81	38	278	0.19%
English Learner Test Variation C	11	273	1,113	724	326	2,447	1.69%
English Learner Test Variation D	9	133	778	705	367	1,992	1.38%
Any Accom., Mod., or EL Variation	17	745	2,265	1,760	950	5,737	3.96%
No Accom., Mod., or EL Variation	704	30,847	56,935	33,082	17,495	139,063	96.04%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	6	2	4	2	14	0.01%
C: Dictated responses to a scribe	0	2	1	0	1	4	0.00%
F: Used non-interfering assistive device	0	0	0	0	0	0	0.00%
G: Used braille test	0	3	3	1	0	7	0.01%
H: Used large-print test	0	8	9	7	1	25	0.02%
J: Tested over more than one day	0	3	1	3	0	7	0.01%
K: Had supervised breaks	0	11	11	8	8	38	0.03%
L: Most beneficial time of day	0	3	1	4	0	8	0.01%
M: Administered at home or in a hospital	0	2	7	3	0	12	0.01%
N: Used a dictionary	0	0	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	1	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	10	10	9	9	38	0.03%
Q: Used a calculator	0	0	51	56	42	149	0.12%
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%
V: Used interfering assistive device	0	0	0	0	0	0	0.00%
W: Used an unlisted modification	0	0	3	0	0	3	0.00%
X: Used an unlisted accommodation	0	4	3	6	2	15	0.01%

Accommodation Summary for Algebra I							
Accom. or Mod. is in Section 504 Plan	0	0	2	0	0	2	0.00%
Accom. or Mod. is in IEP	0	28	64	72	46	210	0.17%
English Learner Test Variation A	0	2	5	8	1	16	0.01%
English Learner Test Variation B	0	0	2	3	1	6	0.00%
English Learner Test Variation C	1	10	8	15	2	36	0.03%
English Learner Test Variation D	0	3	8	9	1	21	0.02%
Any Accom., Mod., or EL Variation	1	53	94	104	60	312	0.25%
No Accom., Mod., or EL Variation	4,599	49,911	44,812	16,984	7,738	124,044	99.75%

Table 6.C.22 Accommodation Summary for Geometry

Accommodation Summary for Geometry						
All Tested	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	2	12	29	14	57	0.02%
C: Dictated responses to a scribe	0	4	2	3	9	0.00%
F: Used non-interfering assistive device	1	0	9	11	21	0.01%
G: Used braille test	0	4	5	4	13	0.00%
H: Used large-print test	2	15	30	14	61	0.02%
J: Tested over more than one day	0	2	13	12	27	0.01%
K: Had supervised breaks	0	13	74	76	163	0.04%
L: Most beneficial time of day	0	4	17	12	33	0.01%
M: Administered at home or in a hospital	0	6	14	21	41	0.01%
N: Used a dictionary	0	0	0	3	3	0.00%
O: Examiner presented with MCE or ASL	0	1	2	0	3	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	14	98	113	225	0.06%
Q: Used a calculator	0	32	305	460	797	0.21%
R: Used an arithmetic table	0	0	0	3	3	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	1	10	11	0.00%
W: Used an unlisted modification	0	0	4	2	6	0.00%
X: Used an unlisted accommodation	0	7	56	40	103	0.03%
Accom. or Mod. is in Section 504 Plan	2	4	10	7	23	0.01%
Accom. or Mod. is in IEP	2	71	479	557	1,109	0.30%
English Learner Test Variation A	3	82	247	184	516	0.14%
English Learner Test Variation B	0	4	58	27	89	0.02%
English Learner Test Variation C	3	91	360	227	681	0.18%
English Learner Test Variation D	2	65	253	243	563	0.15%
Any Accom., Mod., or EL Variation	8	231	1,163	1,086	2,488	0.67%
No Accom., Mod., or EL Variation	15,842	115,770	155,138	81,686	368,436	99.33%
Students Not in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	1	5	5	2	13	0.00%
C: Dictated responses to a scribe	0	0	1	2	3	0.00%
F: Used non-interfering assistive device	0	0	2	1	3	0.00%
G: Used braille test	0	0	0	2	2	0.00%
H: Used large-print test	2	2	3	2	9	0.00%
J: Tested over more than one day	0	0	1	0	1	0.00%
K: Had supervised breaks	0	1	3	6	10	0.00%
L: Most beneficial time of day	0	1	2	0	3	0.00%
M: Administered at home or in a hospital	0	6	11	16	33	0.01%
N: Used a dictionary	0	0	0	0	0	0.00%

Accommodation Summary for Geometry						
O: Examiner presented with MCE or ASL	0	0	1	0	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	1	4	5	10	0.00%
Q: Used a calculator	0	2	34	31	67	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%
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	2	1	3	0.00%
Accom. or Mod. is in Section 504 Plan	2	2	9	6	19	0.01%
Accom. or Mod. is in IEP	0	5	35	29	69	0.02%
English Learner Test Variation A	3	80	246	182	511	0.14%
English Learner Test Variation B	0	4	56	27	87	0.02%
English Learner Test Variation C	3	89	360	224	676	0.19%
English Learner Test Variation D	2	64	251	239	556	0.16%
Any Accom., Mod., or EL Variation	6	149	647	467	1,269	0.36%
No Accom., Mod., or EL Variation	15,664	113,953	148,359	76,199	354,175	99.64%

Students in Special Education	Grade 8	Grade 9	Grade 10	Grade 11	Total	Pct. of Total
B: Marked in test booklet	1	7	24	12	44	0.28%
C: Dictated responses to a scribe	0	4	1	1	6	0.04%
F: Used non-interfering assistive device	1	0	7	10	18	0.12%
G: Used braille test	0	4	5	2	11	0.07%
H: Used large-print test	0	13	27	12	52	0.34%
J: Tested over more than one day	0	2	12	12	26	0.17%
K: Had supervised breaks	0	12	71	70	153	0.99%
L: Most beneficial time of day	0	3	15	12	30	0.19%
M: Administered at home or in a hospital	0	0	3	5	8	0.05%
N: Used a dictionary	0	0	0	3	3	0.02%
O: Examiner presented with MCE or ASL	0	1	1	0	2	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	0	13	94	108	215	1.39%
Q: Used a calculator	0	30	271	428	729	4.71%
R: Used an arithmetic table	0	0	0	3	3	0.02%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	1	10	11	0.07%
W: Used an unlisted modification	0	0	4	2	6	0.04%
X: Used an unlisted accommodation	0	7	54	39	100	0.65%
Accom. or Mod. is in Section 504 Plan	0	2	1	1	4	0.03%
Accom. or Mod. is in IEP	2	66	444	527	1,039	6.72%
English Learner Test Variation A	0	2	1	2	5	0.03%
English Learner Test Variation B	0	0	2	0	2	0.01%

Accommodation Summary for Geometry						
English Learner Test Variation C	0	2	0	3	5	0.03%
English Learner Test Variation D	0	1	2	4	7	0.05%
Any Accom., Mod., or EL Variation	2	82	516	618	1,218	7.87%
No Accom., Mod., or EL Variation	178	1,816	6,774	5,484	14,252	92.13%
English-Only Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	2	12	22	14	50	0.02%
C: Dictated responses to a scribe	0	3	1	3	7	0.00%
F: Used non-interfering assistive device	0	0	5	10	15	0.01%
G: Used braille test	0	2	4	4	10	0.00%
H: Used large-print test	2	11	24	12	49	0.02%
J: Tested over more than one day	0	2	12	11	25	0.01%
K: Had supervised breaks	0	8	58	63	129	0.06%
L: Most beneficial time of day	0	2	16	8	26	0.01%
M: Administered at home or in a hospital	0	5	10	19	34	0.02%
N: Used a dictionary	0	0	0	3	3	0.00%
O: Examiner presented with MCE or ASL	0	1	2	0	3	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	8	57	81	146	0.07%
Q: Used a calculator	0	19	197	298	514	0.24%
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	1	6	7	0.00%
W: Used an unlisted modification	0	0	3	1	4	0.00%
X: Used an unlisted accommodation	0	5	34	33	72	0.03%
Accom. or Mod. is in Section 504 Plan	2	2	9	7	20	0.01%
Accom. or Mod. is in IEP	1	55	320	386	762	0.35%
English Learner Test Variation A	0	1	3	3	7	0.00%
English Learner Test Variation B	0	0	4	0	4	0.00%
English Learner Test Variation C	0	1	2	3	6	0.00%
English Learner Test Variation D	0	0	3	2	5	0.00%
Any Accom., Mod., or EL Variation	3	65	388	472	928	0.43%
No Accom., Mod., or EL Variation	9,619	69,695	89,015	45,721	214,050	99.57%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	2	0	2	0.01%
C: Dictated responses to a scribe	0	1	0	0	1	0.00%
F: Used non-interfering assistive device	0	0	4	0	4	0.01%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	1	0	1	0.00%
J: Tested over more than one day	0	0	1	0	1	0.00%
K: Had supervised breaks	0	1	3	4	8	0.02%

Accommodation Summary for Geometry						
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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	2	2	4	0.01%
Q: Used a calculator	0	1	13	21	35	0.10%
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%
Accom. or Mod. is in Section 504 Plan	0	0	1	0	1	0.00%
Accom. or Mod. is in IEP	0	1	22	20	43	0.12%
English Learner Test Variation A	0	0	6	0	6	0.02%
English Learner Test Variation B	0	0	1	1	2	0.01%
English Learner Test Variation C	0	1	8	1	10	0.03%
English Learner Test Variation D	0	0	4	1	5	0.01%
Any Accom., Mod., or EL Variation	0	4	34	26	64	0.18%
No Accom., Mod., or EL Variation	2,562	12,969	12,978	6,613	35,122	99.82%

English Learner (EL) Students	Grade 8	Grade 9	Grade 10	Grade 11	Total	Pct. of Total
B: Marked in test booklet	0	0	3	0	3	0.01%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	1	1	0.00%
G: Used braille test	0	0	1	0	1	0.00%
H: Used large-print test	0	1	3	2	6	0.01%
J: Tested over more than one day	0	0	0	1	1	0.00%
K: Had supervised breaks	0	3	11	7	21	0.05%
L: Most beneficial time of day	0	1	0	3	4	0.01%
M: Administered at home or in a hospital	0	1	3	1	5	0.01%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	5	35	25	65	0.14%
Q: Used a calculator	0	12	82	111	205	0.44%
R: Used an arithmetic table	0	0	0	3	3	0.01%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	4	4	0.01%
W: Used an unlisted modification	0	0	1	1	2	0.00%
X: Used an unlisted accommodation	0	2	21	6	29	0.06%

Accommodation Summary for Geometry						
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	13	121	127	261	0.56%
English Learner Test Variation A	3	81	232	179	495	1.07%
English Learner Test Variation B	0	4	53	24	81	0.17%
English Learner Test Variation C	3	88	338	219	648	1.40%
English Learner Test Variation D	2	64	234	236	536	1.16%
Any Accom., Mod., or EL Variation	4	153	698	547	1,402	3.02%
No Accom., Mod., or EL Variation	258	7,511	22,171	15,012	44,952	96.98%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	2	0	2	0.00%
C: Dictated responses to a scribe	0	0	1	0	1	0.00%
F: Used non-interfering assistive device	1	0	0	0	1	0.00%
G: Used braille test	0	2	0	0	2	0.00%
H: Used large-print test	0	3	2	0	5	0.01%
J: Tested over more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	1	2	2	5	0.01%
L: Most beneficial time of day	0	1	1	1	3	0.00%
M: Administered at home or in a hospital	0	0	1	1	2	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	1	4	5	10	0.01%
Q: Used a calculator	0	0	13	30	43	0.06%
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	1	1	2	0.00%
Accom. or Mod. is in Section 504 Plan	0	2	0	0	2	0.00%
Accom. or Mod. is in IEP	1	2	16	24	43	0.06%
English Learner Test Variation A	0	0	6	2	8	0.01%
English Learner Test Variation B	0	0	0	2	2	0.00%
English Learner Test Variation C	0	1	12	4	17	0.02%
English Learner Test Variation D	0	1	11	3	15	0.02%
Any Accom., Mod., or EL Variation	1	9	42	40	92	0.12%
No Accom., Mod., or EL Variation	3,397	25,505	30,783	14,198	73,883	99.88%

Table 6.C.23 Accommodation Summary for Algebra II

Accommodation Summary for Algebra II						
All Tested	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	2	9	15	26	0.01%
C: Dictated responses to a scribe	0	1	1	3	5	0.00%
F: Used non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	3	1	4	0.00%
H: Used large-print test	0	0	11	14	25	0.01%
J: Tested over more than one day	0	0	0	5	5	0.00%
K: Had supervised breaks	0	4	18	36	58	0.03%
L: Most beneficial time of day	0	1	4	5	10	0.00%
M: Administered at home or in a hospital	0	0	12	14	26	0.01%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	2	4	34	40	0.02%
Q: Used a calculator	0	4	29	89	122	0.05%
R: Used an arithmetic table	0	0	0	1	1	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	1	1	0.00%
W: Used an unlisted modification	0	0	1	1	2	0.00%
X: Used an unlisted accommodation	0	0	8	15	23	0.01%
Accom. or Mod. is in Section 504 Plan	0	1	3	5	9	0.00%
Accom. or Mod. is in IEP	0	7	60	146	213	0.09%
English Learner Test Variation A	1	6	29	89	125	0.05%
English Learner Test Variation B	0	0	9	40	49	0.02%
English Learner Test Variation C	1	16	75	112	204	0.09%
English Learner Test Variation D	0	11	51	121	183	0.08%
Any Accom., Mod., or EL Variation	1	31	194	419	645	0.28%
No Accom., Mod., or EL Variation	600	18,402	102,461	109,138	230,601	99.72%
Students Not in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	1	2	2	5	0.00%
C: Dictated responses to a scribe	0	0	1	1	2	0.00%
F: Used non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	2	1	3	0.00%
J: Tested over more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	3	2	5	0.00%
L: Most beneficial time of day	0	0	1	1	2	0.00%
M: Administered at home or in a hospital	0	0	11	14	25	0.01%
N: Used a dictionary	0	0	0	0	0	0.00%

Accommodation Summary for Algebra II						
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	0	4	4	0.00%
Q: Used a calculator	0	0	1	12	13	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%
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%
Accom. or Mod. is in Section 504 Plan	0	1	2	4	7	0.00%
Accom. or Mod. is in IEP	0	0	4	9	13	0.01%
English Learner Test Variation A	1	6	29	89	125	0.05%
English Learner Test Variation B	0	0	9	40	49	0.02%
English Learner Test Variation C	1	15	75	111	202	0.09%
English Learner Test Variation D	0	11	51	120	182	0.08%
Any Accom., Mod., or EL Variation	1	22	129	254	406	0.18%
No Accom., Mod., or EL Variation	587	18,275	101,413	106,612	226,887	99.82%
Students in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	1	7	13	21	0.53%
C: Dictated responses to a scribe	0	1	0	2	3	0.08%
F: Used non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	3	1	4	0.10%
H: Used large-print test	0	0	9	13	22	0.56%
J: Tested over more than one day	0	0	0	5	5	0.13%
K: Had supervised breaks	0	4	15	34	53	1.34%
L: Most beneficial time of day	0	1	3	4	8	0.20%
M: Administered at home or in a hospital	0	0	1	0	1	0.03%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	2	4	30	36	0.91%
Q: Used a calculator	0	4	28	77	109	2.76%
R: Used an arithmetic table	0	0	0	1	1	0.03%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	1	1	0.03%
W: Used an unlisted modification	0	0	1	1	2	0.05%
X: Used an unlisted accommodation	0	0	8	15	23	0.58%
Accom. or Mod. is in Section 504 Plan	0	0	1	1	2	0.05%
Accom. or Mod. is in IEP	0	7	56	137	200	5.07%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%

Accommodation Summary for Algebra II						
English Learner Test Variation C	0	1	0	1	2	0.05%
English Learner Test Variation D	0	0	0	1	1	0.03%
Any Accom., Mod., or EL Variation	0	9	65	165	239	6.05%
No Accom., Mod., or EL Variation	13	126	1,047	2,523	3,709	93.95%
English-Only Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	2	8	12	22	0.02%
C: Dictated responses to a scribe	0	1	1	2	4	0.00%
F: Used non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	3	0	3	0.00%
H: Used large-print test	0	0	8	9	17	0.01%
J: Tested over more than one day	0	0	0	4	4	0.00%
K: Had supervised breaks	0	4	12	27	43	0.03%
L: Most beneficial time of day	0	1	3	5	9	0.01%
M: Administered at home or in a hospital	0	0	10	12	22	0.02%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	2	1	22	25	0.02%
Q: Used a calculator	0	4	21	62	87	0.06%
R: Used an arithmetic table	0	0	0	1	1	0.00%
S: Used math manipulatives	0	0	0	0	0	0.00%
V: Used interfering assistive device	0	0	0	1	1	0.00%
W: Used an unlisted modification	0	0	1	1	2	0.00%
X: Used an unlisted accommodation	0	0	5	9	14	0.01%
Accom. or Mod. is in Section 504 Plan	0	1	3	5	9	0.01%
Accom. or Mod. is in IEP	0	7	38	104	149	0.11%
English Learner Test Variation A	0	0	1	2	3	0.00%
English Learner Test Variation B	0	0	0	2	2	0.00%
English Learner Test Variation C	0	1	4	2	7	0.00%
English Learner Test Variation D	0	0	1	1	2	0.00%
Any Accom., Mod., or EL Variation	0	10	65	147	222	0.16%
No Accom., Mod., or EL Variation	336	10,621	63,320	66,078	140,355	99.84%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	2	2	0.01%
J: Tested over more than one day	0	0	0	1	1	0.00%
K: Had supervised breaks	0	0	1	2	3	0.01%

Accommodation Summary for Algebra II						
L: Most beneficial time of day	0	0	1	0	1	0.00%
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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	0	2	2	0.01%
Q: Used a calculator	0	0	0	7	7	0.03%
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	1	0	1	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	2	6	8	0.03%
English Learner Test Variation A	0	0	6	1	7	0.03%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	1	6	2	9	0.04%
English Learner Test Variation D	0	0	4	1	5	0.02%
Any Accom., Mod., or EL Variation	0	1	8	12	21	0.08%
No Accom., Mod., or EL Variation	137	3,057	12,060	10,117	25,371	99.92%
English Learner (EL) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	1	1	2	0.01%
C: Dictated responses to a scribe	0	0	0	1	1	0.01%
F: Used non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	3	7	10	0.06%
L: Most beneficial time of day	0	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	1	0	1	0.01%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	1	8	9	0.06%
Q: Used a calculator	0	0	6	9	15	0.09%
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	1	5	6	0.04%

Accommodation Summary for Algebra II						
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	11	23	34	0.21%
English Learner Test Variation A	1	6	17	82	106	0.66%
English Learner Test Variation B	0	0	9	37	46	0.28%
English Learner Test Variation C	1	14	59	101	175	1.08%
English Learner Test Variation D	0	11	42	112	165	1.02%
Any Accom., Mod., or EL Variation	1	20	105	234	360	2.23%
No Accom., Mod., or EL Variation	13	713	5,050	10,024	15,800	97.77%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	2	2	0.00%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	1	1	0.00%
H: Used large-print test	0	0	3	3	6	0.01%
J: Tested over more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	2	0	2	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	1	1	2	0.00%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	2	2	4	0.01%
Q: Used a calculator	0	0	2	10	12	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%
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	1	1	2	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	9	12	21	0.04%
English Learner Test Variation A	0	0	5	4	9	0.02%
English Learner Test Variation B	0	0	0	1	1	0.00%
English Learner Test Variation C	0	0	6	7	13	0.03%
English Learner Test Variation D	0	0	4	7	11	0.02%
Any Accom., Mod., or EL Variation	0	0	16	25	41	0.08%
No Accom., Mod., or EL Variation	113	4,005	21,924	22,814	48,856	99.92%

Table 6.C.24 Accommodation Summary for Summative High School Mathematics

Accommodation Summary for Summative High School Mathematics					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	2	8	10	0.01%
C: Dictated responses to a scribe	0	0	2	2	0.00%
F: Used non-interfering assistive device	0	1	3	4	0.00%
G: Used braille test	0	1	4	5	0.00%
H: Used large-print test	0	4	8	12	0.01%
J: Tested over more than one day	0	0	1	1	0.00%
K: Had supervised breaks	0	1	8	9	0.01%
L: Most beneficial time of day	0	1	0	1	0.00%
M: Administered at home or in a hospital	0	1	3	4	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	1	6	7	0.01%
Q: Used a calculator	0	6	11	17	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	2	2	0.00%
X: Used an unlisted accommodation	0	2	2	4	0.00%
Accom. or Mod. is in Section 504 Plan	0	0	2	2	0.00%
Accom. or Mod. is in IEP	0	12	42	54	0.05%
English Learner Test Variation A	0	0	14	14	0.01%
English Learner Test Variation B	0	0	1	1	0.00%
English Learner Test Variation C	1	5	18	24	0.02%
English Learner Test Variation D	0	2	15	17	0.02%
Any Accom., Mod., or EL Variation	1	21	77	99	0.09%
No Accom., Mod., or EL Variation	710	15,932	92,188	108,830	99.91%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	1	1	2	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	1	1	2	0.00%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	1	1	0.00%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	2	2	0.00%
N: Used a dictionary	0	0	0	0	0.00%

Accommodation Summary for Summative High School Mathematics					
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	0	0	0.00%
Q: Used a calculator	0	1	2	3	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%
Accom. or Mod. is in Section 504 Plan	0	0	2	2	0.00%
Accom. or Mod. is in IEP	0	2	0	2	0.00%
English Learner Test Variation A	0	0	14	14	0.01%
English Learner Test Variation B	0	0	1	1	0.00%
English Learner Test Variation C	1	5	18	24	0.02%
English Learner Test Variation D	0	2	15	17	0.02%
Any Accom., Mod., or EL Variation	1	9	33	43	0.04%
No Accom., Mod., or EL Variation	676	15,804	91,585	108,065	99.96%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	1	7	8	0.98%
C: Dictated responses to a scribe	0	0	2	2	0.24%
F: Used non-interfering assistive device	0	1	3	4	0.49%
G: Used braille test	0	1	4	5	0.61%
H: Used large-print test	0	3	7	10	1.22%
J: Tested over more than one day	0	0	1	1	0.12%
K: Had supervised breaks	0	1	7	8	0.98%
L: Most beneficial time of day	0	1	0	1	0.12%
M: Administered at home or in a hospital	0	1	1	2	0.24%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	1	6	7	0.85%
Q: Used a calculator	0	5	9	14	1.71%
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	2	2	0.24%
X: Used an unlisted accommodation	0	2	2	4	0.49%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	10	42	52	6.34%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%

Accommodation Summary for Summative High School Mathematics					
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	12	44	56	6.83%
No Accom., Mod., or EL Variation	34	128	602	764	93.17%
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	2	5	7	0.01%
C: Dictated responses to a scribe	0	0	1	1	0.00%
F: Used non-interfering assistive device	0	1	1	2	0.00%
G: Used braille test	0	1	3	4	0.01%
H: Used large-print test	0	4	6	10	0.01%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	1	7	8	0.01%
L: Most beneficial time of day	0	1	0	1	0.00%
M: Administered at home or in a hospital	0	1	3	4	0.01%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	1	4	5	0.01%
Q: Used a calculator	0	3	10	13	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	1	1	0.00%
X: Used an unlisted accommodation	0	1	1	2	0.00%
Accom. or Mod. is in Section 504 Plan	0	0	2	2	0.00%
Accom. or Mod. is in IEP	0	8	31	39	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	1	1	2	0.00%
English Learner Test Variation D	0	0	1	1	0.00%
Any Accom., Mod., or EL Variation	0	11	40	51	0.08%
No Accom., Mod., or EL Variation	363	9,237	58,072	67,672	99.92%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	1	1	0.01%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	1	1	0.01%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	1	1	0.01%

Accommodation Summary for Summative High School Mathematics					
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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	2	2	0.01%
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	0.01%
No Accom., Mod., or EL Variation	166	2,831	12,864	15,861	99.99%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	1	1	0.03%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over 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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	1	1	0.03%
Q: Used a calculator	0	2	0	2	0.07%
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	1	1	2	0.07%

Accommodation Summary for Summative High School Mathematics					
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	3	3	6	0.20%
English Learner Test Variation A	0	0	13	13	0.44%
English Learner Test Variation B	0	0	1	1	0.03%
English Learner Test Variation C	1	4	16	21	0.72%
English Learner Test Variation D	0	2	13	15	0.51%
Any Accom., Mod., or EL Variation	1	9	27	37	1.26%
No Accom., Mod., or EL Variation	39	391	2,462	2,892	98.74%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	2	2	0.01%
C: Dictated responses to a scribe	0	0	1	1	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	1	1	0.00%
H: Used large-print test	0	0	2	2	0.01%
J: Tested over more than one day	0	0	1	1	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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	1	1	0.00%
Q: Used a calculator	0	1	1	2	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	1	1	0.00%
X: Used an unlisted accommodation	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	1	6	7	0.03%
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	1	1	0.00%
English Learner Test Variation D	0	0	1	1	0.00%
Any Accom., Mod., or EL Variation	0	1	8	9	0.04%
No Accom., Mod., or EL Variation	142	3,468	18,729	22,339	99.96%

Table 6.C.25 Accommodation Summary for Integrated Mathematics 1

Accommodation Summary for Integrated Mathematics 1						
All Tested	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	1	1	1	3	0.04%
C: Dictated responses to a scribe	0	1	0	0	1	0.01%
F: Used non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	1	0	0	1	0.01%
H: Used large-print test	0	0	0	1	1	0.01%
J: Tested over more than one day	0	0	1	0	1	0.01%
K: Had supervised breaks	0	3	7	8	18	0.26%
L: Most beneficial time of day	0	2	6	4	12	0.17%
M: Administered at home or in a hospital	0	0	0	1	1	0.01%
N: Used a dictionary	0	0	1	0	1	0.01%
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	2	5	7	14	0.20%
Q: Used a calculator	0	17	37	56	110	1.56%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	1	0	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	0	0	1	0.01%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	18	39	61	118	1.67%
English Learner Test Variation A	0	1	4	4	9	0.13%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	2	0	0	2	0.03%
English Learner Test Variation D	1	2	8	12	23	0.33%
Any Accom., Mod., or EL Variation	1	25	52	80	158	2.24%
No Accom., Mod., or EL Variation	69	1,205	2,135	3,489	6,898	97.76%
Students Not in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	2	0	2	0.03%
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%

Accommodation Summary for Integrated Mathematics 1						
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	1	0	1	0.02%
Q: Used a calculator	0	1	3	6	10	0.16%
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%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	1	4	6	11	0.18%
English Learner Test Variation A	0	1	4	4	9	0.15%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	2	0	0	2	0.03%
English Learner Test Variation D	1	2	7	12	22	0.36%
Any Accom., Mod., or EL Variation	1	6	13	19	39	0.63%
No Accom., Mod., or EL Variation	65	1,086	1,898	3,091	6,140	99.37%
Students in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	1	1	1	3	0.34%
C: Dictated responses to a scribe	0	1	0	0	1	0.11%
F: Used non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	1	0	0	1	0.11%
H: Used large-print test	0	0	0	1	1	0.11%
J: Tested over more than one day	0	0	1	0	1	0.11%
K: Had supervised breaks	0	3	5	8	16	1.83%
L: Most beneficial time of day	0	2	6	4	12	1.37%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	1	0	1	0.11%
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	2	4	7	13	1.49%
Q: Used a calculator	0	16	33	49	98	11.20%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	1	0	1	0.11%
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	0	0	1	0.11%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	17	34	54	105	12.00%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%

Accommodation Summary for Integrated Mathematics 1						
English Learner Test Variation C	0	0	0	0	0	0.00%
English Learner Test Variation D	0	0	1	0	1	0.11%
Any Accom., Mod., or EL Variation	0	19	38	60	117	13.37%
No Accom., Mod., or EL Variation	4	119	237	398	758	86.63%
English-Only Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	1	1	0	2	0.05%
C: Dictated responses to a scribe	0	1	0	0	1	0.02%
F: Used non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	1	0	0	1	0.02%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over more than one day	0	0	1	0	1	0.02%
K: Had supervised breaks	0	3	7	6	16	0.37%
L: Most beneficial time of day	0	2	6	4	12	0.28%
M: Administered at home or in a hospital	0	0	0	0	0	0.00%
N: Used a dictionary	0	0	1	0	1	0.02%
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	2	3	3	8	0.18%
Q: Used a calculator	0	8	26	43	77	1.78%
R: Used an arithmetic table	0	0	0	0	0	0.00%
S: Used math manipulatives	0	0	1	0	1	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	1	0	0	1	0.02%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	10	30	44	84	1.94%
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	11	32	47	90	2.08%
No Accom., Mod., or EL Variation	40	783	1,349	2,073	4,245	97.92%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	1	1	0.15%
C: Dictated responses to a scribe	0	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	1	1	0.15%
J: Tested over more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	1	1	0.15%

Accommodation Summary for Integrated Mathematics 1						
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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	0	0	0	0.00%
Q: Used a calculator	0	2	1	5	8	1.24%
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%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	2	1	7	10	1.55%
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	0	0	1	0.15%
Any Accom., Mod., or EL Variation	0	3	1	7	11	1.70%
No Accom., Mod., or EL Variation	2	84	205	344	635	98.30%
English Learner (EL) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	1	1	0.10%
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	0.10%
N: Used a dictionary	0	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	2	3	5	0.48%
Q: Used a calculator	0	4	5	6	15	1.44%
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%

Accommodation Summary for Integrated Mathematics 1						
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	3	3	8	14	1.35%
English Learner Test Variation A	0	1	4	4	9	0.87%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	0	2	0	0	2	0.19%
English Learner Test Variation D	1	1	8	12	22	2.12%
Any Accom., Mod., or EL Variation	1	8	14	23	46	4.42%
No Accom., Mod., or EL Variation	19	171	281	523	994	95.58%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over 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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	0	1	1	0.10%
Q: Used a calculator	0	3	3	2	8	0.79%
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%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	3	3	2	8	0.79%
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	3	3	3	9	0.89%
No Accom., Mod., or EL Variation	8	165	293	541	1,007	99.11%

Table 6.C.26 Accommodation Summary for Integrated Mathematics 2

Accommodation Summary for Integrated Mathematics 2						
All Tested	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over 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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	0	0	0	0.00%
Q: Used a calculator	0	1	4	6	11	0.30%
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	2	1	3	0.08%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	1	6	5	12	0.33%
English Learner Test Variation A	0	1	1	1	3	0.08%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	1	2	0	1	4	0.11%
English Learner Test Variation D	0	0	0	1	1	0.03%
Any Accom., Mod., or EL Variation	1	4	7	8	20	0.55%
No Accom., Mod., or EL Variation	137	594	1,548	1,341	3,620	99.45%
Students Not in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over 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%

Accommodation Summary for Integrated Mathematics 2						
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	0	0	0	0.00%
Q: Used a calculator	0	1	0	0	1	0.03%
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%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	1	0	0	1	0.03%
English Learner Test Variation A	0	1	1	1	3	0.09%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	1	2	0	1	4	0.12%
English Learner Test Variation D	0	0	0	1	1	0.03%
Any Accom., Mod., or EL Variation	1	4	1	1	7	0.20%
No Accom., Mod., or EL Variation	137	579	1,463	1,279	3,458	99.80%
Students in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over 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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	4	6	10	5.71%
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	2	1	3	1.71%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	6	5	11	6.29%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%

Accommodation Summary for Integrated Mathematics 2						
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	7	13	7.43%
No Accom., Mod., or EL Variation	0	15	85	62	162	92.57%
English-Only Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over 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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	0	0	0	0.00%
Q: Used a calculator	0	1	3	4	8	0.36%
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	2	0	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	1	5	3	9	0.41%
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	5	4	10	0.45%
No Accom., Mod., or EL Variation	82	405	895	826	2,208	99.55%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0	0.00%

Accommodation Summary for Integrated Mathematics 2						
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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	0	1	1	0.33%
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%
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	1	1	0.33%
No Accom., Mod., or EL Variation	16	41	152	93	302	99.67%
English Learner (EL) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over 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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	0	0	0	0.00%
Q: Used a calculator	0	0	1	1	2	0.41%
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	0.21%

Accommodation Summary for Integrated Mathematics 2						
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	0	1	2	3	0.62%
English Learner Test Variation A	0	1	1	1	3	0.62%
English Learner Test Variation B	0	0	0	0	0	0.00%
English Learner Test Variation C	1	2	0	1	4	0.82%
English Learner Test Variation D	0	0	0	1	1	0.21%
Any Accom., Mod., or EL Variation	1	3	2	3	9	1.85%
No Accom., Mod., or EL Variation	6	47	212	212	477	98.15%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over 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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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	33	101	283	208	625	100.00%

Table 6.C.27 Accommodation Summary for Integrated Mathematics 3

Accommodation Summary for Integrated Mathematics 3						
All Tested	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	1	1	0.06%
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 with MCE or ASL or used audio presentation (CD)	0	0	0	0	0	0.00%
P: Examiner read test questions aloud	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%
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	0.06%
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	0.06%
No Accom., Mod., or EL Variation	8	111	476	1,065	1,660	99.94%
Students Not in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over 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%

Accommodation Summary for Integrated Mathematics 3						
O: Examiner presented with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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	5	110	463	1,029	1,607	100.00%
Students in Special Education	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	1	1	1.89%
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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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	1.89%
English Learner Test Variation A	0	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0	0.00%

Accommodation Summary for Integrated Mathematics 3						
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	1.89%
No Accom., Mod., or EL Variation	3	1	12	36	52	98.11%
English-Only Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	1	1	0.09%
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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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	0.09%
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	0.09%
No Accom., Mod., or EL Variation	7	97	360	628	1,092	99.91%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0	0.00%

Accommodation Summary for Integrated Mathematics 3						
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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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	8	35	125	168	100.00%
English Learner (EL) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over 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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%

Accommodation Summary for Integrated Mathematics 3						
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	1	3	16	95	115	100.00%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked 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 non-interfering assistive device	0	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0	0.00%
J: Tested over 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 with MCE or ASL	0	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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	3	65	216	284	100.00%

Table 6.C.28 Accommodation Summary for Grade 5 Science

Accommodation Summary for Grade 5 Science		
All Tested	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	667	0.14%
C: Dictated responses to a scribe	67	0.01%
F: Used non-interfering assistive device	62	0.01%
G: Used braille test	35	0.01%
H: Used large-print test	232	0.05%
J: Tested over more than one day	1,462	0.31%
K: Had supervised breaks	4,517	0.96%
L: Most beneficial time of day	1,755	0.37%
M: Administered at home or in a hospital	81	0.02%
N: Used a dictionary	30	0.01%
O: Examiner presented with MCE or ASL	87	0.02%
P: Examiner read test questions aloud or used audio presentation (CD)	7,324	1.56%
Q: Used a calculator	60	0.01%
R: Used an arithmetic table	71	0.02%
S: Used math manipulatives	18	0.00%
V: Used interfering assistive device	7	0.00%
W: Used an unlisted modification	134	0.03%
X: Used an unlisted accommodation	1,577	0.34%
Accom. or Mod. is in Section 504 Plan	197	0.04%
Accom. or Mod. is in IEP	10,673	2.28%
English Learner Test Variation A	923	0.20%
English Learner Test Variation B	96	0.02%
English Learner Test Variation C	326	0.07%
English Learner Test Variation D	324	0.07%
Any Accom., Mod., or EL Variation	13,648	2.91%
No Accom., Mod., or EL Variation	454,893	97.09%
Students Not in Special Education	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	95	0.02%
C: Dictated responses to a scribe	6	0.00%
F: Used non-interfering assistive device	8	0.00%
G: Used braille test	2	0.00%
H: Used large-print test	43	0.01%
J: Tested over more than one day	203	0.05%
K: Had supervised breaks	666	0.16%
L: Most beneficial time of day	219	0.05%
M: Administered at home or in a hospital	33	0.01%
N: Used a dictionary	6	0.00%
O: Examiner presented with MCE or ASL	2	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	889	0.21%

Accommodation Summary for Grade 5 Science		
Q: Used a calculator	13	0.00%
R: Used an arithmetic table	10	0.00%
S: Used math manipulatives	1	0.00%
V: Used interfering assistive device	1	0.00%
W: Used an unlisted modification	18	0.00%
X: Used an unlisted accommodation	235	0.06%
Accom. or Mod. is in Section 504 Plan	177	0.04%
Accom. or Mod. is in IEP	1,217	0.29%
English Learner Test Variation A	858	0.20%
English Learner Test Variation B	45	0.01%
English Learner Test Variation C	264	0.06%
English Learner Test Variation D	301	0.07%
Any Accom., Mod., or EL Variation	2,808	0.67%
No Accom., Mod., or EL Variation	417,933	99.33%
Students in Special Education	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	570	1.20%
C: Dictated responses to a scribe	61	0.13%
F: Used non-interfering assistive device	54	0.11%
G: Used braille test	33	0.07%
H: Used large-print test	187	0.39%
J: Tested over more than one day	1,253	2.63%
K: Had supervised breaks	3,832	8.03%
L: Most beneficial time of day	1,530	3.21%
M: Administered at home or in a hospital	47	0.10%
N: Used a dictionary	24	0.05%
O: Examiner presented with MCE or ASL	85	0.18%
P: Examiner read test questions aloud or used audio presentation (CD)	6,401	13.42%
Q: Used a calculator	47	0.10%
R: Used an arithmetic table	61	0.13%
S: Used math manipulatives	17	0.04%
V: Used interfering assistive device	6	0.01%
W: Used an unlisted modification	116	0.24%
X: Used an unlisted accommodation	1,340	2.81%
Accom. or Mod. is in Section 504 Plan	20	0.04%
Accom. or Mod. is in IEP	9,405	19.72%
English Learner Test Variation A	65	0.14%
English Learner Test Variation B	51	0.11%
English Learner Test Variation C	62	0.13%
English Learner Test Variation D	22	0.05%
Any Accom., Mod., or EL Variation	10,788	22.62%
No Accom., Mod., or EL Variation	36,908	77.38%

Accommodation Summary for Grade 5 Science		
English-Only Students	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	479	0.19%
C: Dictated responses to a scribe	41	0.02%
F: Used non-interfering assistive device	36	0.01%
G: Used braille test	23	0.01%
H: Used large-print test	158	0.06%
J: Tested over more than one day	939	0.37%
K: Had supervised breaks	2,751	1.08%
L: Most beneficial time of day	1,085	0.43%
M: Administered at home or in a hospital	53	0.02%
N: Used a dictionary	18	0.01%
O: Examiner presented with MCE or ASL	52	0.02%
P: Examiner read test questions aloud or used audio presentation (CD)	4,241	1.66%
Q: Used a calculator	46	0.02%
R: Used an arithmetic table	41	0.02%
S: Used math manipulatives	10	0.00%
V: Used interfering assistive device	7	0.00%
W: Used an unlisted modification	90	0.04%
X: Used an unlisted accommodation	975	0.38%
Accom. or Mod. is in Section 504 Plan	163	0.06%
Accom. or Mod. is in IEP	6,427	2.52%
English Learner Test Variation A	26	0.01%
English Learner Test Variation B	11	0.00%
English Learner Test Variation C	10	0.00%
English Learner Test Variation D	4	0.00%
Any Accom., Mod., or EL Variation	7,517	2.95%
No Accom., Mod., or EL Variation	247,454	97.05%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	25	0.08%
C: Dictated responses to a scribe	3	0.01%
F: Used non-interfering assistive device	4	0.01%
G: Used braille test	3	0.01%
H: Used large-print test	5	0.02%
J: Tested over more than one day	37	0.12%
K: Had supervised breaks	120	0.38%
L: Most beneficial time of day	41	0.13%
M: Administered at home or in a hospital	5	0.02%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	3	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	171	0.54%
Q: Used a calculator	0	0.00%

Accommodation Summary for Grade 5 Science		
R: Used an arithmetic table	0	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	6	0.02%
X: Used an unlisted accommodation	59	0.18%
Accom. or Mod. is in Section 504 Plan	6	0.02%
Accom. or Mod. is in IEP	275	0.86%
English Learner Test Variation A	6	0.02%
English Learner Test Variation B	6	0.02%
English Learner Test Variation C	6	0.02%
English Learner Test Variation D	2	0.01%
Any Accom., Mod., or EL Variation	336	1.05%
No Accom., Mod., or EL Variation	31,595	98.95%
English Learner (EL) Students	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	155	0.12%
C: Dictated responses to a scribe	20	0.02%
F: Used non-interfering assistive device	19	0.01%
G: Used braille test	9	0.01%
H: Used large-print test	56	0.04%
J: Tested over more than one day	472	0.37%
K: Had supervised breaks	1,592	1.24%
L: Most beneficial time of day	600	0.47%
M: Administered at home or in a hospital	21	0.02%
N: Used a dictionary	11	0.01%
O: Examiner presented with MCE or ASL	31	0.02%
P: Examiner read test questions aloud or used audio presentation (CD)	2,829	2.19%
Q: Used a calculator	13	0.01%
R: Used an arithmetic table	30	0.02%
S: Used math manipulatives	4	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	36	0.03%
X: Used an unlisted accommodation	524	0.41%
Accom. or Mod. is in Section 504 Plan	24	0.02%
Accom. or Mod. is in IEP	3,831	2.97%
English Learner Test Variation A	878	0.68%
English Learner Test Variation B	79	0.06%
English Learner Test Variation C	310	0.24%
English Learner Test Variation D	315	0.24%
Any Accom., Mod., or EL Variation	5,611	4.35%
No Accom., Mod., or EL Variation	123,286	95.65%

Accommodation Summary for Grade 5 Science		
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 5**	**Pct. of Total**
B: Marked in test booklet	7	0.01%
C: Dictated responses to a scribe	3	0.01%
F: Used non-interfering assistive device	3	0.01%
G: Used braille test	0	0.00%
H: Used large-print test	12	0.02%
J: Tested over more than one day	9	0.02%
K: Had supervised breaks	35	0.07%
L: Most beneficial time of day	23	0.04%
M: Administered at home or in a hospital	2	0.00%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	63	0.12%
Q: Used a calculator	0	0.00%
R: Used an arithmetic table	0	0.00%
S: Used math manipulatives	4	0.01%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	13	0.03%
Accom. or Mod. is in Section 504 Plan	4	0.01%
Accom. or Mod. is in IEP	104	0.20%
English Learner Test Variation A	13	0.03%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	0	0.00%
English Learner Test Variation D	3	0.01%
Any Accom., Mod., or EL Variation	142	0.27%
No Accom., Mod., or EL Variation	51,854	99.73%

Table 6.C.29 Accommodation Summary for Grade 8 Science

Accommodation Summary for Grade 8 Science		
All Tested	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	271	0.06%
C: Dictated responses to a scribe	38	0.01%
F: Used non-interfering assistive device	43	0.01%
G: Used braille test	57	0.01%
H: Used large-print test	191	0.04%
J: Tested over more than one day	473	0.10%
K: Had supervised breaks	1,488	0.31%
L: Most beneficial time of day	576	0.12%
M: Administered at home or in a hospital	118	0.02%
N: Used a dictionary	18	0.00%
O: Examiner presented with MCE or ASL	34	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	2,515	0.52%
Q: Used a calculator	156	0.03%
R: Used an arithmetic table	51	0.01%
S: Used math manipulatives	3	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	90	0.02%
X: Used an unlisted accommodation	1,145	0.24%
Accom. or Mod. is in Section 504 Plan	67	0.01%
Accom. or Mod. is in IEP	4,737	0.99%
English Learner Test Variation A	1,417	0.30%
English Learner Test Variation B	48	0.01%
English Learner Test Variation C	1,082	0.23%
English Learner Test Variation D	721	0.15%
Any Accom., Mod., or EL Variation	7,739	1.61%
No Accom., Mod., or EL Variation	471,698	98.39%
Students Not in Special Education	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	33	0.01%
C: Dictated responses to a scribe	5	0.00%
F: Used non-interfering assistive device	6	0.00%
G: Used braille test	6	0.00%
H: Used large-print test	29	0.01%
J: Tested over more than one day	42	0.01%
K: Had supervised breaks	162	0.04%
L: Most beneficial time of day	58	0.01%
M: Administered at home or in a hospital	59	0.01%
N: Used a dictionary	6	0.00%
O: Examiner presented with MCE or ASL	2	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	162	0.04%

Accommodation Summary for Grade 8 Science		
Q: Used a calculator	30	0.01%
R: Used an arithmetic table	18	0.00%
S: Used math manipulatives	1	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	8	0.00%
X: Used an unlisted accommodation	110	0.03%
Accom. or Mod. is in Section 504 Plan	59	0.01%
Accom. or Mod. is in IEP	373	0.09%
English Learner Test Variation A	1,382	0.32%
English Learner Test Variation B	31	0.01%
English Learner Test Variation C	1,054	0.24%
English Learner Test Variation D	707	0.16%
Any Accom., Mod., or EL Variation	2,731	0.62%
No Accom., Mod., or EL Variation	434,631	99.38%
Students in Special Education	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	2,37	0.56%
C: Dictated responses to a scribe	33	0.08%
F: Used non-interfering assistive device	36	0.09%
G: Used braille test	51	0.12%
H: Used large-print test	162	0.39%
J: Tested over more than one day	429	1.02%
K: Had supervised breaks	1,320	3.14%
L: Most beneficial time of day	516	1.23%
M: Administered at home or in a hospital	57	0.14%
N: Used a dictionary	12	0.03%
O: Examiner presented with MCE or ASL	32	0.08%
P: Examiner read test questions aloud or used audio presentation (CD)	2,340	5.57%
Q: Used a calculator	125	0.30%
R: Used an arithmetic table	33	0.08%
S: Used math manipulatives	2	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	82	0.20%
X: Used an unlisted accommodation	1,031	2.45%
Accom. or Mod. is in Section 504 Plan	8	0.02%
Accom. or Mod. is in IEP	4,341	10.33%
English Learner Test Variation A	35	0.08%
English Learner Test Variation B	17	0.04%
English Learner Test Variation C	28	0.07%
English Learner Test Variation D	14	0.03%
Any Accom., Mod., or EL Variation	4,985	11.86%
No Accom., Mod., or EL Variation	37,041	88.14%

Accommodation Summary for Grade 8 Science		
English-Only Students	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	202	0.08%
C: Dictated responses to a scribe	30	0.01%
F: Used non-interfering assistive device	31	0.01%
G: Used braille test	31	0.01%
H: Used large-print test	133	0.05%
J: Tested over more than one day	308	0.12%
K: Had supervised breaks	983	0.37%
L: Most beneficial time of day	411	0.15%
M: Administered at home or in a hospital	72	0.03%
N: Used a dictionary	9	0.00%
O: Examiner presented with MCE or ASL	23	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	1,423	0.54%
Q: Used a calculator	96	0.04%
R: Used an arithmetic table	27	0.01%
S: Used math manipulatives	3	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	46	0.02%
X: Used an unlisted accommodation	726	0.27%
Accom. or Mod. is in Section 504 Plan	55	0.02%
Accom. or Mod. is in IEP	2,923	1.10%
English Learner Test Variation A	38	0.01%
English Learner Test Variation B	3	0.00%
English Learner Test Variation C	18	0.01%
English Learner Test Variation D	13	0.00%
Any Accom., Mod., or EL Variation	3,462	1.30%
No Accom., Mod., or EL Variation	261,967	98.70%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	9	0.02%
C: Dictated responses to a scribe	0	0.00%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	3	0.01%
H: Used large-print test	9	0.02%
J: Tested over more than one day	11	0.03%
K: Had supervised breaks	36	0.09%
L: Most beneficial time of day	17	0.04%
M: Administered at home or in a hospital	5	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	3	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	45	0.12%
Q: Used a calculator	0	0.00%

Accommodation Summary for Grade 8 Science		
R: Used an arithmetic table	0	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	4	0.01%
X: Used an unlisted accommodation	34	0.09%
Accom. or Mod. is in Section 504 Plan	4	0.01%
Accom. or Mod. is in IEP	107	0.28%
English Learner Test Variation A	7	0.02%
English Learner Test Variation B	3	0.01%
English Learner Test Variation C	7	0.02%
English Learner Test Variation D	1	0.00%
Any Accom., Mod., or EL Variation	152	0.39%
No Accom., Mod., or EL Variation	38,496	99.61%
English Learner (EL) Students	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	48	0.05%
C: Dictated responses to a scribe	5	0.01%
F: Used non-interfering assistive device	8	0.01%
G: Used braille test	19	0.02%
H: Used large-print test	36	0.04%
J: Tested over more than one day	135	0.15%
K: Had supervised breaks	420	0.46%
L: Most beneficial time of day	128	0.14%
M: Administered at home or in a hospital	33	0.04%
N: Used a dictionary	9	0.01%
O: Examiner presented with MCE or ASL	7	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	975	1.06%
Q: Used a calculator	57	0.06%
R: Used an arithmetic table	24	0.03%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	34	0.04%
X: Used an unlisted accommodation	351	0.38%
Accom. or Mod. is in Section 504 Plan	7	0.01%
Accom. or Mod. is in IEP	1,543	1.68%
English Learner Test Variation A	1,361	1.48%
English Learner Test Variation B	41	0.04%
English Learner Test Variation C	1,029	1.12%
English Learner Test Variation D	697	0.76%
Any Accom., Mod., or EL Variation	3,888	4.23%
No Accom., Mod., or EL Variation	87,957	95.77%

Accommodation Summary for Grade 8 Science		
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 8**	**Pct. of Total**
B: Marked in test booklet	11	0.01%
C: Dictated responses to a scribe	3	0.00%
F: Used non-interfering assistive device	3	0.00%
G: Used braille test	4	0.00%
H: Used large-print test	13	0.02%
J: Tested over more than one day	15	0.02%
K: Had supervised breaks	39	0.05%
L: Most beneficial time of day	14	0.02%
M: Administered at home or in a hospital	6	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	1	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	60	0.07%
Q: Used a calculator	2	0.00%
R: Used an arithmetic table	0	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	5	0.01%
X: Used an unlisted accommodation	32	0.04%
Accom. or Mod. is in Section 504 Plan	1	0.00%
Accom. or Mod. is in IEP	138	0.17%
English Learner Test Variation A	7	0.01%
English Learner Test Variation B	0	0.00%
English Learner Test Variation C	26	0.03%
English Learner Test Variation D	8	0.01%
Any Accom., Mod., or EL Variation	202	0.24%
No Accom., Mod., or EL Variation	82,402	99.76%

Table 6.C.30 Accommodation Summary for Grade 10 Life Science

Accommodation Summary for Grade 10 Life Science		
All Tested	**Grade 10**	**Pct. of Total**
B: Marked in test booklet	86	0.02%
C: Dictated responses to a scribe	28	0.01%
F: Used non-interfering assistive device	7	0.00%
G: Used braille test	35	0.01%
H: Used large-print test	95	0.02%
J: Tested over more than one day	122	0.03%
K: Had supervised breaks	548	0.12%
L: Most beneficial time of day	159	0.03%
M: Administered at home or in a hospital	85	0.02%
N: Used a dictionary	20	0.00%
O: Examiner presented with MCE or ASL	3	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	575	0.12%
Q: Used a calculator	34	0.01%
R: Used an arithmetic table	0	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	22	0.00%
X: Used an unlisted accommodation	224	0.05%
Accom. or Mod. is in Section 504 Plan	25	0.01%
Accom. or Mod. is in IEP	1,342	0.29%
English Learner Test Variation A	991	0.21%
English Learner Test Variation B	116	0.02%
English Learner Test Variation C	1,223	0.26%
English Learner Test Variation D	893	0.19%
Any Accom., Mod., or EL Variation	3,596	0.77%
No Accom., Mod., or EL Variation	462,739	99.23%
Students Not in Special Education	**Grade 10**	**Pct. of Total**
B: Marked in test booklet	15	0.00%
C: Dictated responses to a scribe	6	0.00%
F: Used non-interfering assistive device	2	0.00%
G: Used braille test	4	0.00%
H: Used large-print test	11	0.00%
J: Tested over more than one day	7	0.00%
K: Had supervised breaks	35	0.01%
L: Most beneficial time of day	4	0.00%
M: Administered at home or in a hospital	39	0.01%
N: Used a dictionary	2	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	25	0.01%

Accommodation Summary for Grade 10 Life Science		
Q: Used a calculator	0	0.00%
R: Used an arithmetic table	0	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	1	0.00%
X: Used an unlisted accommodation	22	0.01%
Accom. or Mod. is in Section 504 Plan	22	0.01%
Accom. or Mod. is in IEP	75	0.02%
English Learner Test Variation A	977	0.23%
English Learner Test Variation B	112	0.03%
English Learner Test Variation C	1,211	0.28%
English Learner Test Variation D	876	0.20%
Any Accom., Mod., or EL Variation	2,105	0.49%
No Accom., Mod., or EL Variation	426,793	99.51%
Students in Special Education	**Grade 10**	**Pct. of Total**
B: Marked in test booklet	70	0.19%
C: Dictated responses to a scribe	22	0.06%
F: Used non-interfering assistive device	5	0.01%
G: Used braille test	31	0.08%
H: Used large-print test	83	0.22%
J: Tested over more than one day	114	0.30%
K: Had supervised breaks	513	1.37%
L: Most beneficial time of day	155	0.41%
M: Administered at home or in a hospital	46	0.12%
N: Used a dictionary	18	0.05%
O: Examiner presented with MCE or ASL	3	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	548	1.47%
Q: Used a calculator	34	0.09%
R: Used an arithmetic table	0	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	21	0.06%
X: Used an unlisted accommodation	201	0.54%
Accom. or Mod. is in Section 504 Plan	3	0.01%
Accom. or Mod. is in IEP	1,262	3.37%
English Learner Test Variation A	14	0.04%
English Learner Test Variation B	4	0.01%
English Learner Test Variation C	12	0.03%
English Learner Test Variation D	17	0.05%
Any Accom., Mod., or EL Variation	1,486	3.97%
No Accom., Mod., or EL Variation	35,916	96.03%

Accommodation Summary for Grade 10 Life Science		
English-Only Students	**Grade 10**	**Pct. of Total**
B: Marked in test booklet	67	0.02%
C: Dictated responses to a scribe	22	0.01%
F: Used non-interfering assistive device	6	0.00%
G: Used braille test	25	0.01%
H: Used large-print test	70	0.03%
J: Tested over more than one day	104	0.04%
K: Had supervised breaks	438	0.16%
L: Most beneficial time of day	136	0.05%
M: Administered at home or in a hospital	63	0.02%
N: Used a dictionary	16	0.01%
O: Examiner presented with MCE or ASL	3	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	339	0.12%
Q: Used a calculator	24	0.01%
R: Used an arithmetic table	0	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	16	0.01%
X: Used an unlisted accommodation	155	0.06%
Accom. or Mod. is in Section 504 Plan	24	0.01%
Accom. or Mod. is in IEP	933	0.34%
English Learner Test Variation A	14	0.01%
English Learner Test Variation B	1	0.00%
English Learner Test Variation C	21	0.01%
English Learner Test Variation D	8	0.00%
Any Accom., Mod., or EL Variation	1,162	0.43%
No Accom., Mod., or EL Variation	270,956	99.57%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 10**	**Pct. of Total**
B: Marked in test booklet	3	0.01%
C: Dictated responses to a scribe	2	0.00%
F: Used non-interfering assistive device	1	0.00%
G: Used braille test	3	0.01%
H: Used large-print test	4	0.01%
J: Tested over more than one day	3	0.01%
K: Had supervised breaks	14	0.03%
L: Most beneficial time of day	3	0.01%
M: Administered at home or in a hospital	4	0.01%
N: Used a dictionary	0	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	12	0.03%
Q: Used a calculator	0	0.00%

Accommodation Summary for Grade 10 Life Science		
R: Used an arithmetic table	0	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	0	0.00%
X: Used an unlisted accommodation	8	0.02%
Accom. or Mod. is in Section 504 Plan	1	0.00%
Accom. or Mod. is in IEP	36	0.09%
English Learner Test Variation A	10	0.02%
English Learner Test Variation B	3	0.01%
English Learner Test Variation C	11	0.03%
English Learner Test Variation D	7	0.02%
Any Accom., Mod., or EL Variation	57	0.14%
No Accom., Mod., or EL Variation	40,090	99.86%
English Learner (EL) Students	**Grade 10**	**Pct. of Total**
B: Marked in test booklet	12	0.02%
C: Dictated responses to a scribe	3	0.00%
F: Used non-interfering assistive device	0	0.00%
G: Used braille test	5	0.01%
H: Used large-print test	10	0.01%
J: Tested over more than one day	14	0.02%
K: Had supervised breaks	85	0.11%
L: Most beneficial time of day	14	0.02%
M: Administered at home or in a hospital	11	0.01%
N: Used a dictionary	3	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	192	0.25%
Q: Used a calculator	9	0.01%
R: Used an arithmetic table	0	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	6	0.01%
X: Used an unlisted accommodation	55	0.07%
Accom. or Mod. is in Section 504 Plan	0	0.00%
Accom. or Mod. is in IEP	312	0.41%
English Learner Test Variation A	953	1.26%
English Learner Test Variation B	108	0.14%
English Learner Test Variation C	1,170	1.55%
English Learner Test Variation D	857	1.13%
Any Accom., Mod., or EL Variation	2,270	3.00%
No Accom., Mod., or EL Variation	73,307	97.00%

Accommodation Summary for Grade 10 Life Science		
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 10**	**Pct. of Total**
B: Marked in test booklet	4	0.01%
C: Dictated responses to a scribe	1	0.00%
F: Used non-interfering assistive device	0	0.00%
G: Used braille test	2	0.00%
H: Used large-print test	11	0.01%
J: Tested over more than one day	1	0.00%
K: Had supervised breaks	10	0.01%
L: Most beneficial time of day	5	0.01%
M: Administered at home or in a hospital	5	0.01%
N: Used a dictionary	1	0.00%
O: Examiner presented with MCE or ASL	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	31	0.04%
Q: Used a calculator	1	0.00%
R: Used an arithmetic table	0	0.00%
S: Used math manipulatives	0	0.00%
V: Used interfering assistive device	0	0.00%
W: Used an unlisted modification	0	0.00%
X: Used an unlisted accommodation	5	0.01%
Accom. or Mod. is in Section 504 Plan	0	0.00%
Accom. or Mod. is in IEP	57	0.07%
English Learner Test Variation A	13	0.02%
English Learner Test Variation B	3	0.00%
English Learner Test Variation C	19	0.02%
English Learner Test Variation D	17	0.02%
Any Accom., Mod., or EL Variation	95	0.12%
No Accom., Mod., or EL Variation	77,509	99.88%

Table 6.C.31 Accommodation Summary for Biology

Accommodation Summary for Biology					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	20	37	19	76	0.01%
C: Dictated responses to a scribe	4	7	5	16	0.00%
F: Used non-interfering assistive device	1	3	6	10	0.00%
G: Used braille test	12	17	7	36	0.01%
H: Used large-print test	37	40	16	93	0.02%
J: Tested over more than one day	28	52	32	112	0.02%
K: Had supervised breaks	108	305	175	588	0.12%
L: Most beneficial time of day	29	95	31	155	0.03%
M: Administered at home or in a hospital	28	33	27	88	0.02%
N: Used a dictionary	1	4	2	7	0.00%
O: Examiner presented with MCE or ASL	0	3	1	4	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	182	340	170	692	0.14%
Q: Used a calculator	16	33	23	72	0.01%
R: Used an arithmetic table	1	0	0	1	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	1	6	2	9	0.00%
X: Used an unlisted accommodation	48	84	44	176	0.03%
Accom. or Mod. is in Section 504 Plan	7	16	1	24	0.00%
Accom. or Mod. is in IEP	337	690	365	1,392	0.27%
English Learner Test Variation A	243	476	218	937	0.18%
English Learner Test Variation B	29	117	45	191	0.04%
English Learner Test Variation C	243	549	245	1,037	0.20%
English Learner Test Variation D	226	507	252	985	0.19%
Any Accom., Mod., or EL Variation	812	1,814	863	3,489	0.69%
No Accom., Mod., or EL Variation	163,503	245,797	93,982	503,282	99.31%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	9	9	1	19	0.00%
C: Dictated responses to a scribe	0	3	2	5	0.00%
F: Used non-interfering assistive device	0	1	3	4	0.00%
G: Used braille test	2	3	1	6	0.00%
H: Used large-print test	9	5	3	17	0.00%
J: Tested over more than one day	2	3	0	5	0.00%
K: Had supervised breaks	8	22	6	36	0.01%
L: Most beneficial time of day	3	3	2	8	0.00%
M: Administered at home or in a hospital	10	12	16	38	0.01%
N: Used a dictionary	0	1	0	1	0.00%

Accommodation Summary for Biology					
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	37	13	10	60	0.01%
Q: Used a calculator	0	4	3	7	0.00%
R: Used an arithmetic table	1	0	0	1	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	0	0	0.00%
X: Used an unlisted accommodation	4	10	2	16	0.00%
Accom. or Mod. is in Section 504 Plan	5	14	1	20	0.00%
Accom. or Mod. is in IEP	52	35	18	105	0.02%
English Learner Test Variation A	239	464	215	918	0.19%
English Learner Test Variation B	27	114	45	186	0.04%
English Learner Test Variation C	239	541	241	1,021	0.22%
English Learner Test Variation D	218	498	249	965	0.20%
Any Accom., Mod., or EL Variation	464	1,036	460	1,960	0.41%
No Accom., Mod., or EL Variation	156,891	228,127	86,807	471,825	99.59%

Students in Special Education	Grade 9	Grade 10	Grade 11	Total	Pct. of Total
B: Marked in test booklet	11	28	18	57	0.17%
C: Dictated responses to a scribe	4	4	3	11	0.03%
F: Used non-interfering assistive device	1	2	3	6	0.02%
G: Used braille test	10	14	6	30	0.09%
H: Used large-print test	28	35	13	76	0.23%
J: Tested over more than one day	26	49	32	107	0.32%
K: Had supervised breaks	98	283	169	550	1.67%
L: Most beneficial time of day	26	92	29	147	0.45%
M: Administered at home or in a hospital	18	20	11	49	0.15%
N: Used a dictionary	1	3	2	6	0.02%
O: Examiner presented with MCE or ASL	0	3	1	4	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	145	325	159	629	1.91%
Q: Used a calculator	16	29	20	65	0.20%
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	6	2	9	0.03%
X: Used an unlisted accommodation	44	73	42	159	0.48%
Accom. or Mod. is in Section 504 Plan	2	2	0	4	0.01%
Accom. or Mod. is in IEP	283	651	346	1,280	3.89%
English Learner Test Variation A	4	12	3	19	0.06%
English Learner Test Variation B	2	3	0	5	0.02%

Accommodation Summary for Biology					
English Learner Test Variation C	4	8	4	16	0.05%
English Learner Test Variation D	8	9	3	20	0.06%
Any Accom., Mod., or EL Variation	346	774	402	1,522	4.62%
No Accom., Mod., or EL Variation	6,604	17,654	7,160	31,418	95.38%
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	17	26	13	56	0.02%
C: Dictated responses to a scribe	3	7	3	13	0.00%
F: Used non-interfering assistive device	1	3	4	8	0.00%
G: Used braille test	11	10	6	27	0.01%
H: Used large-print test	31	29	9	69	0.02%
J: Tested over more than one day	28	50	28	106	0.04%
K: Had supervised breaks	89	248	134	471	0.16%
L: Most beneficial time of day	28	86	28	142	0.05%
M: Administered at home or in a hospital	22	26	22	70	0.02%
N: Used a dictionary	1	1	2	4	0.00%
O: Examiner presented with MCE or ASL	0	1	1	2	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	102	201	112	415	0.14%
Q: Used a calculator	12	25	16	53	0.02%
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	6	2	9	0.00%
X: Used an unlisted accommodation	31	58	37	126	0.04%
Accom. or Mod. is in Section 504 Plan	6	15	1	22	0.01%
Accom. or Mod. is in IEP	237	477	268	982	0.33%
English Learner Test Variation A	3	3	0	6	0.00%
English Learner Test Variation B	0	3	2	5	0.00%
English Learner Test Variation C	3	3	1	7	0.00%
English Learner Test Variation D	4	6	2	12	0.00%
Any Accom., Mod., or EL Variation	285	588	326	1,199	0.41%
No Accom., Mod., or EL Variation	95,791	141,534	55,339	292,664	99.59%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	1	1	2	0.00%
C: Dictated responses to a scribe	1	0	0	1	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	3	0	3	0.01%
H: Used large-print test	1	3	3	7	0.02%
J: Tested over more than one day	0	1	0	1	0.00%
K: Had supervised breaks	3	10	7	20	0.04%

Accommodation Summary for Biology					
L: Most beneficial time of day	0	2	1	3	0.01%
M: Administered at home or in a hospital	0	3	2	5	0.01%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	4	6	5	15	0.03%
Q: Used a calculator	0	1	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%
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	2	2	6	0.01%
Accom. or Mod. is in Section 504 Plan	0	1	0	1	0.00%
Accom. or Mod. is in IEP	7	19	16	42	0.09%
English Learner Test Variation A	1	4	1	6	0.01%
English Learner Test Variation B	0	1	1	2	0.00%
English Learner Test Variation C	2	5	1	8	0.02%
English Learner Test Variation D	2	3	1	6	0.01%
Any Accom., Mod., or EL Variation	13	30	20	63	0.14%
No Accom., Mod., or EL Variation	16,711	20,099	9,270	46,080	99.86%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	2	7	1	10	0.01%
C: Dictated responses to a scribe	0	0	1	1	0.00%
F: Used non-interfering assistive device	0	0	1	1	0.00%
G: Used braille test	0	3	0	3	0.00%
H: Used large-print test	0	3	2	5	0.01%
J: Tested over more than one day	0	1	4	5	0.01%
K: Had supervised breaks	13	41	33	87	0.11%
L: Most beneficial time of day	0	4	2	6	0.01%
M: Administered at home or in a hospital	3	3	2	8	0.01%
N: Used a dictionary	0	2	0	2	0.00%
O: Examiner presented with MCE or ASL	0	2	0	2	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	68	117	46	231	0.30%
Q: Used a calculator	4	5	3	12	0.02%
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	0	0	0.00%
X: Used an unlisted accommodation	14	21	4	39	0.05%

Accommodation Summary for Biology					
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	79	163	65	307	0.40%
English Learner Test Variation A	237	459	212	908	1.19%
English Learner Test Variation B	28	112	39	179	0.24%
English Learner Test Variation C	233	532	235	1,000	1.31%
English Learner Test Variation D	216	488	243	947	1.24%
Any Accom., Mod., or EL Variation	489	1,144	490	2,123	2.79%
No Accom., Mod., or EL Variation	18,320	40,981	14,717	74,018	97.21%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	1	3	4	8	0.01%
C: Dictated responses to a scribe	0	0	1	1	0.00%
F: Used non-interfering assistive device	0	0	1	1	0.00%
G: Used braille test	1	1	1	3	0.00%
H: Used large-print test	5	4	2	11	0.01%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	3	6	1	10	0.01%
L: Most beneficial time of day	0	2	0	2	0.00%
M: Administered at home or in a hospital	3	1	1	5	0.01%
N: Used a dictionary	0	1	0	1	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	8	15	5	28	0.03%
Q: Used a calculator	0	2	3	5	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	3	1	4	0.00%
Accom. or Mod. is in Section 504 Plan	1	0	0	1	0.00%
Accom. or Mod. is in IEP	12	28	15	55	0.06%
English Learner Test Variation A	2	10	5	17	0.02%
English Learner Test Variation B	1	1	3	5	0.01%
English Learner Test Variation C	5	9	8	22	0.02%
English Learner Test Variation D	4	8	6	18	0.02%
Any Accom., Mod., or EL Variation	23	47	25	95	0.11%
No Accom., Mod., or EL Variation	32,449	42,794	14,482	89,725	99.89%

Table 6.C.32 Accommodation Summary for Chemistry

Accommodation Summary for Chemistry					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	10	11	21	0.01%
C: Dictated responses to a scribe	0	1	2	3	0.00%
F: Used non-interfering assistive device	0	2	2	4	0.00%
G: Used braille test	0	3	3	6	0.00%
H: Used large-print test	0	16	12	28	0.01%
J: Tested over more than one day	0	6	3	9	0.00%
K: Had supervised breaks	6	8	18	32	0.01%
L: Most beneficial time of day	0	1	2	3	0.00%
M: Administered at home or in a hospital	0	4	6	10	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	15	62	77	0.03%
Q: Used a calculator	0	41	15	56	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	1	3	4	0.00%
X: Used an unlisted accommodation	3	6	11	20	0.01%
Accom. or Mod. is in Section 504 Plan	0	3	4	7	0.00%
Accom. or Mod. is in IEP	9	81	108	198	0.09%
English Learner Test Variation A	0	29	56	85	0.04%
English Learner Test Variation B	0	5	23	28	0.01%
English Learner Test Variation C	1	44	65	110	0.05%
English Learner Test Variation D	3	25	77	105	0.05%
Any Accom., Mod., or EL Variation	13	162	270	445	0.20%
No Accom., Mod., or EL Variation	3,993	98,215	125,093	227,301	99.80%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	3	2	5	0.00%
C: Dictated responses to a scribe	0	1	1	2	0.00%
F: Used non-interfering assistive device	0	1	0	1	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	3	0	3	0.00%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	1	0	1	2	0.00%
L: Most beneficial time of day	0	1	0	1	0.00%
M: Administered at home or in a hospital	0	3	6	9	0.00%
N: Used a dictionary	0	0	0	0	0.00%

Accommodation Summary for Chemistry					
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	3	3	6	0.00%
Q: Used a calculator	0	5	0	5	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%
Accom. or Mod. is in Section 504 Plan	0	2	3	5	0.00%
Accom. or Mod. is in IEP	1	8	3	12	0.01%
English Learner Test Variation A	0	29	56	85	0.04%
English Learner Test Variation B	0	5	23	28	0.01%
English Learner Test Variation C	1	44	65	110	0.05%
English Learner Test Variation D	3	25	77	105	0.05%
Any Accom., Mod., or EL Variation	5	78	153	236	0.11%
No Accom., Mod., or EL Variation	3,898	96,672	122,349	222,919	99.89%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	7	9	16	0.35%
C: Dictated responses to a scribe	0	0	1	1	0.02%
F: Used non-interfering assistive device	0	1	2	3	0.07%
G: Used braille test	0	3	3	6	0.13%
H: Used large-print test	0	13	12	25	0.54%
J: Tested over more than one day	0	6	3	9	0.20%
K: Had supervised breaks	5	8	17	30	0.65%
L: Most beneficial time of day	0	0	2	2	0.04%
M: Administered at home or in a hospital	0	1	0	1	0.02%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	12	59	71	1.55%
Q: Used a calculator	0	36	15	51	1.11%
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	1	3	4	0.09%
X: Used an unlisted accommodation	3	6	11	20	0.44%
Accom. or Mod. is in Section 504 Plan	0	1	1	2	0.04%
Accom. or Mod. is in IEP	8	73	105	186	4.05%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%

Accommodation Summary for Chemistry					
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	8	84	117	209	4.55%
No Accom., Mod., or EL Variation	95	1,543	2,742	4,380	95.45%
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	9	8	17	0.01%
C: Dictated responses to a scribe	0	0	2	2	0.00%
F: Used non-interfering assistive device	0	1	1	2	0.00%
G: Used braille test	0	2	2	4	0.00%
H: Used large-print test	0	10	9	19	0.01%
J: Tested over more than one day	0	3	3	6	0.00%
K: Had supervised breaks	3	6	14	23	0.02%
L: Most beneficial time of day	0	0	2	2	0.00%
M: Administered at home or in a hospital	0	3	6	9	0.01%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	7	36	43	0.03%
Q: Used a calculator	0	28	12	40	0.03%
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	1	2	3	0.00%
X: Used an unlisted accommodation	1	4	4	9	0.01%
Accom. or Mod. is in Section 504 Plan	0	3	4	7	0.01%
Accom. or Mod. is in IEP	4	51	69	124	0.09%
English Learner Test Variation A	0	3	2	5	0.00%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	3	2	5	0.00%
English Learner Test Variation D	0	2	1	3	0.00%
Any Accom., Mod., or EL Variation	4	68	89	161	0.12%
No Accom., Mod., or EL Variation	2,309	59,323	73,606	135,238	99.88%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	1	1	2	0.01%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	1	1	2	0.01%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	1	1	2	0.01%
J: Tested over more than one day	0	1	0	1	0.00%
K: Had supervised breaks	0	1	0	1	0.00%

Accommodation Summary for Chemistry					
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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	2	1	3	0.01%
Q: Used a calculator	0	0	1	1	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	1	0	1	0.00%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	5	4	9	0.03%
English Learner Test Variation A	0	6	1	7	0.03%
English Learner Test Variation B	0	1	0	1	0.00%
English Learner Test Variation C	0	7	1	8	0.03%
English Learner Test Variation D	0	5	1	6	0.02%
Any Accom., Mod., or EL Variation	0	13	5	18	0.07%
No Accom., Mod., or EL Variation	497	12,439	13,211	26,147	99.93%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	1	1	0.01%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over more than one day	0	2	0	2	0.01%
K: Had supervised breaks	3	1	3	7	0.04%
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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	4	22	26	0.16%
Q: Used a calculator	0	10	1	11	0.07%
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	2	1	6	9	0.06%

Accommodation Summary for Chemistry					
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	5	17	29	51	0.31%
English Learner Test Variation A	0	15	51	66	0.41%
English Learner Test Variation B	0	4	23	27	0.17%
English Learner Test Variation C	1	23	58	82	0.50%
English Learner Test Variation D	2	11	72	85	0.52%
Any Accom., Mod., or EL Variation	8	59	162	229	1.41%
No Accom., Mod., or EL Variation	459	5,220	10,342	16,021	98.59%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	1	1	0.00%
C: Dictated responses to a scribe	0	1	0	1	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	1	1	2	0.00%
H: Used large-print test	0	5	2	7	0.01%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	1	1	0.00%
L: Most beneficial time of day	0	1	0	1	0.00%
M: Administered at home or in a hospital	0	1	0	1	0.00%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	2	3	5	0.01%
Q: Used a calculator	0	3	1	4	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	1	1	0.00%
X: Used an unlisted accommodation	0	0	1	1	0.00%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	8	6	14	0.03%
English Learner Test Variation A	0	5	2	7	0.01%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	11	4	15	0.03%
English Learner Test Variation D	1	7	3	11	0.02%
Any Accom., Mod., or EL Variation	1	22	14	37	0.07%
No Accom., Mod., or EL Variation	724	21,124	27,839	49,687	99.93%

Table 6.C.33 Accommodation Summary for Earth Science

Accommodation Summary for Earth Science					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	28	12	9	49	0.02%
C: Dictated responses to a scribe	1	3	4	8	0.00%
F: Used non-interfering assistive device	2	0	0	2	0.00%
G: Used braille test	5	5	5	15	0.01%
H: Used large-print test	15	11	7	33	0.02%
J: Tested over more than one day	55	24	41	120	0.06%
K: Had supervised breaks	288	123	137	548	0.26%
L: Most beneficial time of day	75	24	42	141	0.07%
M: Administered at home or in a hospital	25	12	11	48	0.02%
N: Used a dictionary	3	4	0	7	0.00%
O: Examiner presented with MCE or ASL	4	3	1	8	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	193	66	89	348	0.17%
Q: Used a calculator	16	4	14	34	0.02%
R: Used an arithmetic table	1	0	1	2	0.00%
S: Used math manipulatives	0	0	1	1	0.00%
V: Used interfering assistive device	0	0	1	1	0.00%
W: Used an unlisted modification	21	6	4	31	0.01%
X: Used an unlisted accommodation	127	30	51	208	0.10%
Accom. or Mod. is in Section 504 Plan	6	1	1	8	0.00%
Accom. or Mod. is in IEP	565	205	253	1,023	0.49%
English Learner Test Variation A	427	154	97	678	0.33%
English Learner Test Variation B	42	7	4	53	0.03%
English Learner Test Variation C	295	127	89	511	0.25%
English Learner Test Variation D	336	121	96	553	0.27%
Any Accom., Mod., or EL Variation	1,283	511	470	2,264	1.09%
No Accom., Mod., or EL Variation	135,999	31,082	37,651	204,732	98.91%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	2	3	2	7	0.00%
C: Dictated responses to a scribe	1	1	0	2	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	1	0	1	0.00%
H: Used large-print test	2	1	0	3	0.00%
J: Tested over more than one day	3	1	2	6	0.00%
K: Had supervised breaks	26	6	7	39	0.02%
L: Most beneficial time of day	5	0	2	7	0.00%
M: Administered at home or in a hospital	15	6	7	28	0.02%
N: Used a dictionary	0	0	0	0	0.00%

Accommodation Summary for Earth Science					
O: Examiner presented with MCE or ASL	1	0	1	2	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	20	1	6	27	0.01%
Q: Used a calculator	2	0	1	3	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	1	1	0.00%
W: Used an unlisted modification	1	0	0	1	0.00%
X: Used an unlisted accommodation	7	2	5	14	0.01%
Accom. or Mod. is in Section 504 Plan	4	1	1	6	0.00%
Accom. or Mod. is in IEP	43	7	13	63	0.03%
English Learner Test Variation A	419	152	93	664	0.36%
English Learner Test Variation B	39	7	4	50	0.03%
English Learner Test Variation C	287	127	85	499	0.27%
English Learner Test Variation D	328	119	91	538	0.29%
Any Accom., Mod., or EL Variation	668	280	192	1,140	0.62%
No Accom., Mod., or EL Variation	124,510	26,394	32,691	183,595	99.38%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	26	8	7	41	0.18%
C: Dictated responses to a scribe	0	2	4	6	0.03%
F: Used non-interfering assistive device	2	0	0	2	0.01%
G: Used braille test	5	4	5	14	0.06%
H: Used large-print test	13	9	7	29	0.13%
J: Tested over more than one day	51	23	39	113	0.51%
K: Had supervised breaks	261	117	130	508	2.28%
L: Most beneficial time of day	69	24	40	133	0.60%
M: Administered at home or in a hospital	10	6	4	20	0.09%
N: Used a dictionary	3	4	0	7	0.03%
O: Examiner presented with MCE or ASL	3	3	0	6	0.03%
P: Examiner read test questions aloud or used audio presentation (CD)	173	65	82	320	1.44%
Q: Used a calculator	14	4	13	31	0.14%
R: Used an arithmetic table	1	0	1	2	0.01%
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	20	6	4	30	0.13%
X: Used an unlisted accommodation	120	28	46	194	0.87%
Accom. or Mod. is in Section 504 Plan	2	0	0	2	0.01%
Accom. or Mod. is in IEP	520	197	239	956	4.30%
English Learner Test Variation A	8	2	4	14	0.06%
English Learner Test Variation B	3	0	0	3	0.01%

Accommodation Summary for Earth Science					
English Learner Test Variation C	8	0	4	12	0.05%
English Learner Test Variation D	8	2	5	15	0.07%
Any Accom., Mod., or EL Variation	613	230	277	1,120	5.04%
No Accom., Mod., or EL Variation	11,482	4,683	4,953	21,118	94.96%
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	24	6	7	37	0.03%
C: Dictated responses to a scribe	0	3	3	6	0.00%
F: Used non-interfering assistive device	1	0	0	1	0.00%
G: Used braille test	3	5	4	12	0.01%
H: Used large-print test	10	5	5	20	0.02%
J: Tested over more than one day	54	21	39	114	0.09%
K: Had supervised breaks	228	97	111	436	0.35%
L: Most beneficial time of day	65	22	37	124	0.10%
M: Administered at home or in a hospital	21	9	7	37	0.03%
N: Used a dictionary	1	3	0	4	0.00%
O: Examiner presented with MCE or ASL	1	3	0	4	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	131	47	58	236	0.19%
Q: Used a calculator	13	3	10	26	0.02%
R: Used an arithmetic table	1	0	1	2	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	11	4	4	19	0.02%
X: Used an unlisted accommodation	79	25	40	144	0.12%
Accom. or Mod. is in Section 504 Plan	4	0	1	5	0.00%
Accom. or Mod. is in IEP	402	160	190	752	0.61%
English Learner Test Variation A	7	1	2	10	0.01%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	6	2	2	10	0.01%
English Learner Test Variation D	9	2	2	13	0.01%
Any Accom., Mod., or EL Variation	491	191	225	907	0.73%
No Accom., Mod., or EL Variation	81,588	18,855	22,420	122,863	99.27%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	3	0	0	3	0.02%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	1	0	0	1	0.01%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	1	1	0	2	0.01%
J: Tested over more than one day	0	1	0	1	0.01%
K: Had supervised breaks	8	2	8	18	0.13%

Accommodation Summary for Earth Science					
L: Most beneficial time of day	0	0	1	1	0.01%
M: Administered at home or in a hospital	1	2	0	3	0.02%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	8	1	3	12	0.08%
Q: Used a calculator	1	1	0	2	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	1	1	0.01%
W: Used an unlisted modification	1	0	0	1	0.01%
X: Used an unlisted accommodation	7	0	1	8	0.06%
Accom. or Mod. is in Section 504 Plan	1	1	0	2	0.01%
Accom. or Mod. is in IEP	19	4	10	33	0.23%
English Learner Test Variation A	1	0	0	1	0.01%
English Learner Test Variation B	1	1	0	2	0.01%
English Learner Test Variation C	2	1	0	3	0.02%
English Learner Test Variation D	2	0	0	2	0.01%
Any Accom., Mod., or EL Variation	30	7	11	48	0.34%
No Accom., Mod., or EL Variation	9,516	1,929	2,748	14,193	99.66%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	6	2	8	0.02%
C: Dictated responses to a scribe	1	0	1	2	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	1	1	0.00%
H: Used large-print test	3	5	1	9	0.02%
J: Tested over more than one day	1	2	1	4	0.01%
K: Had supervised breaks	48	21	13	82	0.20%
L: Most beneficial time of day	8	1	2	11	0.03%
M: Administered at home or in a hospital	2	1	3	6	0.01%
N: Used a dictionary	2	1	0	3	0.01%
O: Examiner presented with MCE or ASL	3	0	1	4	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	45	18	26	89	0.21%
Q: Used a calculator	1	0	4	5	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	9	2	0	11	0.03%
X: Used an unlisted accommodation	39	3	8	50	0.12%

Accommodation Summary for Earth Science					
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	128	37	46	211	0.51%
English Learner Test Variation A	417	153	95	665	1.60%
English Learner Test Variation B	41	6	4	51	0.12%
English Learner Test Variation C	285	123	87	495	1.19%
English Learner Test Variation D	323	119	94	536	1.29%
Any Accom., Mod., or EL Variation	739	307	223	1,269	3.05%
No Accom., Mod., or EL Variation	26,054	6,894	7,454	40,402	96.95%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	1	0	0	1	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	2	0	0	2	0.01%
H: Used large-print test	1	0	1	2	0.01%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	4	2	4	10	0.04%
L: Most beneficial time of day	2	1	1	4	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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	8	0	2	10	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%
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	1	1	2	0.01%
Accom. or Mod. is in Section 504 Plan	1	0	0	1	0.00%
Accom. or Mod. is in IEP	12	2	6	20	0.07%
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	2	1	0	3	0.01%
English Learner Test Variation D	1	0	0	1	0.00%
Any Accom., Mod., or EL Variation	16	4	8	28	0.10%
No Accom., Mod., or EL Variation	18,510	3,314	4,951	26,775	99.90%

Table 6.C.34 Accommodation Summary for Physics

Accommodation Summary for Physics					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	1	4	5	10	0.02%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	1	1	0.00%
G: Used braille test	0	0	2	2	0.00%
H: Used large-print test	2	5	5	12	0.02%
J: Tested over more than one day	0	0	3	3	0.00%
K: Had supervised breaks	3	13	22	38	0.06%
L: Most beneficial time of day	0	1	4	5	0.01%
M: Administered at home or in a hospital	0	0	4	4	0.01%
N: Used a dictionary	0	1	0	1	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	7	2	15	24	0.04%
Q: Used a calculator	1	19	14	34	0.05%
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	2	9	2	13	0.02%
Accom. or Mod. is in Section 504 Plan	0	1	2	3	0.00%
Accom. or Mod. is in IEP	13	43	37	93	0.15%
English Learner Test Variation A	30	3	15	48	0.08%
English Learner Test Variation B	0	1	1	2	0.00%
English Learner Test Variation C	18	11	21	50	0.08%
English Learner Test Variation D	2	4	18	24	0.04%
Any Accom., Mod., or EL Variation	63	64	83	210	0.33%
No Accom., Mod., or EL Variation	13,562	8,132	41,560	63,254	99.67%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	1	1	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	1	0	1	0.00%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	1	1	4	6	0.01%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	0	0	2	2	0.00%
N: Used a dictionary	0	0	0	0	0.00%

Accommodation Summary for Physics					
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	1	0	1	0.00%
Q: Used a calculator	0	1	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%
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	1	0	1	0.00%
Accom. or Mod. is in Section 504 Plan	0	1	2	3	0.00%
Accom. or Mod. is in IEP	1	2	3	6	0.01%
English Learner Test Variation A	30	3	15	48	0.08%
English Learner Test Variation B	0	1	1	2	0.00%
English Learner Test Variation C	18	11	21	50	0.08%
English Learner Test Variation D	2	4	18	24	0.04%
Any Accom., Mod., or EL Variation	49	16	35	100	0.16%
No Accom., Mod., or EL Variation	12,840	7,867	40,738	61,445	99.84%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	1	4	5	10	0.52%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	2	2	0.10%
H: Used large-print test	2	4	5	11	0.57%
J: Tested over more than one day	0	0	3	3	0.16%
K: Had supervised breaks	2	12	18	32	1.67%
L: Most beneficial time of day	0	1	4	5	0.26%
M: Administered at home or in a hospital	0	0	2	2	0.10%
N: Used a dictionary	0	1	0	1	0.05%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud	7	1	15	23	1.20%
Q: Used a calculator	1	18	13	32	1.67%
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	2	8	2	12	0.63%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	12	41	34	87	4.53%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%

Accommodation Summary for Physics					
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	14	48	48	110	5.73%
No Accom., Mod., or EL Variation	722	265	822	1,809	94.27%
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	1	2	4	7	0.02%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	2	2	0.01%
H: Used large-print test	1	5	4	10	0.03%
J: Tested over more than one day	0	0	3	3	0.01%
K: Had supervised breaks	3	6	14	23	0.06%
L: Most beneficial time of day	0	1	4	5	0.01%
M: Administered at home or in a hospital	0	0	4	4	0.01%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	7	2	7	16	0.04%
Q: Used a calculator	1	13	11	25	0.07%
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	1	7	2	10	0.03%
Accom. or Mod. is in Section 504 Plan	0	1	2	3	0.01%
Accom. or Mod. is in IEP	11	28	25	64	0.17%
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	0	0	0	0.00%
English Learner Test Variation D	0	0	1	1	0.00%
Any Accom., Mod., or EL Variation	13	34	40	87	0.23%
No Accom., Mod., or EL Variation	7,644	4,988	25,212	37,844	99.77%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	1	1	0.01%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	1	0	1	2	0.03%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	2	2	0.03%

Accommodation Summary for Physics					
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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	1	1	0.01%
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%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	1	0	2	3	0.04%
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	1	1	0.01%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	1	0	4	5	0.07%
No Accom., Mod., or EL Variation	1,582	851	5,053	7,486	99.93%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	2	0	2	0.04%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	1	1	0.02%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	5	4	9	0.18%
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	1	0	1	0.02%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	4	4	0.08%
Q: Used a calculator	0	4	3	7	0.14%
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	1	2	0	3	0.06%

Accommodation Summary for Physics					
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	1	12	8	21	0.42%
English Learner Test Variation A	30	2	15	47	0.94%
English Learner Test Variation B	0	1	0	1	0.02%
English Learner Test Variation C	18	10	19	47	0.94%
English Learner Test Variation D	2	3	16	21	0.42%
Any Accom., Mod., or EL Variation	49	25	35	109	2.18%
No Accom., Mod., or EL Variation	1,721	820	2,355	4,896	97.82%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	2	2	4	0.03%
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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	3	3	0.02%
Q: Used a calculator	0	2	0	2	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	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	3	2	5	0.04%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	1	1	0.01%
English Learner Test Variation C	0	1	1	2	0.02%
English Learner Test Variation D	0	1	1	2	0.02%
Any Accom., Mod., or EL Variation	0	5	4	9	0.07%
No Accom., Mod., or EL Variation	2,609	1,467	8,898	12,974	99.93%

Table 6.C.35 Accommodation Summary for Integrated Science 1

Accommodation Summary for Integrated Science 1					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	7	7	1	15	0.02%
C: Dictated responses to a scribe	3	1	0	4	0.00%
F: Used non-interfering assistive device	1	0	1	2	0.00%
G: Used braille test	3	3	0	6	0.01%
H: Used large-print test	10	5	4	19	0.02%
J: Tested over more than one day	5	5	1	11	0.01%
K: Had supervised breaks	95	18	11	124	0.13%
L: Most beneficial time of day	34	3	3	40	0.04%
M: Administered at home or in a hospital	9	9	2	20	0.02%
N: Used a dictionary	2	4	0	6	0.01%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	165	40	42	247	0.26%
Q: Used a calculator	11	3	6	20	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	1	0	0	1	0.00%
X: Used an unlisted accommodation	76	27	33	136	0.14%
Accom. or Mod. is in Section 504 Plan	1	0	0	1	0.00%
Accom. or Mod. is in IEP	320	95	73	488	0.50%
English Learner Test Variation A	193	61	25	279	0.29%
English Learner Test Variation B	24	4	5	33	0.03%
English Learner Test Variation C	194	70	37	301	0.31%
English Learner Test Variation D	133	53	28	214	0.22%
Any Accom., Mod., or EL Variation	621	229	151	1,001	1.04%
No Accom., Mod., or EL Variation	74,386	11,115	10,173	95,674	98.96%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	1	0	1	0.00%
C: Dictated responses to a scribe	2	0	0	2	0.00%
F: Used non-interfering assistive device	1	0	0	1	0.00%
G: Used braille test	2	0	0	2	0.00%
H: Used large-print test	1	1	0	2	0.00%
J: Tested over more than one day	1	0	1	2	0.00%
K: Had supervised breaks	4	0	2	6	0.01%
L: Most beneficial time of day	0	0	0	0	0.00%
M: Administered at home or in a hospital	4	4	1	9	0.01%
N: Used a dictionary	0	3	0	3	0.00%

Accommodation Summary for Integrated Science 1					
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	5	4	2	11	0.01%
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	3	2	1	6	0.01%
Accom. or Mod. is in Section 504 Plan	1	0	0	1	0.00%
Accom. or Mod. is in IEP	12	7	5	24	0.03%
English Learner Test Variation A	190	61	25	276	0.32%
English Learner Test Variation B	24	4	5	33	0.04%
English Learner Test Variation C	193	70	37	300	0.35%
English Learner Test Variation D	130	53	26	209	0.24%
Any Accom., Mod., or EL Variation	277	140	64	481	0.55%
No Accom., Mod., or EL Variation	68,232	9,395	8,768	86,395	99.45%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	6	6	1	13	0.13%
C: Dictated responses to a scribe	1	1	0	2	0.02%
F: Used non-interfering assistive device	0	0	1	1	0.01%
G: Used braille test	1	3	0	4	0.04%
H: Used large-print test	9	4	4	17	0.17%
J: Tested over more than one day	4	5	0	9	0.09%
K: Had supervised breaks	91	18	9	118	1.21%
L: Most beneficial time of day	34	3	3	40	0.41%
M: Administered at home or in a hospital	5	5	1	11	0.11%
N: Used a dictionary	2	1	0	3	0.03%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	160	36	39	235	2.40%
Q: Used a calculator	11	3	6	20	0.20%
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	0.01%
X: Used an unlisted accommodation	73	25	32	130	1.33%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	307	88	67	462	4.72%
English Learner Test Variation A	3	0	0	3	0.03%
English Learner Test Variation B	0	0	0	0	0.00%

Accommodation Summary for Integrated Science 1					
English Learner Test Variation C	1	0	0	1	0.01%
English Learner Test Variation D	3	0	2	5	0.05%
Any Accom., Mod., or EL Variation	343	89	86	518	5.29%
No Accom., Mod., or EL Variation	6,147	1,716	1,404	9,267	94.71%
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	7	4	1	12	0.03%
C: Dictated responses to a scribe	2	1	0	3	0.01%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	2	2	0	4	0.01%
H: Used large-print test	6	3	1	10	0.02%
J: Tested over more than one day	4	5	1	10	0.02%
K: Had supervised breaks	63	15	11	89	0.19%
L: Most beneficial time of day	28	3	3	34	0.07%
M: Administered at home or in a hospital	8	5	1	14	0.03%
N: Used a dictionary	2	2	0	4	0.01%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	71	24	21	116	0.24%
Q: Used a calculator	7	2	5	14	0.03%
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	44	16	25	85	0.18%
Accom. or Mod. is in Section 504 Plan	1	0	0	1	0.00%
Accom. or Mod. is in IEP	178	62	50	290	0.61%
English Learner Test Variation A	5	0	1	6	0.01%
English Learner Test Variation B	1	0	0	1	0.00%
English Learner Test Variation C	4	0	1	5	0.01%
English Learner Test Variation D	3	0	0	3	0.01%
Any Accom., Mod., or EL Variation	204	66	62	332	0.70%
No Accom., Mod., or EL Variation	35,606	6,072	5,543	47,221	99.30%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	1	0	0	1	0.01%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	2	0	0	2	0.03%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	1	1	0	2	0.03%

Accommodation Summary for Integrated Science 1					
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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	4	1	1	6	0.08%
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	2	1	2	5	0.07%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	7	2	3	12	0.16%
English Learner Test Variation A	1	0	0	1	0.01%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	3	0	0	3	0.04%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	13	2	3	18	0.24%
No Accom., Mod., or EL Variation	5,905	689	789	7,383	99.76%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	2	0	2	0.01%
C: Dictated responses to a scribe	1	0	0	1	0.00%
F: Used non-interfering assistive device	0	0	1	1	0.00%
G: Used braille test	0	1	0	1	0.00%
H: Used large-print test	1	1	2	4	0.02%
J: Tested over more than one day	1	0	0	1	0.00%
K: Had supervised breaks	26	2	0	28	0.13%
L: Most beneficial time of day	4	0	0	4	0.02%
M: Administered at home or in a hospital	1	2	0	3	0.01%
N: Used a dictionary	0	2	0	2	0.01%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	88	15	20	123	0.56%
Q: Used a calculator	4	1	1	6	0.03%
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	27	9	6	42	0.19%

Accommodation Summary for Integrated Science 1					
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	124	29	20	173	0.79%
English Learner Test Variation A	185	61	24	270	1.23%
English Learner Test Variation B	23	4	5	32	0.15%
English Learner Test Variation C	185	70	36	291	1.33%
English Learner Test Variation D	130	53	28	211	0.96%
Any Accom., Mod., or EL Variation	390	157	84	631	2.88%
No Accom., Mod., or EL Variation	15,974	2,974	2,360	21,308	97.12%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	1	0	1	0.01%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	1	0	0	1	0.01%
H: Used large-print test	1	1	1	3	0.02%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	4	0	0	4	0.02%
L: Most beneficial time of day	2	0	0	2	0.01%
M: Administered at home or in a hospital	0	2	1	3	0.02%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	2	0	0	2	0.01%
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	2	1	0	3	0.02%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	9	2	0	11	0.06%
English Learner Test Variation A	2	0	0	2	0.01%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	2	0	0	2	0.01%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	12	4	2	18	0.09%
No Accom., Mod., or EL Variation	16,770	1,352	1,457	19,579	99.91%

Table 6.C.36 Accommodation Summary for Integrated Science 2

Accommodation Summary for Integrated Science 2					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	3	2	5	0.04%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	1	0	1	0.01%
H: Used large-print test	0	3	3	6	0.04%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	24	0	0	24	0.17%
L: Most beneficial time of day	2	7	6	15	0.11%
M: Administered at home or in a hospital	0	0	1	1	0.01%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	1	0	1	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	2	5	10	17	0.12%
Q: Used a calculator	0	1	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%
V: Used interfering assistive device	0	0	0	0	0.00%
W: Used an unlisted modification	0	1	0	1	0.01%
X: Used an unlisted accommodation	0	25	12	37	0.27%
Accom. or Mod. is in Section 504 Plan	1	1	0	2	0.01%
Accom. or Mod. is in IEP	25	36	29	90	0.65%
English Learner Test Variation A	0	47	10	57	0.41%
English Learner Test Variation B	0	1	0	1	0.01%
English Learner Test Variation C	2	41	2	45	0.33%
English Learner Test Variation D	0	35	7	42	0.30%
Any Accom., Mod., or EL Variation	30	99	43	172	1.24%
No Accom., Mod., or EL Variation	4,415	6,945	2,299	13,659	98.76%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	3	0	0	3	0.02%
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%

Accommodation Summary for Integrated Science 2					
O: Examiner presented with MCE or ASL	0	1	0	1	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	0	0	9	9	0.07%
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	1	2	3	0.02%
Accom. or Mod. is in Section 504 Plan	1	1	0	2	0.02%
Accom. or Mod. is in IEP	2	1	11	14	0.11%
English Learner Test Variation A	0	46	9	55	0.44%
English Learner Test Variation B	0	1	0	1	0.01%
English Learner Test Variation C	2	40	2	44	0.35%
English Learner Test Variation D	0	35	7	42	0.34%
Any Accom., Mod., or EL Variation	5	56	21	82	0.66%
No Accom., Mod., or EL Variation	4,122	6,251	1,985	12,358	99.34%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	3	2	5	0.36%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	1	0	1	0.07%
H: Used large-print test	0	3	3	6	0.43%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	21	0	0	21	1.51%
L: Most beneficial time of day	2	7	6	15	1.08%
M: Administered at home or in a hospital	0	0	1	1	0.07%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	2	5	1	8	0.58%
Q: Used a calculator	0	1	0	1	0.07%
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	1	0	1	0.07%
X: Used an unlisted accommodation	0	24	10	34	2.44%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	23	35	18	76	5.46%
English Learner Test Variation A	0	1	1	2	0.14%
English Learner Test Variation B	0	0	0	0	0.00%

Accommodation Summary for Integrated Science 2					
English Learner Test Variation C	0	1	0	1	0.07%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	25	43	22	90	6.47%
No Accom., Mod., or EL Variation	293	694	314	1,301	93.53%
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	1	2	3	0.04%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	1	0	1	0.01%
H: Used large-print test	0	1	2	3	0.04%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	1	0	0	1	0.01%
L: Most beneficial time of day	2	6	5	13	0.19%
M: Administered at home or in a hospital	0	0	1	1	0.01%
N: Used a dictionary	0	0	0	0	0.00%
O: Examiner presented with MCE or ASL	0	1	0	1	0.01%
P: Examiner read test questions aloud or used audio presentation (CD)	0	1	4	5	0.07%
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	1	0	1	0.01%
X: Used an unlisted accommodation	0	17	11	28	0.42%
Accom. or Mod. is in Section 504 Plan	0	1	0	1	0.01%
Accom. or Mod. is in IEP	3	25	22	50	0.74%
English Learner Test Variation A	0	3	0	3	0.04%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	3	0	3	0.04%
English Learner Test Variation D	0	3	0	3	0.04%
Any Accom., Mod., or EL Variation	3	32	23	58	0.86%
No Accom., Mod., or EL Variation	2,057	3,410	1,218	6,685	99.14%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	1	0	1	0.07%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	1	1	2	0.15%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	3	0	0	3	0.22%

Accommodation Summary for Integrated Science 2					
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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	3	1	0	4	0.30%
English Learner Test Variation A	0	1	0	1	0.07%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	1	0	1	0.07%
English Learner Test Variation D	0	1	0	1	0.07%
Any Accom., Mod., or EL Variation	3	2	1	6	0.44%
No Accom., Mod., or EL Variation	556	615	173	1,344	99.56%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	20	0	0	20	0.67%
L: Most beneficial time of day	0	1	1	2	0.07%
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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	2	3	6	11	0.37%
Q: Used a calculator	0	1	0	1	0.03%
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	4	1	5	0.17%

Accommodation Summary for Integrated Science 2					
Accom. or Mod. is in Section 504 Plan	1	0	0	1	0.03%
Accom. or Mod. is in IEP	19	5	7	31	1.03%
English Learner Test Variation A	0	39	10	49	1.64%
English Learner Test Variation B	0	1	0	1	0.03%
English Learner Test Variation C	2	33	2	37	1.23%
English Learner Test Variation D	0	28	7	35	1.17%
Any Accom., Mod., or EL Variation	24	56	19	99	3.30%
No Accom., Mod., or EL Variation	1,064	1,262	571	2,897	96.70%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	1	0	1	0.04%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	1	0	1	0.04%
J: Tested over 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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	0	1	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%
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	4	0	4	0.15%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	5	0	5	0.18%
English Learner Test Variation A	0	4	0	4	0.15%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	4	0	4	0.15%
English Learner Test Variation D	0	3	0	3	0.11%
Any Accom., Mod., or EL Variation	0	9	0	9	0.33%
No Accom., Mod., or EL Variation	730	1,649	335	2,714	99.67%

Table 6.C.37 Accommodation Summary for Integrated Science 3

Accommodation Summary for Integrated Science 3					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	1	0	1	0.05%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	1	0	1	0.05%
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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	1	0	1	0.05%
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	2	0	2	0.10%
No Accom., Mod., or EL Variation	238	257	1,492	1,987	99.90%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	1	0	1	0.06%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over 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%

Accommodation Summary for Integrated Science 3					
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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	1	0	1	0.06%
No Accom., Mod., or EL Variation	212	230	1,335	1,777	99.94%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	1	0	1	0.47%
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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	1	0	1	0.47%
English Learner Test Variation A	0	0	0	0	0.00%
English Learner Test Variation B	0	0	0	0	0.00%

Accommodation Summary for Integrated Science 3					
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	1	0	1	0.47%
No Accom., Mod., or EL Variation	26	27	157	210	99.53%
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	1	0	1	0.09%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	1	0	1	0.09%
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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
Accom. or Mod. is in Section 504 Plan	0	0	0	0	0.00%
Accom. or Mod. is in IEP	0	1	0	1	0.09%
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	2	0	2	0.17%
No Accom., Mod., or EL Variation	166	173	820	1,159	99.83%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0.00%

Accommodation Summary for Integrated Science 3					
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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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	26	132	161	100.00%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over 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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%

Accommodation Summary for Integrated Science 3					
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	58	22	202	282	100.00%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over 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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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	9	36	335	380	100.00%

Table 6.C.38 Accommodation Summary for Integrated Science 4

Accommodation Summary for Integrated Science 4					
All Tested	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	1	0	0	1	0.10%
J: Tested over 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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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	1	2	3	0.31%
English Learner Test Variation B	0	1	0	1	0.10%
English Learner Test Variation C	0	1	2	3	0.31%
English Learner Test Variation D	2	1	2	5	0.52%
Any Accom., Mod., or EL Variation	3	2	2	7	0.73%
No Accom., Mod., or EL Variation	207	402	344	953	99.27%
Students Not in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over 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%

Accommodation Summary for Integrated Science 4					
O: Examiner presented with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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	1	2	3	0.35%
English Learner Test Variation B	0	1	0	1	0.12%
English Learner Test Variation C	0	1	2	3	0.35%
English Learner Test Variation D	1	1	2	4	0.47%
Any Accom., Mod., or EL Variation	1	2	2	5	0.59%
No Accom., Mod., or EL Variation	182	353	314	849	99.41%
Students in Special Education	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	1	0	0	1	0.94%
J: Tested over 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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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%

Accommodation Summary for Integrated Science 4					
English Learner Test Variation C	0	0	0	0	0.00%
English Learner Test Variation D	1	0	0	1	0.94%
Any Accom., Mod., or EL Variation	2	0	0	2	1.89%
No Accom., Mod., or EL Variation	25	49	30	104	98.11%
English-Only Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	1	0	0	1	0.21%
J: Tested over 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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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	1	0	0	1	0.21%
No Accom., Mod., or EL Variation	96	180	201	477	99.79%
Initially–Fluent English Proficient (I-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over more than one day	0	0	0	0	0.00%
K: Had supervised breaks	0	0	0	0	0.00%

Accommodation Summary for Integrated Science 4					
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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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	14	22	27	63	100.00%
English Learner (EL) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over 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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%

Accommodation Summary for Integrated Science 4					
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	2	2	0.73%
English Learner Test Variation B	0	0	0	0	0.00%
English Learner Test Variation C	0	0	2	2	0.73%
English Learner Test Variation D	2	1	2	5	1.82%
Any Accom., Mod., or EL Variation	2	1	2	5	1.82%
No Accom., Mod., or EL Variation	52	144	74	270	98.18%
Reclassified-Fluent English Proficient (R-FEP) Students	**Grade 9**	**Grade 10**	**Grade 11**	**Total**	**Pct. of Total**
B: Marked in test booklet	0	0	0	0	0.00%
C: Dictated responses to a scribe	0	0	0	0	0.00%
F: Used non-interfering assistive device	0	0	0	0	0.00%
G: Used braille test	0	0	0	0	0.00%
H: Used large-print test	0	0	0	0	0.00%
J: Tested over 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 with MCE or ASL	0	0	0	0	0.00%
P: Examiner read test questions aloud or used audio presentation (CD)	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%
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	1	0	1	0.70%
English Learner Test Variation B	0	1	0	1	0.70%
English Learner Test Variation C	0	1	0	1	0.70%
English Learner Test Variation D	0	0	0	0	0.00%
Any Accom., Mod., or EL Variation	0	1	0	1	0.70%
No Accom., Mod., or EL Variation	45	56	41	142	99.30%

Appendix 6.D — DIF Tables

Table 6.D.1 Operational Items Exhibiting Significant DIF

Operational Items Exhibiting Significant DIF											
Test	**Item Number**	**Item Seq. No.**	**Male-Female**	**White-American Indian**	**White-Asian**	**White-Pacific Islander**	**White-Filipino**	**White-Combined Asian**	**White-Hispanic**	**White-African American**	**English Only-English Learner**
ELANGR02	CSL10747.085	50 (Core 1) 45 (Core 2)	A+	A+	C+	A+	C+	C+	A+	A+	A+
ELANGR02	CSL11349.0SA	61	A+	A+	B+	A+	C+	B+	A+	A+	A-
ELANGR03	CSR00224.OSA	3	A-	A-	A-	A-	A-	A-	A-	A-	C-
ELANGR03	CSR00086.OSA	9	A-	A-	A+	A+	A+	A+	A+	A+	C-
ELANGR04	CSL20950.027	52 (Core 1) 46 (Core 2)	A+	A+	C+	A+	B+	C+	A+	A+	A+
ELANGR04	CSL12339.169	60 (Core 1) 54 (Core 2)	A+	A-	C+	C+	C+	C+	A+	B+	A+
ELANGR05	CSR12986.017	5	A-	A+	A-	A-	A-	A-	A-	A-	C-
ELANGR05	CSR13386.020	22	A-	A-	C-	A-	C-	B-	A-	A-	A-
ELANGR05	CSL10252.032	48 (Core 1) 42 (Core 2)	A+	A+	C+	C+	C+	C+	B+	B+	A+
ELANGR05	CSL12157.162	62 (Core 1) 56 (Core 2)	A-	A+	B+	A+	C+	B+	A+	A+	A+
ELANGR05	CSL00467.OSA	76	A+	A+	C+	A+	C+	B+	A+	A-	B+
ELANGR06	CSL12192.108	55	A+	A+	C+	A+	C+	C+	A+	A+	A+
ELANGR06	CSL11817.017	66	A-	A+	C+	B+	C+	C+	A+	A+	A+
ELANGR07	CSR01913.266	43 (Core 1) 38 (Core 2)	A+	A-	C-	B-	C-	C-	A-	A-	A-
ELANGR07	CSL11197.128	73	A-	A+	C+	B+	C+	C+	A+	A+	A+
ELANGR07	CSW30050.OSA	Essay	C+	A-	A+	A+	A+	A+	A-	A-	A-
ELANGR08	CSL20274.003	51 (Core 1) 46 (Core 2)	B+	A+	C-	A-	A-	B-	B-	A-	B-
ELANGR08	CSL20316.071	62	A+	A-	C-	A-	B-	C-	B-	A-	A-
ELANGR08	CSL20406.006	67	A-	A+	C+	A+	C+	C+	A+	A+	A+
ELANGR08	CSL11946.133	77	A+	A+	C+	C+	C+	C+	A+	A+	A+
ELANGR08	CSL00230.OSA	81	A-	A+	C-	A-	B-	C-	A-	A-	A-
ELANGR10	CSL20991.034	47 (Core 1) 41 (Core 2)	A+	A-	B+	A+	C+	B+	A+	A+	A+
ELANGR10	CSL20569.038	52	A-	A-	C-	A-	B-	B-	B-	A-	C-
ELANGR11	CSR12539.0SA	79	A+	A-	A+	A+	A+	A+	C+	A+	C+
HISSGR11	CSH10501	35	A-	A+	A-	A+	A+	A+	C+	A+	A+
HISSGR11	CSH10537	58	A-	A+	C+	A+	B+	B+	A+	A+	A+
HISSWRLD	CSV21336	65	A-	A+	C+	A+	A+	B+	A+	A+	A+
MATHALG2	CST10162	46	C-	A-	A-	A-	A-	A-	A-	A-	A-
MATHGENR	CSM10190	20	B-	A-	B-	B-	C-	B-	A-	B-	A-
MATHGR05	CSM21192	39	B-	A-	A-	A-	A-	A-	A-	A-	C-
MATHINT1	CSA30041	5	A-	‡	A-	‡	A-	A-	A-	A-	C-

Operational Items Exhibiting Significant DIF											
Test	Item Number	Item Seq. No.	Male-Female	White-American Indian	White-Asian	White-Pacific Islander	White-Filipino	White-Combined Asian	White-Hispanic	White-African American	English Only-English Learner
MATHINT3	CST00501	16	A+	‡	‡	‡	‡	B+	C+	‡	‡
SCIEEART	CSY20101	1	C-	A-	B-	A-	A-	A-	A-	B-	A-
SCIEINT1	CSY20629	28	B-	A-	B-	A-	A-	B-	B-	C-	A-
SCIEINT2	CSC10361	9	A-	‡	‡	‡	B+	A+	A-	A+	C-
SCIEINT4	CSB00091	3	A-	‡	‡	‡	‡	‡	C-	‡	A-
SCIEINT4	CSC20065	10	C-	‡	‡	‡	‡	‡	A+	‡	A-
SCIEINT4	CSP10275	33	A+	‡	‡	‡	‡	‡	A+	‡	C+

‡ Minimum sample size for DIF analysis not met.

Table 6.D.2 Field-test Items Exhibiting Significant DIF

Field-test Items Exhibiting Significant DIF												
Test	Item Number	Form	Item Seq. No.	Male-Female	White-American Indian	White-Asian	White-Pacific Islander	White-Filipino	White-Combined Asian	White-Hispanic	White-African American	English Only-English Learner
ELANGR02	CSR40337.080	6	19	A+	A+	C-	‡	A-	B-	A-	A-	C-
ELANGR02	CSL40049.018	10	49	A+	A-	B+	‡	C+	B+	A+	A+	A+
ELANGR02	CSL40424.012	13	47	A+	‡	C+	‡	B+	C+	A+	A+	A+
ELANGR02	CSL40171.OSA	13	52	A-	‡	C+	‡	B+	B+	A+	B+	A+
ELANGR02	CSL40417.012	14	47	A-	A-	A+	‡	C+	B+	A+	A+	A+
ELANGR03	CSL40192.OSA	1	70	A+	C+	A+	‡	A+	A+	A+	A-	A+
ELANGR03	CSL40183.OSA	2	70	A-	B-	C-	‡	B-	C-	A+	B-	A+
ELANGR03	CSR40013.011	3	19	A+	A-	C+	‡	C+	C+	B+	A+	B+
ELANGR03	CSL40436.017	9	54	A+	A+	C+	‡	A+	B+	A+	A+	A+
ELANGR04	CSR40141.002	3	16	A-	A-	C-	‡	B-	C-	C-	A-	C-
ELANGR04	CSL40197.OSA	6	45	A+	A+	A+	‡	C+	A+	A+	A+	A+
ELANGR04	CSL40462.020	12	62	B+	A+	C+	A+	C+	C+	A+	B+	A-
ELANGR04	CSL40202.OSA	13	77	A+	A+	C+	B+	C+	C+	A+	B+	A+
ELANGR05	CSR40112.059	1	33	A-	A-	C-	C-	B-	C-	C-	C-	C-
ELANGR05	CSR40628.066	8	35	A-	‡	A-	‡	B-	A-	A-	C-	A-
ELANGR05	CSR40478.023	10	33	C-	‡	A-	‡	A-	A-	A-	A-	A-
ELANGR05	CSL40447.022	13	64	B+	‡	C+	‡	B+	C+	A+	B+	A+
ELANGR06	CSR40749.008	4	17	A+	A+	B-	A+	A-	A-	A-	A-	C-
ELANGR06	CSR40818.031	8	17	A+	A+	C+	A+	A+	B+	A+	B+	A+
ELANGR06	CSL40243.014	13	51	A+	A+	C-	‡	A-	B-	A+	A-	A-

Field-test Items Exhibiting Significant DIF

Test	Item Number	Form	Item Seq. No.	Male-Female	White-American Indian	White-Asian	White-Pacific Islander	White-Filipino	White-Combined Asian	White-Hispanic	White-African American	English Only-English Learner
ELANGR06	CSL40247.014	14	50	A+	A-	C+	‡	C+	C+	A+	A+	A+
ELANGR07	CSR40773.074	8	26	A-	A-	B-	C-	C-	B-	A-	A-	A-
ELANGR07	CSL40097.OSA	10	75	A+	A+	C+	‡	C+	C+	A+	A+	A-
ELANGR07	CSL40358.008	11	60	A+	B+	C+	‡	A+	B+	A+	A+	A-
ELANGR08	CSL40376.026	13	53	A+	‡	C+	‡	C+	C+	A+	B+	A+
ELANGR09	CSR40443.012	3	37	A-	C+	A+	A-	A+	A+	A-	A-	A+
ELANGR09	CSL40306.002	11	57	B-	A-	C-	B-	C-	C-	C-	C-	B-
ELANGR09	CSL40291.004	13	58	A+	A+	C+	B+	B+	C+	A+	A+	A+
ELANGR10	CSL40318.029	11	50	A+	A+	C+	B+	C+	C+	A+	A+	A+
ELANGR10	CSL40320.029	11	51	A-	A+	B-	A-	B-	B-	B-	A-	C-
ELANGR10	CSL40313.029	12	47	A+	A-	C-	‡	C-	C-	B-	A-	A-
ELANGR10	CSL40278.001	14	50	C-	A-	A-	‡	B-	A-	B-	A-	B-
ELANGR11	CSR40264.044	9	19	A-	A-	C+	A+	B+	C+	C+	A+	A+
ELANGR11	CSR40262.044	10	18	A-	‡	C-	‡	B-	C-	B-	A-	B-
ELANGR11	CSR40265.044	10	19	A-	‡	C-	‡	A-	B-	B-	A-	C-
ELANGR11	CSR40240.041	11	20	A+	A+	A+	‡	A+	A+	C+	A-	B+
ELANGR11	CSL40499.031	12	65	C-	A+	A-	A-	A-	A-	A-	A-	B-
HISSGR08	CSV40246	5	17	A-	A+	C+	A+	A+	B+	A-	A-	A+
HISSGR11	CSV40186	4	10	A-	‡	C+	‡	B+	C+	A-	A-	A-
MATHGR03	CSM40260	6	66	A-	A+	B+	‡	C+	B+	A+	A+	A-
MATHGR05	CSM40210	3	31	C-	A-	A-	‡	B-	A-	B-	C-	C-
MATHGR05	CSM40030	7	67	A-	A-	A-	‡	A-	A-	C-	B-	C-
MATHGR07	CSM40048	6	50	A-	A-	B-	B-	B-	B-	B-	A-	C-
MATHHIGH	CSG40056	3	40	A+	‡	B+	‡	A-	A+	A+	A+	C+
MATHHIGH	CSG00598	5	40	A-	‡	A-	‡	A+	A-	A-	B-	C-
MATHHIGH	CST40074	7	66	A-	‡	A-	‡	A-	A-	A-	B-	C-
SCIEBIOL	CSB50099	2	12	A-	A+	A-	‡	C-	A-	A-	A-	A-
SCIEBIOL	CSB50041	11	25	A+	A-	B+	‡	C+	B+	A+	A+	A-
SCIECHEM	CSC20486	5	62	A-	‡	C-	‡	C-	C-	B-	A-	B-
SCIEEART	CSY10231	20	62	A+	‡	C+	‡	A+	B+	A+	A-	A-
SCIEGR05	CSZ50358	6	43	A-	C-	A+	‡	A-	A-	A-	A-	A-
SCIEGR05	CSZ50793	20	49	A-	‡	C-	‡	B-	C-	B-	B-	A+
SCIEGR08	CSZ40205	10	43	A+	‡	B-	‡	A-	B-	B-	B-	C-
SCIEPHYS	CSP20340	1	29	A+	‡	C+	‡	‡	C+	B+	A+	A-

Field-test Items Exhibiting Significant DIF

Test	Item Number	Form	Item Seq. No.	Male-Female	White-American Indian	White-Asian	White-Pacific Islander	White-Filipino	White-Combined Asian	White-Hispanic	White-African American	English Only-English Learner
SCIEPHYS	CSP50185	5	4	A+	‡	A-	‡	‡	A-	C-	‡	A-
SCIEPHYS	CSP50171	6	29	A-	‡	C-	‡	‡	C-	B-	A-	A-
SCIEPHYS	CSP50219	9	4	A-	‡	A-	‡	‡	A-	A-	‡	C-
SCIEPHYS	CSP20355	10	4	B+	‡	C+	‡	‡	B+	B+	‡	A-
SCIEPHYS	CSP50192	14	17	C+	‡	B+	‡	‡	B+	A+	‡	A+
SCIEPHYS	CSP10087	14	29	A-	‡	A-	‡	‡	A-	B-	‡	C-

‡ Minimum sample size for DIF analysis not met.

Table 6.D.3 DIF Classifications for English–Language Arts Grade 2 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	3	5	0	0	6	9	2	3	0	0	0	0	0	0	6	9
A-	31	48	30	46	31	48	31	48	24	37	28	43	32	49	32	49	33	51	27	42
A+	34	52	35	54	25	38	34	52	29	45	29	45	33	51	32	49	32	49	24	37
B+	0	0	0	0	5	8	0	0	4	6	5	8	0	0	1	2	0	0	6	9
C+	0	0	0	0	1	2	0	0	2	3	1	2	0	0	0	0	0	0	2	3
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.4 DIF Classifications for English–Language Arts Grade 3 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	2	3
B-	1	2	0	0	0	0	1	2	3	5	0	0	1	2	0	0	0	0	5	8
A-	31	48	30	46	30	46	30	46	26	40	31	48	27	42	30	46	29	45	23	35
A+	32	49	35	54	32	49	33	51	31	48	33	51	37	57	35	54	34	52	28	43
B+	1	2	0	0	3	5	1	2	5	8	1	2	0	0	0	0	0	0	7	11
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.5 DIF Classifications for English–Language Arts Grade 4 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	3	4	0	0	2	3	3	4	0	0	0	0	2	3	5	7
A-	37	49	35	46	33	43	34	45	40	53	37	49	36	47	42	55	33	43	38	50
A+	38	50	41	54	36	47	41	54	31	41	32	42	40	53	33	43	40	53	28	37
B+	1	1	0	0	2	3	0	0	2	3	2	3	0	0	1	1	1	1	3	4
C+	0	0	0	0	2	3	1	1	1	1	2	3	0	0	0	0	0	0	2	3
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	76	100	76	100	76	100	76	100	76	100	76	100	76	100	76	100	76	100	76	100

Table 6.D.6 DIF Classifications for English–Language Arts Grade 5 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	1	1	2	3
B-	2	3	0	0	1	1	0	0	4	5	2	3	2	3	0	0	2	3	7	9
A-	35	47	39	52	34	45	38	51	29	39	30	40	36	48	36	48	27	36	29	39
A+	38	51	36	48	33	44	33	44	34	45	38	51	36	48	38	51	44	59	27	36
B+	0	0	0	0	4	5	3	4	4	5	4	5	1	1	1	1	1	1	7	9
C+	0	0	0	0	2	3	1	1	3	4	1	1	0	0	0	0	0	0	3	4
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100

Table 6.D.7 DIF Classifications for English–Language Arts Grade 6 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	2	3	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	4	5
A-	34	45	31	41	41	55	38	51	39	52	41	55	36	48	32	43	31	41	35	47
A+	39	52	44	59	31	41	36	48	31	41	31	41	39	52	43	57	43	57	32	43
B+	0	0	0	0	1	1	1	1	2	3	1	1	0	0	0	0	0	0	2	3
C+	0	0	0	0	2	3	0	0	2	3	2	3	0	0	0	0	0	0	2	3
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100

Table 6.D.8 DIF Classifications for English–Language Arts Grade 7 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	1	1
B-	1	1	0	0	3	4	2	3	1	1	1	1	0	0	0	0	1	1	5	7
A-	36	47	37	49	32	42	35	46	34	45	36	47	37	49	35	46	33	43	28	37
A+	38	50	39	51	36	47	38	50	38	50	37	49	39	51	41	54	42	55	36	47
B+	0	0	0	0	3	4	1	1	1	1	0	0	0	0	0	0	0	0	4	5
C+	1	1	0	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	2	3
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	76	100	76	100	76	100	76	100	76	100	76	100	76	100	76	100	76	100	76	100

Table 6.D.9 DIF Classifications for English–Language Arts Grade 8 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	3	4	0	0	0	0	2	3	0	0	0	0	0	0	3	4
B-	0	0	0	0	2	3	0	0	5	7	3	4	2	3	0	0	1	1	3	4
A-	36	48	38	51	33	44	41	55	30	40	32	43	29	39	34	45	34	45	27	36
A+	37	49	37	49	29	39	33	44	37	49	34	45	44	59	41	55	40	53	33	44
B+	2	3	0	0	6	8	0	0	1	1	2	3	0	0	0	0	0	0	7	9
C+	0	0	0	0	2	3	1	1	2	3	2	3	0	0	0	0	0	0	2	3
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100

Table 6.D.10 DIF Classifications for English–Language Arts Grade 9 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	2	3	0	0	2	3	2	3	0	0	0	0	1	1	3	4
A-	33	44	37	49	33	44	31	41	38	51	35	47	33	44	34	45	30	40	34	45
A+	42	56	38	51	37	49	44	59	32	43	37	49	42	56	41	55	44	59	33	44
B+	0	0	0	0	3	4	0	0	3	4	1	1	0	0	0	0	0	0	5	7
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100

Table 6.D.11 DIF Classifications for English–Language Arts Grade 10 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1
B-	1	1	0	0	1	1	0	0	3	4	2	3	1	1	0	0	3	4	7	9
A-	38	51	35	47	29	39	31	41	27	36	28	37	29	39	31	41	31	41	21	28
A+	35	47	40	53	41	55	44	59	42	56	44	59	44	59	44	59	39	52	41	55
B+	1	1	0	0	3	4	0	0	2	3	1	1	1	1	0	0	1	1	4	5
C+	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100

Table 6.D.12 DIF Classifications for English–Language Arts Grade 11 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	1	1	0	0	2	3	0	0	0	0	1	1	0	0	0	0	0	0	3	4
A-	35	47	38	51	39	52	39	52	43	57	41	55	36	48	37	49	37	49	36	48
A+	39	52	37	49	32	43	36	48	31	41	32	43	38	51	38	51	37	49	32	43
B+	0	0	0	0	2	3	0	0	1	1	1	1	0	0	0	0	0	0	3	4
C+	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100

Table 6.D.13 DIF Classifications for History–Social Science Grade 8 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A-	40	53	39	52	38	51	38	51	35	47	39	52	36	48	37	49	36	48	35	47
A+	34	45	36	48	36	48	37	49	40	53	36	48	39	52	37	49	39	52	37	49
B+	1	1	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	3	4
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100	75	100

Table 6.D.14 DIF Classifications for World History Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A-	30	50	27	45	36	60	31	52	32	53	34	57	28	47	26	43	24	40	34	57
A+	30	50	33	55	20	33	29	48	27	45	23	38	32	53	34	57	36	60	22	37
B+	0	0	0	0	3	5	0	0	1	2	3	5	0	0	0	0	0	0	3	5
C+	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	2
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100

Table 6.D.15 DIF Classifications for History–Social Science Grade 11 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A-	27	45	30	50	33	55	29	48	25	42	29	48	32	53	38	63	30	50	32	53
A+	33	55	30	50	26	43	31	52	34	57	30	50	27	45	22	37	30	50	26	43
B+	0	0	0	0	0	0	0	0	1	2	1	2	0	0	0	0	0	0	0	0
C+	0	0	0	0	1	2	0	0	0	0	0	0	1	2	0	0	0	0	2	3
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100

Table 6.D.16 DIF Classifications for Mathematics Grade 2 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	1	2	0	0	0	0	0	0	2	3	1	2	1	2	0	0	3	5	6	9
A-	30	46	29	45	27	42	29	45	26	40	30	46	23	35	30	46	26	40	20	31
A+	34	52	36	55	38	58	36	55	36	55	34	52	41	63	35	54	36	55	38	58
B+	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	2
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.17 DIF Classifications for Mathematics Grade 3 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	3	5	0	0	0	0	0	0	2	3	0	0	0	0	0	0	2	3	7	11
A-	23	35	32	49	28	43	33	51	23	35	29	45	29	45	32	49	28	43	23	35
A+	37	57	33	51	36	55	32	49	37	57	35	54	36	55	33	51	32	49	29	45
B+	2	3	0	0	1	2	0	0	3	5	1	2	0	0	0	0	3	5	6	9
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.18 DIF Classifications for Mathematics Grade 4 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	1	2	0	0	0	0	0	0	1	2	0	0	0	0	1	2	2	3	5	8
A-	27	42	33	51	30	46	32	49	30	46	33	51	32	49	30	46	29	45	27	42
A+	35	54	32	49	35	54	33	51	34	52	32	49	33	51	34	52	34	52	31	48
B+	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.19 DIF Classifications for Mathematics Grade 5 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	2
B-	2	3	0	0	2	3	2	3	2	3	2	3	1	2	1	2	2	3	3	5
A-	21	32	28	43	30	46	28	43	27	42	30	46	29	45	32	49	29	45	27	42
A+	42	65	37	57	33	51	35	54	36	55	33	51	35	54	32	49	33	51	34	52
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.20 DIF Classifications for Mathematics Grade 6 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	3	5	0	0	2	3	0	0	2	3	2	3	0	0	0	0	1	2	5	8
A-	27	42	31	48	27	42	32	49	25	38	29	45	31	48	36	55	26	40	26	40
A+	35	54	34	52	34	52	33	51	37	57	33	51	34	52	29	45	38	58	32	49
B+	0	0	0	0	2	3	0	0	1	2	1	2	0	0	0	0	0	0	2	3
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.21 DIF Classifications for Mathematics Grade 7 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	2	3	0	0	1	2	1	2	1	2	0	0	0	0	1	2	0	0	4	6
A-	29	45	31	48	27	42	28	43	25	38	29	45	32	49	32	49	29	45	24	37
A+	30	46	34	52	37	57	35	54	38	58	36	55	33	51	32	49	36	55	32	49
B+	4	6	0	0	0	0	1	2	1	2	0	0	0	0	0	0	0	0	5	8
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.22 DIF Classifications for General Mathematics Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	2
B-	1	2	0	0	2	3	1	2	1	2	2	3	0	0	1	2	1	2	2	3
A-	28	43	35	54	29	45	28	43	25	38	26	40	28	43	28	43	28	43	26	40
A+	35	54	30	46	34	52	36	55	37	57	37	57	37	57	36	55	36	55	34	52
B+	1	2	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	2	3
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.23 DIF Classifications for Algebra I Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	1	2	0	0	1	2	0	0	0	0	0	0	0	0	0	0	4	6	6	9
A-	29	45	32	49	32	49	31	48	27	42	34	52	27	42	33	51	21	32	20	31
A+	35	54	33	51	32	49	34	52	38	58	31	48	38	58	32	49	40	62	39	60
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.24 DIF Classifications for Geometry Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	1	2	0	0	1	2	1	2	4	6	1	2	1	2	0	0	2	3	8	12
A-	32	49	34	52	31	48	30	46	30	46	31	48	29	45	37	57	25	38	24	37
A+	31	48	30	46	33	51	34	52	31	48	33	51	35	54	28	43	38	58	31	48
B+	1	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.25 DIF Classifications for Algebra II Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
B-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	3	5
A-	27	42	29	45	32	49	33	51	27	42	28	43	24	37	33	51	26	40	25	38
A+	37	57	36	55	32	49	30	46	38	58	37	57	41	63	32	49	35	54	32	49
B+	0	0	0	0	1	2	2	3	0	0	0	0	0	0	0	0	1	2	4	6
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.26 DIF Classifications for Summative High School Mathematics Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	1	2	1	2	2	3	5	8	2	3	2	3	1	2	1	2	8	12	11	17
A-	28	43	30	46	21	32	22	34	22	34	21	32	28	43	28	43	21	32	14	22
A+	36	55	34	52	42	65	38	58	40	62	42	65	35	54	36	55	33	51	35	54
B+	0	0	0	0	0	0	0	0	1	2	0	0	1	2	0	0	3	5	5	8
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.27 DIF Classifications for Integrated Mathematics 1 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	2
B-	0	0	0	0	1	2	0	0	0	0	1	2	0	0	0	0	2	3	3	5
A-	33	51	0	0	32	49	0	0	35	54	31	48	34	52	30	46	21	32	26	40
A+	32	49	0	0	30	46	0	0	28	43	32	49	31	48	35	54	41	63	31	48
B+	0	0	0	0	2	3	0	0	2	3	1	2	0	0	0	0	0	0	4	6
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	65	100	0	0	65	100	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.28 DIF Classifications for Integrated Mathematics 2 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	2	3	0	0	4	6	0	0	0	0	4	6	1	2	3	5	4	6	12	18
A-	29	45	0	0	31	48	0	0	0	0	27	42	33	51	26	40	30	46	23	35
A+	33	51	0	0	25	38	0	0	0	0	29	45	28	43	34	52	29	45	19	29
B+	1	2	0	0	5	8	0	0	0	0	5	8	3	5	2	3	2	3	11	17
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	65	100	0	0	65	100	65	100	0	0	0	0	0	0	0	0	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.29 DIF Classifications for Integrated Mathematics 3 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	3	5	0	0	0	0	0	0	0	0	2	3	9	14	0	0	0	0	13	20
A-	32	49	0	0	0	0	0	0	0	0	28	43	24	37	0	0	0	0	19	29
A+	25	38	0	0	0	0	0	0	0	0	33	51	24	37	0	0	0	0	23	35
B+	5	8	0	0	0	0	0	0	0	0	2	3	7	11	0	0	0	0	9	14
C+	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	2
Small N	0	0	65	100	65	100	65	100	65	100	0	0	0	0	65	100	65	100	0	0
TOTAL	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100	65	100

Table 6.D.30 DIF Classifications for Science Grade 5 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	2	1	2	2	3
A-	32	53	30	50	31	52	22	37	23	38	30	50	29	48	29	48	28	47	24	40
A+	28	47	30	50	29	48	38	63	36	60	30	50	31	52	30	50	31	52	34	57
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100

Table 6.D.31 DIF Classifications for Science Grade 8 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	2	3	0	0	1	2	0	0	1	2	1	2	0	0	0	0	1	2	3	5
A-	26	43	27	45	28	47	25	42	29	48	28	47	28	47	24	40	27	45	24	40
A+	29	48	33	55	29	48	35	58	30	50	30	50	32	53	36	60	32	53	30	50
B+	3	5	0	0	2	3	0	0	0	0	1	2	0	0	0	0	0	0	3	5
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100

Table 6.D.32 DIF Classifications for Grade 10 Life Science Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	2
A-	28	47	26	43	29	48	25	42	28	47	29	48	25	42	28	47	27	45	29	48
A+	31	52	34	57	31	52	35	58	31	52	31	52	35	58	32	53	33	55	29	48
B+	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100

Table 6.D.33 DIF Classifications for Biology Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	1	2	0	0	1	2	1	2	0	0	0	0	1	2	1	2
A-	31	52	29	48	27	45	29	48	25	42	26	43	33	55	28	47	27	45	33	55
A+	29	48	31	52	32	53	31	52	34	57	33	55	27	45	32	53	32	53	26	43
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100

Table 6.D.34 DIF Classifications for Chemistry Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	1	2	0	0	2	3	0	0	1	2	2	3	0	0	0	0	1	2	4	7
A-	26	43	24	40	27	45	27	45	28	47	27	45	28	47	28	47	26	43	29	48
A+	33	55	36	60	31	52	33	55	31	52	31	52	32	53	32	53	33	55	27	45
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100

Table 6.D.35 DIF Classifications for Earth Science Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
B-	2	3	0	0	2	3	1	2	1	2	1	2	1	2	2	3	0	0	3	5
A-	26	43	32	53	25	42	24	40	26	43	28	47	25	42	22	37	29	48	21	35
A+	31	52	28	47	33	55	35	58	33	55	31	52	34	57	36	60	31	52	35	58
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100

Table 6.D.36 DIF Classifications for Physics Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	2	3	1	2	2	3	2	3	0	0	1	2	0	0	0	0	3	5	7	12
A-	25	42	28	47	32	53	30	50	32	53	33	55	29	48	28	47	27	45	26	43
A+	32	53	30	50	24	40	26	43	28	47	26	43	31	52	32	53	29	48	21	35
B+	1	2	1	2	2	3	2	3	0	0	0	0	0	0	0	0	1	2	6	10
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100

Table 6.D.37 DIF Classifications for Integrated Science 1 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	1	2
B-	1	2	0	0	1	2	1	2	1	2	1	2	1	2	0	0	1	2	2	3
A-	24	40	29	48	30	50	25	42	31	52	32	53	25	42	31	52	24	40	28	47
A+	35	58	31	52	28	47	34	57	27	45	27	45	34	57	28	47	35	58	27	45
B+	0	0	0	0	1	2	0	0	1	2	0	0	0	0	0	0	0	0	2	3
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100

Table 6.D.38 DIF Classifications for Integrated Science 2 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	2
B-	2	3	0	0	0	0	0	0	1	2	0	0	1	2	2	3	3	5	8	13
A-	25	42	0	0	0	0	0	0	31	52	34	57	30	50	29	48	26	43	26	43
A+	31	52	0	0	0	0	0	0	26	43	26	43	28	47	27	45	30	50	21	35
B+	2	3	0	0	0	0	0	0	2	3	0	0	1	2	2	3	0	0	4	7
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	60	100	60	100	60	100	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100

Table 6.D.39 DIF Classifications for Integrated Science 3 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	3	5
A-	28	47	0	0	0	0	0	0	0	0	0	0	30	50	0	0	26	43	26	43
A+	31	52	0	0	0	0	0	0	0	0	0	0	29	48	0	0	31	52	29	48
B+	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	1	2	2	3
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	60	100	60	100	60	100	60	100	60	100	0	0	60	100	0	0	0	0
TOTAL	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100

Table 6.D.40 DIF Classifications for Integrated Science 4 Operational Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	1	2	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	2	3
B-	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	4	7
A-	27	45	0	0	0	0	0	0	0	0	0	0	30	50	0	0	29	48	24	40
A+	26	43	0	0	0	0	0	0	0	0	0	0	27	45	0	0	27	45	24	40
B+	3	5	0	0	0	0	0	0	0	0	0	0	2	3	0	0	2	3	5	8
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	2
Small N	0	0	60	100	60	100	60	100	60	100	60	100	0	0	60	100	0	0	0	0
TOTAL	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100

Table 6.D.41 DIF Classifications for English–Language Arts Grade 2 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1
B-	0	0	3	4	1	1	0	0	4	5	2	2	2	2	2	2	0	0	9	11
A-	29	35	38	46	33	40	1	1	39	48	38	46	40	49	44	54	39	48	30	37
A+	52	63	33	40	39	48	1	1	29	35	33	40	40	49	35	43	42	51	26	32
B+	1	1	2	2	6	7	0	0	8	10	8	10	0	0	1	1	0	0	12	15
C+	0	0	0	0	2	2	0	0	2	2	1	1	0	0	0	0	0	0	4	5
Small N	0	0	6	7	0	0	80	98	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	82	100	82	100	82	100	82	100	82	100	82	100	82	100	82	100	82	100	82	100

Table 6.D.42 DIF Classifications for English–Language Arts Grade 3 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	1	1
B-	1	1	4	5	3	4	0	0	3	4	2	2	1	1	1	1	0	0	7	8
A-	32	38	43	51	25	30	0	0	28	33	26	31	49	58	52	62	45	54	32	38
A+	51	61	36	43	50	60	0	0	49	58	50	60	33	39	31	37	38	45	36	43
B+	0	0	0	0	3	4	0	0	3	4	4	5	1	1	0	0	1	1	5	6
C+	0	0	1	1	2	2	0	0	1	1	1	1	0	0	0	0	0	0	3	4
Small N	0	0	0	0	0	0	84	100	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	84	100	84	100	84	100	84	100	84	100	84	100	84	100	84	100	84	100	84	100

Table 6.D.43 DIF Classifications for English–Language Arts Grade 4 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	1	1	0	0	0	0	1	1	1	1	0	0	1	1	1	1
B-	0	0	5	6	3	4	0	0	3	4	0	0	0	0	0	0	0	0	9	11
A-	35	44	33	41	35	44	8	10	42	53	43	54	49	61	47	59	45	56	36	45
A+	44	55	31	39	38	48	9	11	26	33	31	39	30	38	31	39	34	43	23	29
B+	1	1	0	0	1	1	3	4	6	8	3	4	0	0	2	3	0	0	8	10
C+	0	0	0	0	2	3	0	0	3	4	2	3	0	0	0	0	0	0	3	4
Small N	0	0	11	14	0	0	60	75	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	80	100	80	100	80	100	80	100	80	100	80	100	80	100	80	100	80	100	80	100

Table 6.D.44 DIF Classifications for English–Language Arts Grade 5 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	1	1	0	0	1	1	1	1	0	0	1	1	1	1	2	2	1	1	3	4
B-	1	1	0	0	1	1	1	1	7	9	1	1	0	0	0	0	1	1	7	9
A-	41	50	11	13	34	41	6	7	29	35	33	40	43	52	54	66	52	63	37	45
A+	37	45	3	4	43	52	3	4	42	51	44	54	38	46	25	30	28	34	30	37
B+	2	2	0	0	2	2	1	1	4	5	2	2	0	0	1	1	0	0	4	5
C+	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	1	1
Small N	0	0	68	83	0	0	70	85	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	82	100	82	100	82	100	82	100	82	100	82	100	82	100	82	100	82	100	82	100

Table 6.D.45 DIF Classifications for English–Language Arts Grade 6 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	2	2
B-	0	0	1	1	4	5	4	5	3	4	3	4	0	0	0	0	1	1	8	10
A-	31	38	44	54	34	42	16	20	39	48	34	42	41	51	46	57	57	70	38	47
A+	50	62	36	44	40	49	13	16	34	42	42	52	40	49	34	42	22	27	27	33
B+	0	0	0	0	0	0	0	0	4	5	1	1	0	0	1	1	0	0	4	5
C+	0	0	0	0	2	2	0	0	1	1	1	1	0	0	0	0	0	0	2	2
Small N	0	0	0	0	0	0	48	59	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	81	100	81	100	81	100	81	100	81	100	81	100	81	100	81	100	81	100	81	100

Table 6.D.46 DIF Classifications for English–Language Arts Grade 7 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1
B-	0	0	1	1	1	1	2	3	5	6	1	1	1	1	1	1	1	1	9	11
A-	34	43	37	46	25	31	22	28	28	35	26	33	48	60	50	63	59	74	32	40
A+	46	58	40	50	43	54	17	21	37	46	44	55	31	39	29	36	20	25	23	29
B+	0	0	2	3	9	11	0	0	8	10	8	10	0	0	0	0	0	0	13	16
C+	0	0	0	0	2	3	0	0	1	1	1	1	0	0	0	0	0	0	2	3
Small N	0	0	0	0	0	0	38	48	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	80	100	80	100	80	100	80	100	80	100	80	100	80	100	80	100	80	100	80	100

Table 6.D.47 DIF Classifications for English–Language Arts Grade 8 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	1	1	2	3	2	3	2	3	2	3	0	0	0	0	1	1	7	9
A-	34	46	24	32	32	43	14	19	33	45	31	42	35	47	46	62	46	62	28	38
A+	37	50	20	27	33	45	14	19	34	46	36	49	39	53	26	35	27	36	27	36
B+	3	4	0	0	6	8	1	1	4	5	4	5	0	0	2	3	0	0	11	15
C+	0	0	0	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	1	1
Small N	0	0	29	39	0	0	43	58	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	74	100	74	100	74	100	74	100	74	100	74	100	74	100	74	100	74	100	74	100

Table 6.D.48 DIF Classifications for English–Language Arts Grade 9 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	1	1	0	0	1	1	1	1	1	1	1	1	0	0	1	1
B-	3	4	0	0	1	1	4	5	2	3	1	1	2	3	0	0	1	1	8	11
A-	42	58	44	60	28	38	33	45	32	44	24	33	50	68	57	78	48	66	33	45
A+	28	38	28	38	40	55	22	30	33	45	44	60	20	27	15	21	24	33	23	32
B+	0	0	0	0	2	3	2	3	5	7	2	3	0	0	0	0	0	0	6	8
C+	0	0	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	2	3
Small N	0	0	0	0	0	0	12	16	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	73	100	73	100	73	100	73	100	73	100	73	100	73	100	73	100	73	100	73	100

Table 6.D.49 DIF Classifications for English–Language Arts Grade 10 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	1	1	0	0	1	1	0	0	1	1	1	1	0	0	0	0	1	1	3	4
B-	2	2	1	1	2	2	0	0	5	6	1	1	3	4	0	0	1	1	5	6
A-	36	43	38	46	22	27	8	10	29	35	28	34	44	53	60	72	43	52	39	47
A+	44	53	31	37	53	64	9	11	44	53	50	60	36	43	23	28	38	46	28	34
B+	0	0	1	1	4	5	1	1	3	4	2	2	0	0	0	0	0	0	7	8
C+	0	0	0	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	1	1
Small N	0	0	12	14	0	0	65	78	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	83	100	83	100	83	100	83	100	83	100	83	100	83	100	83	100	83	100	83	100

Table 6.D.50 DIF Classifications for English–Language Arts Grade 11 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	1	1	0	0	2	3	0	0	0	0	1	1	0	0	0	0	1	1	3	4
B-	1	1	0	0	1	1	0	0	5	7	2	3	3	4	0	0	6	8	10	14
A-	38	53	22	31	37	51	17	24	37	51	37	51	45	63	51	71	50	69	37	51
A+	32	44	33	46	30	42	3	4	27	38	31	43	22	31	21	29	14	19	16	22
B+	0	0	1	1	1	1	0	0	3	4	0	0	0	0	0	0	1	1	4	6
C+	0	0	0	0	1	1	0	0	0	0	1	1	2	3	0	0	0	0	2	3
Small N	0	0	16	22	0	0	52	72	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	72	100	72	100	72	100	72	100	72	100	72	100	72	100	72	100	72	100	72	100

Table 6.D.51 DIF Classifications for History–Social Science Grade 8 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	3	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	7
A-	25	60	22	52	16	38	14	33	21	50	16	38	21	50	20	48	20	48	20	48
A+	14	33	20	48	23	55	10	24	20	48	24	57	19	45	22	52	22	52	14	33
B+	0	0	0	0	2	5	0	0	1	2	2	5	2	5	0	0	0	0	4	10
C+	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	2
Small N	0	0	0	0	0	0	18	43	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100

Table 6.D.52 DIF Classifications for World History Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	1	2	0	0	2	5	0	0	0	0	0	0	1	2	0	0	3	7
A-	28	67	22	52	16	38	23	55	20	48	15	36	28	67	28	67	25	60	23	55
A+	13	31	19	45	24	57	16	38	22	52	27	64	14	33	13	31	17	40	13	31
B+	1	2	0	0	2	5	1	2	0	0	0	0	0	0	0	0	0	0	3	7
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100

Table 6.D.53 DIF Classifications for History–Social Science Grade 11 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	0	0	0	0	2	5	0	0	0	0	0	0	1	2	3	7
A-	19	45	16	38	18	43	4	10	19	45	18	43	28	67	28	67	29	69	14	33
A+	21	50	14	33	22	52	2	5	19	45	22	52	14	33	14	33	12	29	20	48
B+	2	5	0	0	1	2	0	0	2	5	1	2	0	0	0	0	0	0	4	10
C+	0	0	0	0	1	2	0	0	0	0	1	2	0	0	0	0	0	0	1	2
Small N	0	0	12	29	0	0	36	86	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100

Table 6.D.54 DIF Classifications for Mathematics Grade 2 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	2	5	1	2	0	0	1	2	0	0	2	5	0	0	2	5	4	10
A-	20	48	21	50	20	48	4	10	20	48	21	50	22	52	23	55	23	55	20	48
A+	22	52	18	43	20	48	2	5	20	48	20	48	18	43	19	45	17	40	15	36
B+	0	0	1	2	1	2	0	0	1	2	1	2	0	0	0	0	0	0	3	7
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	36	86	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100

Table 6.D.55 DIF Classifications for Mathematics Grade 3 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	2	5	0	0	1	2	1	2	1	2	0	0	2	5	3	7	2	5	5	12
A-	25	60	23	55	7	17	2	5	15	36	9	21	22	52	28	67	28	67	13	31
A+	14	33	18	43	33	79	3	7	23	55	32	76	18	43	11	26	12	29	19	45
B+	1	2	1	2	1	2	0	0	2	5	1	2	0	0	0	0	0	0	4	10
C+	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	2
Small N	0	0	0	0	0	0	36	86	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100

Table 6.D.56 DIF Classifications for Mathematics Grade 4 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	3	7	0	0	0	0	0	0	0	0	0	0	1	2	1	2	5	12
A-	16	38	19	45	8	19	4	10	14	33	9	21	24	57	26	62	23	55	8	19
A+	25	60	14	33	32	76	2	5	27	64	33	79	18	43	15	36	18	43	25	60
B+	1	2	0	0	2	5	0	0	1	2	0	0	0	0	0	0	0	0	4	10
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	6	14	0	0	36	86	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100

Table 6.D.57 DIF Classifications for Mathematics Grade 5 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	1	2	0	0	0	0	0	0	0	0	0	0	1	2	1	2	2	5	2	5
B-	3	7	1	2	0	0	0	0	3	7	0	0	1	2	2	5	0	0	4	10
A-	15	36	19	45	8	19	4	10	13	31	13	31	17	40	22	52	19	45	9	21
A+	23	55	15	36	29	69	2	5	25	60	29	69	23	55	17	40	21	50	20	48
B+	0	0	1	2	5	12	0	0	1	2	0	0	0	0	0	0	0	0	7	17
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	6	14	0	0	36	86	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100

Table 6.D.58 DIF Classifications for Mathematics Grade 6 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	3	7	0	0	1	2	0	0	0	0	0	0	0	0	1	2	1	2	4	10
A-	17	40	24	57	15	36	14	33	20	48	18	43	21	50	23	55	26	62	14	33
A+	21	50	17	40	23	55	16	38	21	50	23	55	21	50	18	43	15	36	19	45
B+	1	2	1	2	3	7	0	0	1	2	1	2	0	0	0	0	0	0	5	12
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	12	29	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100

Table 6.D.59 DIF Classifications for Mathematics Grade 7 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	2
B-	0	0	0	0	1	2	1	2	2	5	1	2	1	2	1	2	1	2	3	7
A-	25	60	23	55	16	38	10	24	21	50	20	48	26	62	27	64	24	57	24	57
A+	17	40	19	45	23	55	7	17	19	45	21	50	15	36	14	33	16	38	12	29
B+	0	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	2	5
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	24	57	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100

Table 6.D.60 DIF Classifications for General Mathematics Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A-	4	67	2	33	3	50	2	33	2	33	3	50	3	50	3	50	3	50	4	67
A+	2	33	4	67	3	50	4	67	4	67	3	50	3	50	3	50	3	50	2	33
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100

Table 6.D.61 DIF Classifications for Algebra I Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	0	0	2	5	2	5	0	0	1	2	1	2	2	5	7	17
A-	22	52	24	57	15	36	6	14	18	43	18	43	30	71	30	71	22	52	20	48
A+	20	48	18	43	27	64	4	10	22	52	24	57	11	26	11	26	18	43	15	36
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	30	71	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100

Table 6.D.62 DIF Classifications for Geometry Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	2	5	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	2	3	7
A-	20	48	0	0	9	21	0	0	18	43	14	33	28	67	26	62	19	45	21	50
A+	20	48	0	0	33	79	0	0	24	57	28	67	14	33	15	36	22	52	18	43
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	42	100	0	0	42	100	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100

Table 6.D.63 DIF Classifications for Algebra II Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	1	2	0	0	1	2	0	0	0	0	0	0	1	2	2	5
A-	16	38	0	0	15	36	0	0	17	40	15	36	18	43	22	52	17	40	14	33
A+	26	62	0	0	26	62	0	0	24	57	27	64	24	57	20	48	24	57	26	62
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	42	100	0	0	42	100	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100

Table 6.D.64 DIF Classifications for Summative High School Mathematics Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	2	5
B-	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3	7	2	5	3	7
A-	21	50	0	0	14	33	0	0	22	52	16	38	29	69	23	55	17	40	19	45
A+	21	50	0	0	25	60	0	0	19	45	26	62	13	31	15	36	16	38	11	26
B+	0	0	0	0	2	5	0	0	1	2	0	0	0	0	1	2	4	10	6	14
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	2
Small N	0	0	42	100	0	0	42	100	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100	42	100

Table 6.D.65 DIF Classifications for Integrated Mathematics 1 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A-	2	33	0	0	2	33	0	0	2	33	2	33	2	33	4	67	4	67	3	50
A+	4	67	0	0	4	67	0	0	4	67	4	67	4	67	2	33	2	33	3	50
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	6	100	0	0	6	100	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100

Table 6.D.66 DIF Classifications for Integrated Mathematics 2 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	1	17	0	0	0	0	1	17	0	0	0	0	0	0	2	33
A-	5	83	0	0	3	50	0	0	0	0	3	50	5	83	4	67	1	17	3	50
A+	1	17	0	0	2	33	0	0	0	0	2	33	1	17	2	33	4	67	1	17
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	17	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	6	100	0	0	6	100	6	100	0	0	0	0	0	0	0	0	0	0
TOTAL	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100

Table 6.D.67 DIF Classifications for Integrated Mathematics 3 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	0	0	0	0	0	0	0	0	1	17	0	0	0	0	1	17
A-	4	67	0	0	0	0	0	0	0	0	3	50	1	17	0	0	0	0	2	33
A+	2	33	0	0	0	0	0	0	0	0	2	33	3	50	0	0	0	0	2	33
B+	0	0	0	0	0	0	0	0	0	0	1	17	1	17	0	0	0	0	1	17
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	6	100	6	100	6	100	6	100	0	0	0	0	6	100	6	100	0	0
TOTAL	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100

Table 6.D.68 DIF Classifications for Science Grade 5 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	2	2
B-	2	2	1	1	1	1	1	1	2	2	1	1	1	1	2	2	2	2	6	5
A-	72	60	24	20	50	42	2	2	61	51	50	42	71	59	83	69	89	74	59	49
A+	43	36	15	13	61	51	3	3	55	46	66	55	48	40	34	28	29	24	41	34
B+	3	3	1	1	7	6	0	0	2	2	2	2	0	0	1	1	0	0	12	10
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	78	65	0	0	114	95	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100

Table 6.D.69 DIF Classifications for Science Grade 8 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
B-	10	8	6	5	1	1	1	1	4	3	1	1	2	2	5	4	2	2	24	20
A-	54	45	38	32	57	48	18	15	61	51	60	50	95	79	84	70	100	83	58	48
A+	55	46	21	18	56	47	10	8	51	43	55	46	23	19	31	26	17	14	30	25
B+	1	1	1	1	6	5	1	1	4	3	4	3	0	0	0	0	0	0	7	6
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	54	45	0	0	90	75	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100

Table 6.D.70 DIF Classifications for Grade 10 Life Science Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	1	1	4	3	2	2	1	1	4	3	0	0	1	1	0	0	2	2	13	11
A-	64	53	63	53	59	49	8	7	63	53	58	48	85	71	86	72	75	63	67	56
A+	54	45	29	24	57	48	3	3	50	42	61	51	34	28	34	28	43	36	35	29
B+	1	1	0	0	2	2	0	0	3	3	1	1	0	0	0	0	0	0	5	4
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	24	20	0	0	108	90	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100

Table 6.D.71 DIF Classifications for Biology Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
B-	1	1	7	6	0	0	1	1	1	1	0	0	0	0	0	0	2	2	12	10
A-	57	48	51	43	40	33	11	9	41	34	41	34	71	59	70	58	74	62	49	41
A+	61	51	55	46	78	65	11	9	76	63	78	65	49	41	50	42	44	37	53	44
B+	1	1	1	1	2	2	1	1	0	0	1	1	0	0	0	0	0	0	4	3
C+	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
Small N	0	0	6	5	0	0	96	80	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100

Table 6.D.72 DIF Classifications for Chemistry Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	1	1
B-	3	3	0	0	1	1	0	0	1	1	0	0	1	1	1	1	3	3	7	6
A-	70	58	0	0	54	45	0	0	64	53	56	47	84	70	84	70	66	55	58	48
A+	47	39	0	0	64	53	0	0	54	45	63	53	35	29	35	29	51	43	54	45
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	120	100	0	0	120	100	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100

Table 6.D.73 DIF Classifications for Earth Science Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	1	1	0	0	1	1	0	0	3	3	0	0	0	0	0	0	1	1	5	4
A-	72	60	0	0	56	47	0	0	49	41	58	48	72	60	68	57	71	59	64	53
A+	46	38	0	0	56	47	0	0	61	51	60	50	48	40	52	43	48	40	36	30
B+	1	1	0	0	6	5	0	0	7	6	2	2	0	0	0	0	0	0	14	12
C+	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Small N	0	0	120	100	0	0	120	100	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100

Table 6.D.74 DIF Classifications for Physics Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	1	1	0	0	0	0	1	1	1	1	0	0	2	2	4	3
B-	7	6	0	0	2	2	0	0	0	0	2	2	10	8	1	1	10	8	20	17
A-	53	44	0	0	51	43	0	0	0	0	50	42	60	50	12	10	67	56	37	31
A+	54	45	0	0	54	45	0	0	0	0	57	48	46	38	11	9	40	33	40	33
B+	5	4	0	0	10	8	0	0	0	0	9	8	3	3	0	0	1	1	16	13
C+	1	1	0	0	2	2	0	0	0	0	1	1	0	0	0	0	0	0	3	3
Small N	0	0	120	100	0	0	120	100	120	100	0	0	0	0	96	80	0	0	0	0
TOTAL	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100

Table 6.D.75 DIF Classifications for Integrated Science 1 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	1	17	0	0	0	0	0	0	0	0	0	0	0	0	1	17
A-	5	83	3	50	1	17	5	83	4	67	4	67	4	67	5	83	5	83	4	67
A+	1	17	3	50	4	67	1	17	2	33	2	33	2	33	1	17	1	17	1	17
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100

Table 6.D.76 DIF Classifications for Integrated Science 2 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	0	0	0	0	1	17	0	0	0	0	1	17	0	0	2	33
A-	2	33	0	0	0	0	0	0	3	50	5	83	4	67	3	50	4	67	4	67
A+	4	67	0	0	0	0	0	0	2	33	1	17	2	33	2	33	2	33	0	0
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	6	100	6	100	6	100	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100

Table 6.D.77 DIF Classifications for Integrated Science 3 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A-	3	50	0	0	0	0	0	0	0	0	0	0	4	67	0	0	4	67	5	83
A+	3	50	0	0	0	0	0	0	0	0	0	0	2	33	0	0	2	33	1	17
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	6	100	6	100	6	100	6	100	6	100	0	0	6	100	0	0	0	0
TOTAL	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100

Table 6.D.78 DIF Classifications for Integrated Science 4 Field-test Items

DIF category	M-F		W-AmI		W-Asn		W-PacI		W-Fil		W-ComA		W-His		W-AfrA		E-ELnr		Total	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A-	1	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	50	1	17
A+	5	83	0	0	0	0	0	0	0	0	0	0	6	100	0	0	2	33	4	67
B+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	17	1	17
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N	0	0	6	100	6	100	6	100	6	100	6	100	0	0	6	100	0	0	0	0
TOTAL	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100	6	100

Chapter 7: Item Quality

This chapter summarizes the item-level statistics obtained for the California standards-testing program administered during spring of 2007. This includes items on ten grade-specific CSTs for ELA for grades 2 to 11; two CSTs for history–social science for grades 8 and 11; six grade-specific CSTs for mathematics for grades 2 to 7; eight end-of-course CSTs for math including three integrated tests; three grade-specific CSTs for science for grades 5, 8, and 10; and eight end-of-course CSTs for science including four integrated tests. Students in grades 9, 10, and 11 who were enrolled in a World History course took the EOC CST for World History. This CST was previously only taken by all students in grade 10.

The CSTs for integrated math and science consisted of questions that were also administered in content-specific CSTs. Each CST was composed of dichotomously scored multiple-choice (MC) items except for ELA, where a polytomously scored writing task was also presented as part of the grades 4 and 7 tests.

The CSTs also included six field-test items that were not included in the operational test scores. Different sets of items were presented in each form (version)[11] for the various CSTs. Larger numbers of items were field-tested for the CST science tests (20 versions) and the CST ELA tests (14 versions). The CSTs for history–social science and math were administered in seven forms with the exception of General Math, which was tested in one form. The Integrated Math and Integrated Science tests and the General Math test were also presented in a single form.

As described in Chapter 1, various CST analyses were conducted at different times in the testing process and involved different proportions of the full CST data. The item-level IRT information presented in this chapter is based on the sample of student data that was used in the final item analyses (FIA), which comprised about 50 percent of the full CST data. In addition, the IRT analyses for the end-of-course CSTs for math were limited to the students in targeted grades (i.e., grade 8 for Algebra I, grade 9 for Geometry, grade 10 for Algebra II, and grade 11 for Summative High School Math), as was done by the previous vendors, to provide consistent item level statistics across time. This was also true for the World History test for which the IRT analyses were limited to students in grade 10.

The classical item-analysis statistics reported in this chapter were calculated on the P1 data file. This file contained about 99 percent of the test results. For ease of comparison, the results of the classical item analyses for the CSTs for end-of-course math and history are presented for both sets of data (the grade-specific and the overall test-taking population).

Table 7.1 summarizes information about the test forms[12] and students included in the item analyses, including the numbers of test forms, operational items, field-test items, and the approximate number of students taking operational and field-test items in the P1 and FIA samples. The FIA samples for the end-of-course CSTs for mathematics and history were grade specific, thus included valid scores for examinees at grade 8 for Algebra I, grade 9 for Geometry, grade 10 for Algebra II, grade 11 for Summative High School Math and grade 10 for World History. The P1 samples for the math end-of-course tests included valid scores for all examinees who tested in those subjects.

[11] A version of a test is one that has the same operational form of the test with different pretest item sets. These are considered different *forms* of the same test.

[12] A form was counted as a field-test form if it contains one or more field-test items.

Table 7.1 Summary of Items and Forms Presented in 2007 CSTs

Subject	CST	Operational			Field Test			
		# Items	# Examinees FIA Sample	# Examinees Total (P1)	# Forms	# Items	# Examinees FIA Sample	# Examinees Total (P1)
English–Language Arts	**2**	65	205,538	452,972	14	82	11,747-15,551	31,516-35,602
	3	65	208,320	455,219	14	84	13,659-20,191	31,158-38,069
	4	76	199,315	457,829	14	80	10,583-20,535	23,096-47,324
	5	75	202,915	466,854	14	82	7,768-58,537	18,468-134,170
	6	75	207,684	474,863	14	81	12,516-16,764	31,238-34,841
	7	76	218,224	479,840	14	80	14,702-16,136	29,846-39,931
	8	75	218,443	479,717	14	74	5,078-50,215	12,951-128,430
	9	75	277,280	505,104	14	73	17,739-23,412	28,859-45,353
	10	75	271,124	478,921	14	83	9,840-76,526	16,498-141,114
	11	75	255,407	437,551	14	72	13,472-35,026	21,356-62,734
History–Social Science	**Grade 8**	75	217,990	478,975	7	42	14,709-129,146	26,950-306,014
	World History	60	148,113	491,079	7	42	20,995-21,274	68,198-68,888
	Grade 11	60	251,467	427,071	7	42	13,267-171,316	20,973-292,333
Mathematics	**2**	65	205,847	453,919	7	42	14,747-115,754	31,596-261,609
	3	65	208,669	456,269	7	42	13,667-122,016	31,212-263,543
	4	65	200,074	459,557	7	42	11,984-127,001	25,862-287,142
	5	65	203,675	468,049	7	42	11,158-135,735	21,803-320,365
	6	65	208,112	475,529	7	42	16,296-109,135	33,501-258,755
	7	65	208,629	458,543	7	42	14,842-118,938	28,503-275,165
	General Math	65	150,925	303,461	1	6	150,925	303,461
	Algebra I	65	109,978	738,231	7	42	15,629-15,942	104,143-108,539
	Geometry	65	65,919	369,311	7	42	9,305-9,559	52,522-52,714
	Algebra II	65	58,910	230,757	7	42	8,348-8,496	32,811-32,985
	High School Math	65	54,743	108,750	7	42	7,771-7,877	15,435-15,645
	Integrated Math 1	65	4,041	6,901	1	6	4,041	6,901
	Integrated Math 2	65	1,897	3,615	1	6	1,897	3,615
	Integrated Math 3	65	816	1,657	1	6	816	1,657
Science	**Science Grade 5**	60	203,500	467,541	20	120	7,787-21,811	18,482-67,924
	Science Grade 8	60	218,032	477,974	20	120	5,052-38,184	12,889-84,555
	Life Science	60	265,324	463,572	20	120	9,636-31,758	15,992-51,990
	Biology	60	294,783	505,229	20	120	13,317-15,612	22,508-26,658
	Chemistry	60	129,919	227,375	20	120	6,120-6,702	10,608-11,756
	Earth Science	60	129,368	206,118	20	120	5,640-7,521	8,783-12,071
	Physics	60	35,490	63,322	20	120	1,481-2,092	2,660-3,683
	Integrated Science 1	60	48,468	96,209	1	6	48,468	96,209
	Integrated Science 2	60	3,685	13,785	1	6	3,685	13,785
	Integrated Science 3	60	1,027	1,973	1	6	1,027	1,973
	Integrated Science 4	60	850	951	1	6	850	951

For tests that were administered in a single form, the counts for the operational and field-test sections are the same. The field-test items were used as placeholders to make the tests of uniform

length. The statistics used for the assembly of these CSTs were based on the content-specific results. The number of items field-tested varied from content area to content area depending on the need for new items in the item pools used for test assembly.

The statistics presented in this chapter are divided into two sections as follows:

1. Summaries of classical item-level analyses, including item proportion correct (p-value), point-biserial correlations (Pt-Rbis) for each operational item, and summaries of overall p-value and point-biserial correlation statistics across operational items. These statistics are presented in Appendix 7.A.
2. Summaries of Rasch model item difficulty statistics (b-values) for operational and field-test items, and summaries of item classifications based on the fit of the Rasch model to the data, reported in letter categories of A, B, C, D, and F (IRT flag) for operational and field-test items. These statistics are presented in Appendix 7.B.

Differential Item Functioning (DIF) analyses were also performed on all operational items and all field-test items for which sufficient student samples were available. Those results were presented earlier, in Appendix 6.D of Chapter 6.

Item Analyses

This section describes the overall and item-by-item proportion correct indices as well as the point-biserial correlation indices for the operational items. The point-biserial correlation is a special case of the Pearson product-moment correlation used to measure the relationship between two variables, one dichotomous 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:

$$R_{it} = \frac{Cov(i,t)}{\sigma_{xi}\sigma_t} \tag{7.1}$$

where,

Cov(i,t) is the Covariance between an item *i* and total score *t*

σ_{xi} is the standard deviation for an item *i*

σ_t is the standard deviation for *t*

Table 7.2 presents summary indices for each operational test. Both the mean and median are provided. Detailed tables are provided in Appendix 7.A.

The data in Table 7.2 indicate that most of the CSTs were medium-difficulty tests (with average p-values around 0.5 to 0.6)[13]. The CSTs that were most difficult for these students (p-value <= 0.50) were Algebra I, General Math, and the Integrated Math and Science CSTs. The CSTs that were least difficult for California students were mathematics administered at grades 2, 3, and 4, as well as Summative High School Math (p-value = 0.69).

The average item-total correlations indicated levels of item discrimination that were similar to expectations. This index was greater than or equal to 0.40 for 22 out of 38 CSTs and was between 0.35 and 0.39 for 11 CSTs. Most of the grade-specific CSTs for math and ELA exhibited higher item-total correlations—0.42 to 0.47 for the CSTs for mathematics, and 0.41 to 0.46 for the CSTs for

[13] The average p-value can differ from one test to another for many reasons. This include the perspective of the Test Development committee, the available items in the assembly pool, the use of items assembled for one population being used with another (e.g., Integrated Science tests), historically different assembly targets for different tests, changes in the population taking the test from the population used to develop the target, and discrepancies between the target and the assembled test.

ELA. The point-biserial correlations were slightly lower for a majority of CSTs for history–social science, end-of-course math, and all science, with values ranging from 0.34 to 0.42. The point-biserial correlations for items appearing in most of the CSTs for integrated math and integrated science were much lower compared to the point-biserials obtained for these items when administered in the content-specific tests. This is likely due to the lower scores and lower variability in the student samples taking the integrated CSTs compared with those taking the content-specific CSTs. The biserial correlations for majority of the CSTs in all subject areas (32 out of 38 tests) either stayed the same as 2006 or differed negligibly by .01 to .02 points in 2007.

The item-by-item values for the indices are presented in Table 7.A.1 through Table 7.A.1 which start on page 402.

Table 7.2 Average and Median Proportion Correct and Point-Biserial

Subject	CST	Number of items	Number of Examinees	Mean		Median	
				p-value	Pt-Rbis	p-value	Pt-Rbis
English–Language Arts	**2**	65	452,972	0.64	0.46	0.66	0.47
	3	65	455,219	0.63	0.42	0.60	0.43
	4	75	457,829	0.62	0.44	0.60	0.45
	5	75	466,854	0.60	0.42	0.59	0.43
	6	75	474,863	0.58	0.42	0.57	0.42
	7	75	479,840	0.59	0.42	0.58	0.43
	8	75	479,717	0.61	0.41	0.61	0.41
	9	75	505,104	0.59	0.43	0.59	0.44
	10	75	478,921	0.60	0.45	0.58	0.45
	11	75	437,551	0.58	0.46	0.58	0.48
History–Social Science	**8**	75	478,975	0.51	0.40	0.50	0.41
	World History	60	491,079	0.49	0.39	0.49	0.40
	11	60	427,071	0.50	0.40	0.51	0.42
Mathematics	**2**	65	453,919	0.74	0.44	0.78	0.44
	3	65	456,269	0.73	0.46	0.75	0.47
	4	65	459,557	0.72	0.47	0.75	0.48
	5	65	468,049	0.63	0.45	0.64	0.46
	6	65	475,529	0.59	0.43	0.60	0.44
	7	65	458,543	0.56	0.42	0.56	0.44
	General Math	65	303,461	0.48	0.34	0.48	0.36
	Algebra I	65	738,231	0.45	0.36	0.47	0.38
	Geometry	65	369,311	0.51	0.42	0.51	0.44
	Algebra II	65	230,757	0.51	0.38	0.50	0.39
	High School Math	65	108,750	0.69	0.43	0.69	0.44
	Integrated Math 1	65	6,901	0.40	0.30	0.40	0.31
	Integrated Math 2	65	3,615	0.42	0.36	0.41	0.35
	Integrated Math 3	65	1,657	0.43	0.35	0.42	0.34
Science	**Grade 5 Science**	60	467,541	0.60	0.38	0.62	0.40
	Grade 8 Science	60	477,974	0.55	0.38	0.56	0.40
	Grade 10 Life Science	60	463,572	0.54	0.42	0.54	0.45
	Biology	60	505,229	0.54	0.41	0.54	0.41
	Chemistry	60	227,375	0.57	0.40	0.57	0.39
	Earth Science	60	206,118	0.52	0.38	0.51	0.39

Subject	CST	Number of items	Number of Examinees	Mean		Median	
				p-value	Pt-Rbis	p-value	Pt-Rbis
	Physics	60	63,321	0.56	0.40	0.57	0.40
	Integrated Science 1	60	96,209	0.44	0.32	0.44	0.34
	Integrated Science 2	60	13,785	0.43	0.30	0.43	0.31
	Integrated Science 3	60	1,973	0.39	0.29	0.38	0.32
	Integrated Science 4	60	951	0.40	0.30	0.39	0.31
Grade-Specific	**Algebra I – 8**	65	238,426	0.53	0.39	0.55	0.39
	Geometry – 9	65	115,839	0.62	0.43	0.63	0.44
	Algebra II – 10	65	102,505	0.56	0.37	0.55	0.38
	High School Math – 11	65	92,108	0.68	0.42	0.67	0.44
	World History – 10	60	436,552	0.50	0.39	0.50	0.39

IRT Analyses

The results of the IRT analyses are presented in Appendix 7.B, which starts on page 416. Table 7.B.1 through Table 7.B.44 present summary univariate statistics (mean, standard deviation, minimum, and maximum) and distributions for the IRT b-values after scaling. These statistics are listed for the operational test, by cluster scores, and for the field-test items. Table 7.B.45 through Table 7.B.54 present the results of the IRT fit analyses for the CSTs. The tables are presented for all grade-specific and end-of-course CSTs. No IRT statistics are presented for the CSTs for Integrated Science because these tests are comprised entirely of items that are administered in the content-specific CSTs[14].

Summaries of IRT b-values

The summary of IRT b-values for the operational and field test items are presented in Table 7.B.1 through Table 7.B.34 in Appendix 7.B.

Table 7.B.35 to Table 7.B.44 depict a more detailed presentation of IRT b-values for the operational and field-test items. The tables show the distribution of items at 16 IRT b-value intervals, where the b-values ranged from “less than -3.5” to “greater than or equal to 3.5” points within each interval. These distributions indicated that most of the items had difficulty levels in the range of -2.0 and 2.0 for majority of CSTs except for a few CSTs for mathematics.

IRT Model-Data Fit Analyses

Because the Rasch model is used in equating and scaling the CSTs, an important part of IRT item analyses is the assessment of model-data fit. ETS statisticians classified operational and field-test items for the CSTs into discrete categories based on an evaluation of how well each item was fit by the Rasch model. The flagging procedure has categories of A, B, C, D, and F that are assigned based on an evaluation of graphical model-data fit information. Descriptors for each category are provided below. As an illustration, the IRT item characteristic curves and empirical data (item-ability regressions) for five items recently field-tested in 2005 are shown in Figure 7.1. These five items represent the various rating categories. The item number in the calibration and ETS identification number for each item (“accession number”) are listed next to each item as well as the corresponding rating categories.

Flag A (Item 236, CSV23487)

- Good fit of theoretical curve to empirical data along the entire ability range, may have some small divergence at the extremes

[14] For further details, refer to “Scaling the CSTs for Integrated Science” on page 11 of Chapter 3

- Small Chi-square value relative to the other items in the calibration with similar sample sizes

Flag B (Item 061, CSV22589)

- Theoretical curve within error range across most of ability range, may have some small divergence at the extremes
- Acceptable Chi-square value relative to the other items in the calibration with similar sample sizes

Flag C (Item 165, CSV20282)

- Theoretical curve within error range at some regions and slightly outside of error range at remaining regions of ability range
- Moderate Chi-square value relative to the other items in the calibration with similar sample sizes
- This category often applies to items that appear to be functioning well, but that are not well fit by the Rasch model

Flag D (Item 113, CSV20317)

- Theoretical curve outside of error range at some regions across ability range
- Large Chi-square value relative to the other items in the calibration with similar sample sizes

Flag F (Item 184, CSV20311)

- Theoretical curve outside of error range at most regions across ability range
- Probability of answering item correctly may be higher at lower ability than higher ability (U-shaped empirical curve)
- Very large Chi-square value relative to the other items with similar sample sizes and classical item statistics tend also to be very poor.

In general, items with flagging categories of A, B, or C are all considered acceptable. Ratings of D are considered questionable—test developers are asked to avoid these items if possible and to carefully review them if they must be used. Test developers are instructed to avoid using items rated F for operational test assembly without a review by a psychometrician.

Consistent with previous years, the overall difficulty level of the field-test items was higher than the operational items for all CSTs. The average difficulty level for the operational items ranged from -0.87 for grade 2 math to 0.25 for grade 7 ELA. The index of average difficulty for the field-test items ranged from -0.67 for Grade 2 math to 1.05 for General Math.

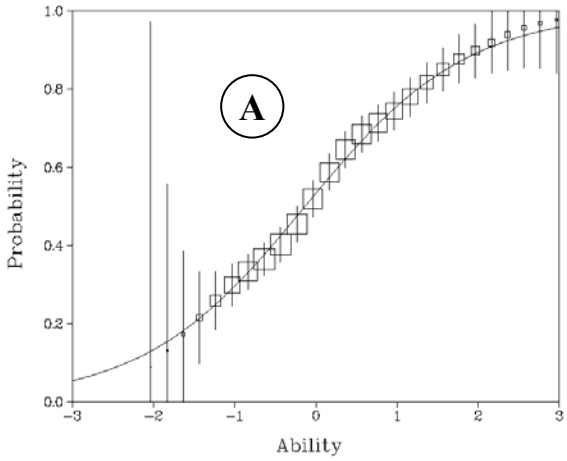
The results of the IRT model data fit classifications are presented in Table 7.B.45 through Table 7.B.49 for operational items and in Table 7.B.50 through Table 7.B.54 for the field-test items. In general, very few operational items were rated as F items for any of the 38 CSTs. For English–language arts, 14 out of 730 operational items were flagged as F items; ten of those items belonged to grades 8 through 11. For history–social science, only 1 out of 195 items and for mathematics, 1 out of 715 items were flagged as F items. An exception was observed for the CST for Integrated Math 3, where four items were flagged as F items. It should be noted that the test is administered to a fairly small group of students, giving the item statistics higher standard errors. In case of science, 8 out of 420 items were flagged as F items.

Summary of Item-Level Analyses

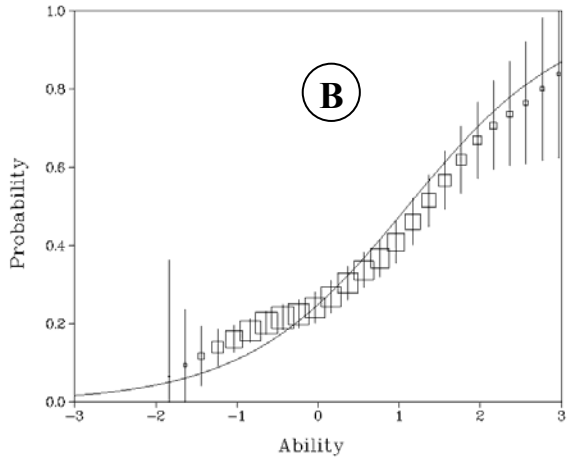
The item-level analyses of the 2007 CSTs presented in this chapter included classical item analyses and IRT analyses. Overall, these analyses indicate that the CSTs administered in 2007 meet the technical criteria established in professional standards for high-stakes tests, and that the items

field-tested as part of the 2007 administration have statistical characteristics that are appropriate for use in future administrations.

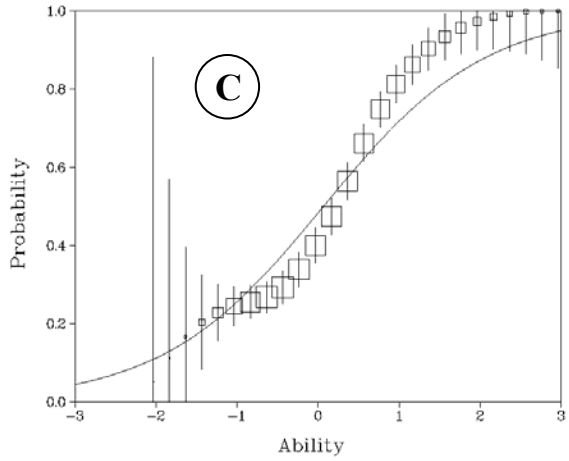
Figure 7.1 Items from the 2005 History–Social Science Grade 10 Field-test Calibration



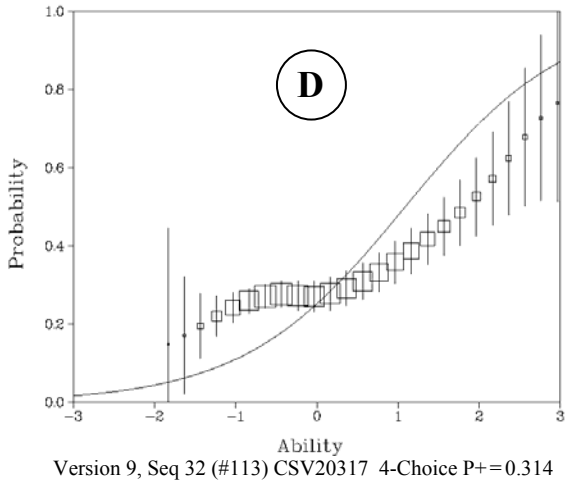
Version 30, Seq 29 (#236) CSV23487 4-Choice P+ = 0.563
a = 0.588 F, b = -0.135, c = 0.000 F, CHI = 5.41, N = 5,912



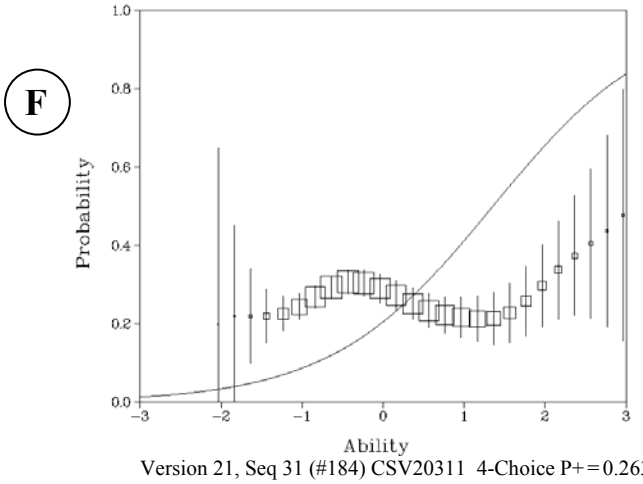
Version 1, Seq 28 (#61) CSV22589 4 Choice P+ = 0.307
a = 0.588 F, b = 1.104, c = 0.000 F, CHI = 66.70, N = 6,348



Version 18, Seq 30 (#165) CSV20282 4-Choice P+ = 0.523
a = 0.588 F, b = 0.066, c = 0.000 F, CHI = 208.99, N = 6,183



Version 9, Seq 32 (#113) CSV20317 4-Choice P+ = 0.314
a = 0.588 F, b = 1.089, c = 0.000 F, CHI = 361.31, N = 6,047



Version 21, Seq 31 (#184) CSV20311 4-Choice P+ = 0.263
a = 0.588 F, b = 1.356, c = 0.000 F, CHI = 1027.57, N = 6,277

References

Holland, P.W. and Thayer, D.T. An alternative definition of the ETS delta scale of item difficulty. RR-85–43, 1985.

Hambleton, R.K. and Swaminathan, H. Item Response Theory: Principles and Applications. Boston, MA: Kluwer-Nijhoff, 1985.

Appendix 7.A—Item-by-Item p-value and Point-Biserial Tables

Table 7.A.1 Item-by-item p-value and Point-Biserial for English–Language Arts

Item-by-item p-value and Point-Biserial for English–Language Arts																				
CSTs	**2**		**3**		**4**		**5**		**6**		**7**		**8**		**9**		**10**		**11**	
Items	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**
1	0.78	0.48	0.59	0.45	0.82	0.49	0.73	0.43	0.77	0.41	0.58	0.34	0.83	0.35	0.51	0.48	0.71	0.35	0.53	0.28
2	0.61	0.46	0.92	0.45	0.74	0.42	0.59	0.43	0.72	0.38	0.57	0.34	0.64	0.39	0.51	0.31	0.42	0.43	0.63	0.46
3	0.85	0.50	0.87	0.46	0.91	0.33	0.86	0.37	0.68	0.40	0.47	0.41	0.58	0.32	0.73	0.51	0.38	0.27	0.67	0.36
4	0.82	0.41	0.84	0.51	0.67	0.50	0.66	0.57	0.51	0.42	0.47	0.36	0.63	0.28	0.59	0.40	0.49	0.31	0.71	0.50
5	0.71	0.55	0.84	0.44	0.68	0.45	0.59	0.43	0.57	0.40	0.76	0.46	0.77	0.47	0.75	0.54	0.82	0.41	0.49	0.32
6	0.70	0.29	0.58	0.46	0.67	0.30	0.93	0.28	0.33	0.29	0.71	0.48	0.55	0.42	0.62	0.41	0.74	0.36	0.51	0.37
7	0.55	0.43	0.76	0.50	0.60	0.56	0.54	0.32	0.80	0.45	0.56	0.45	0.60	0.39	0.69	0.40	0.60	0.41	0.69	0.46
8	0.86	0.33	0.83	0.33	0.66	0.55	0.71	0.39	0.47	0.41	0.62	0.37	0.36	0.38	0.68	0.50	0.51	0.47	0.82	0.51
9	0.68	0.48	0.79	0.49	0.58	0.46	0.77	0.54	0.66	0.45	0.75	0.32	0.56	0.40	0.73	0.55	0.61	0.49	0.77	0.46
10	0.74	0.39	0.76	0.36	0.50	0.35	0.71	0.54	0.49	0.33	0.64	0.48	0.60	0.29	0.89	0.47	0.55	0.26	0.53	0.39
11	0.84	0.52	0.78	0.38	0.55	0.51	0.37	0.30	0.75	0.53	0.72	0.41	0.76	0.39	0.55	0.46	0.77	0.53	0.71	0.46
12	0.62	0.53	0.55	0.47	0.62	0.47	0.81	0.44	0.52	0.56	0.36	0.33	0.63	0.48	0.66	0.43	0.67	0.32	0.24	0.20
13	0.53	0.57	0.61	0.29	0.82	0.41	0.83	0.40	0.38	0.32	0.75	0.51	0.59	0.46	0.58	0.38	0.59	0.36	0.58	0.37
14	0.75	0.53	0.31	0.34	0.60	0.39	0.55	0.46	0.72	0.17	0.41	0.30	0.76	0.38	0.73	0.35	0.56	0.45	0.61	0.55
15	0.70	0.51	0.71	0.51	0.81	0.47	0.53	0.50	0.65	0.38	0.45	0.26	0.45	0.33	0.65	0.50	0.48	0.32	0.52	0.41
16	0.49	0.44	0.88	0.45	0.35	0.30	0.46	0.32	0.60	0.37	0.45	0.39	0.55	0.43	0.64	0.47	0.69	0.58	0.54	0.49
17	0.67	0.48	0.59	0.49	0.76	0.41	0.69	0.48	0.44	0.40	0.54	0.36	0.42	0.27	0.49	0.30	0.50	0.43	0.49	0.34
18	0.81	0.47	0.58	0.43	0.58	0.47	0.72	0.57	0.35	0.33	0.75	0.43	0.48	0.36	0.56	0.46	0.50	0.37	0.55	0.36
19	0.66	0.52	0.66	0.57	0.56	0.36	0.78	0.46	0.72	0.40	0.62	0.51	0.78	0.34	0.80	0.46	0.56	0.38	0.66	0.52
20	0.60	0.50	0.53	0.35	0.45	0.44	0.56	0.47	0.52	0.48	0.68	0.47	0.78	0.47	0.70	0.45	0.69	0.56	0.59	0.46
21	0.42	0.24	0.62	0.30	0.52	0.43	0.77	0.44	0.66	0.49	0.47	0.36	0.81	0.49	0.60	0.46	0.59	0.46	0.50	0.46
22	0.73	0.53	0.32	0.42	0.74	0.55	0.32	0.33	0.47	0.47	0.73	0.52	0.76	0.37	0.52	0.39	0.60	0.46	0.50	0.50
23	0.47	0.39	0.63	0.48	0.74	0.41	0.58	0.42	0.50	0.45	0.41	0.22	0.59	0.37	0.70	0.49	0.52	0.47	0.59	0.48
24	0.49	0.45	0.77	0.45	0.47	0.27	0.52	0.37	0.60	0.40	0.65	0.49	0.71	0.42	0.63	0.49	0.56	0.49	0.69	0.50
25	0.54	0.46	0.50	0.39	0.51	0.36	0.53	0.37	0.59	0.56	0.69	0.47	0.63	0.51	0.59	0.40	0.58	0.47	0.57	0.53
26	0.48	0.44	0.61	0.37	0.47	0.48	0.63	0.42	0.74	0.53	0.72	0.49	0.48	0.36	0.69	0.50	0.60	0.47	0.52	0.41
27	0.67	0.51	0.85	0.43	0.69	0.56	0.80	0.42	0.56	0.26	0.70	0.47	0.65	0.41	0.72	0.42	0.64	0.48	0.52	0.46
28	0.64	0.42	0.47	0.40	0.57	0.40	0.47	0.39	0.48	0.29	0.55	0.41	0.43	0.34	0.54	0.40	0.56	0.51	0.52	0.43
29	0.72	0.54	0.60	0.53	0.78	0.53	0.61	0.55	0.57	0.35	0.65	0.52	0.57	0.43	0.62	0.54	0.52	0.43	0.38	0.29
30	0.49	0.46	0.53	0.46	0.69	0.53	0.35	0.29	0.61	0.49	0.58	0.49	0.62	0.39	0.54	0.47	0.58	0.51	0.62	0.44
31	0.67	0.41	0.81	0.55	0.57	0.57	0.64	0.53	0.37	0.36	0.75	0.44	0.49	0.37	0.54	0.32	0.68	0.54	0.52	0.34
32	0.63	0.50	0.48	0.31	0.73	0.53	0.52	0.41	0.61	0.35	0.49	0.35	0.68	0.51	0.67	0.46	0.54	0.40	0.63	0.55
33	0.49	0.37	0.46	0.33	0.71	0.55	0.34	0.26	0.42	0.47	0.37	0.25	0.54	0.48	0.43	0.48	0.44	0.48	0.53	0.60
34	0.90	0.45	0.40	0.38	0.53	0.37	0.53	0.46	0.53	0.43	0.66	0.57	0.43	0.46	0.65	0.52	0.55	0.53	0.46	0.57
35	0.77	0.47	0.58	0.48	0.83	0.50	0.57	0.45	0.47	0.31	0.77	0.47	0.53	0.39	0.57	0.44	0.49	0.42	0.51	0.56
36	0.60	0.50	0.54	0.48	0.81	0.52	0.29	0.17	0.59	0.50	0.75	0.49	0.67	0.48	0.66	0.53	0.52	0.43	0.42	0.27
37	0.65	0.45	0.55	0.51	0.87	0.42	0.44	0.32	0.49	0.37	0.58	0.44	0.70	0.45	0.74	0.50	0.72	0.53	0.47	0.55

Item-by-item p-value and Point-Biserial for English–Language Arts

CSTs	2		3		4		5		6		7		8		9		10		11	
Items	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**
38	0.53	0.54	0.83	0.52	0.83	0.51	0.64	0.35	0.51	0.31	0.72	0.53	0.75	0.50	0.41	0.25	0.52	0.40	0.32	0.40
39	0.75	0.47	0.47	0.36	0.57	0.52	0.48	0.29	0.46	0.38	0.40	0.38	0.55	0.45	0.62	0.49	0.58	0.48	0.32	0.26
40	0.69	0.47	0.43	0.37	0.71	0.48	0.73	0.41	0.55	0.48	0.77	0.49	0.73	0.47	0.51	0.23	0.43	0.29	0.38	0.25
41	0.66	0.57	0.60	0.44	0.38	0.34	0.40	0.40	0.72	0.41	0.37	0.27	0.71	0.48	0.41	0.33	0.80	0.49	0.69	0.53
42	0.67	0.51	0.46	0.33	0.49	0.37	0.80	0.35	0.67	0.45	0.51	0.37	0.69	0.53	0.46	0.38	0.55	0.35	0.52	0.47
43	0.24	0.22	0.60	0.54	0.75	0.46	0.28	0.28	0.67	0.48	0.62	0.43	0.76	0.43	0.62	0.38	0.57	0.50	0.52	0.49
44	0.77	0.52	0.36	0.31	0.50	0.44	0.51	0.45	0.40	0.37	0.89	0.40	0.82	0.35	0.52	0.41	0.65	0.49	0.70	0.51
45	0.76	0.52	0.68	0.46	0.44	0.32	0.66	0.45	0.43	0.43	0.80	0.33	0.59	0.32	0.55	0.44	0.71	0.39	0.61	0.45
46	0.55	0.47	0.60	0.50	0.54	0.36	0.81	0.45	0.61	0.54	0.48	0.38	0.64	0.43	0.41	0.28	0.55	0.44	0.68	0.52
47	0.67	0.40	0.73	0.47	0.63	0.50	0.52	0.43	0.62	0.44	0.54	0.31	0.70	0.50	0.41	0.20	0.75	0.41	0.57	0.46
48	0.35	0.18	0.72	0.49	0.85	0.50	0.45	0.20	0.50	0.45	0.70	0.55	0.51	0.43	0.52	0.43	0.71	0.53	0.67	0.50
49	0.42	0.28	0.57	0.51	0.56	0.35	0.65	0.49	0.80	0.42	0.53	0.50	0.64	0.31	0.43	0.42	0.46	0.40	0.57	0.36
50	0.59	0.39	0.49	0.37	0.49	0.42	0.55	0.26	0.69	0.34	0.35	0.32	0.78	0.37	0.49	0.42	0.74	0.54	0.65	0.52
51	0.60	0.54	0.69	0.40	0.51	0.34	0.69	0.51	0.65	0.45	0.58	0.41	0.41	0.20	0.65	0.56	0.72	0.59	0.62	0.43
52	0.63	0.49	0.86	0.28	0.43	0.37	0.57	0.49	0.47	0.40	0.61	0.50	0.50	0.39	0.64	0.54	0.62	0.53	0.80	0.54
53	0.69	0.52	0.44	0.33	0.77	0.45	0.56	0.48	0.57	0.51	0.26	0.24	0.58	0.39	0.40	0.45	0.71	0.42	0.65	0.48
54	0.62	0.55	0.57	0.32	0.72	0.50	0.59	0.38	0.43	0.40	0.30	0.28	0.61	0.44	0.36	0.33	0.76	0.37	0.58	0.46
55	0.75	0.55	0.56	0.41	0.68	0.53	0.54	0.35	0.73	0.32	0.58	0.40	0.73	0.51	0.54	0.44	0.56	0.42	0.69	0.51
56	0.58	0.45	0.67	0.41	0.44	0.40	0.40	0.39	0.73	0.43	0.74	0.47	0.73	0.52	0.70	0.54	0.63	0.53	0.49	0.46
57	0.78	0.45	0.56	0.46	0.32	0.29	0.38	0.34	0.45	0.40	0.65	0.48	0.64	0.41	0.65	0.53	0.64	0.53	0.72	0.56
58	0.70	0.57	0.48	0.33	0.49	0.43	0.26	0.39	0.37	0.35	0.54	0.47	0.50	0.50	0.65	0.44	0.40	0.49	0.71	0.59
59	0.64	0.51	0.54	0.41	0.60	0.43	0.46	0.53	0.71	0.50	0.62	0.50	0.69	0.47	0.80	0.52	0.60	0.53	0.46	0.49
60	0.49	0.39	0.71	0.29	0.52	0.46	0.77	0.46	0.45	0.39	0.56	0.48	0.64	0.57	0.54	0.42	0.77	0.40	0.66	0.52
61	0.79	0.57	0.63	0.41	0.71	0.48	0.68	0.54	0.51	0.54	0.62	0.51	0.49	0.30	0.55	0.53	0.75	0.55	0.67	0.51
62	0.66	0.44	0.58	0.29	0.58	0.43	0.63	0.50	0.74	0.49	0.57	0.46	0.52	0.42	0.52	0.36	0.50	0.38	0.51	0.57
63	0.56	0.47	0.77	0.36	0.49	0.51	0.47	0.36	0.37	0.43	0.56	0.49	0.50	0.50	0.61	0.46	0.50	0.32	0.68	0.51
64	0.51	0.54	0.83	0.49	0.57	0.47	0.77	0.45	0.45	0.33	0.65	0.50	0.50	0.40	0.65	0.37	0.57	0.52	0.51	0.37
65	0.61	0.48	0.68	0.41	0.51	0.36	0.77	0.58	0.73	0.42	0.82	0.41	0.45	0.32	0.48	0.43	0.57	0.55	0.58	0.52
66					0.66	0.51	0.81	0.49	0.85	0.49	0.69	0.52	0.48	0.50	0.49	0.37	0.35	0.36	0.45	0.51
67					0.74	0.37	0.58	0.57	0.46	0.40	0.69	0.47	0.49	0.40	0.56	0.35	0.67	0.57	0.64	0.57
68					0.79	0.50	0.56	0.56	0.73	0.48	0.38	0.33	0.45	0.36	0.58	0.44	0.80	0.59	0.73	0.57
69					0.57	0.55	0.76	0.44	0.50	0.44	0.44	0.40	0.57	0.37	0.59	0.40	0.49	0.35	0.53	0.40
70					0.82	0.57	0.87	0.45	0.76	0.48	0.52	0.38	0.59	0.37	0.68	0.52	0.64	0.34	0.72	0.54
71					0.51	0.34	0.73	0.48	0.59	0.56	0.56	0.48	0.63	0.41	0.67	0.45	0.49	0.52	0.62	0.51
72					0.64	0.54	0.48	0.33	0.54	0.38	0.55	0.35	0.74	0.50	0.34	0.31	0.73	0.53	0.78	0.53
73					0.44	0.28	0.80	0.44	0.57	0.47	0.59	0.42	0.65	0.46	0.54	0.45	0.53	0.38	0.55	0.34
74					0.56	0.49	0.60	0.49	0.64	0.53	0.52	0.32	0.67	0.53	0.65	0.51	0.50	0.38	0.57	0.36
75					0.35	0.21	0.61	0.44	0.66	0.58	0.63	0.43	0.46	0.21	0.44	0.25	0.72	0.39	0.74	0.56

Table 7.A.2 Item-by-item p-value and Point-Biserial for History–Social Science

Item-by-item p-value and Point-Biserial for History–Social Science						
Tests	**8**		**10**		**11**	
Items	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**
1	0.44	0.43	0.55	0.40	0.71	0.31
2	0.78	0.31	0.58	0.37	0.52	0.19
3	0.50	0.27	0.47	0.40	0.38	0.36
4	0.55	0.43	0.55	0.30	0.36	0.38
5	0.70	0.42	0.44	0.25	0.48	0.45
6	0.48	0.43	0.41	0.39	0.69	0.50
7	0.55	0.47	0.48	0.38	0.40	0.30
8	0.44	0.28	0.42	0.33	0.55	0.50
9	0.42	0.37	0.52	0.46	0.50	0.37
10	0.46	0.26	0.45	0.29	0.72	0.34
11	0.44	0.39	0.57	0.47	0.41	0.40
12	0.56	0.45	0.58	0.24	0.67	0.42
13	0.43	0.34	0.58	0.48	0.45	0.44
14	0.53	0.38	0.55	0.35	0.60	0.43
15	0.41	0.31	0.49	0.43	0.42	0.30
16	0.53	0.40	0.48	0.33	0.52	0.47
17	0.56	0.42	0.45	0.43	0.52	0.48
18	0.43	0.35	0.63	0.32	0.43	0.41
19	0.58	0.32	0.46	0.39	0.53	0.38
20	0.38	0.28	0.56	0.42	0.41	0.25
21	0.57	0.42	0.51	0.27	0.40	0.29
22	0.56	0.53	0.49	0.41	0.44	0.35
23	0.43	0.47	0.59	0.41	0.58	0.36
24	0.64	0.47	0.46	0.39	0.43	0.47
25	0.47	0.33	0.44	0.39	0.58	0.47
26	0.53	0.49	0.28	0.35	0.68	0.53
27	0.54	0.41	0.40	0.40	0.56	0.45
28	0.53	0.48	0.51	0.42	0.52	0.54
29	0.38	0.31	0.61	0.47	0.54	0.38
30	0.48	0.46	0.54	0.36	0.49	0.32
31	0.61	0.44	0.49	0.24	0.35	0.25
32	0.46	0.41	0.54	0.48	0.50	0.39
33	0.50	0.42	0.40	0.37	0.53	0.27
34	0.41	0.45	0.61	0.49	0.38	0.35
35	0.40	0.36	0.55	0.39	0.45	0.49
36	0.64	0.42	0.45	0.39	0.40	0.29
37	0.50	0.42	0.59	0.48	0.57	0.49

Item-by-item p-value and Point-Biserial for History–Social Science						
Tests	**8**		**10**		**11**	
Items	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**
38	0.41	0.33	0.48	0.36	0.41	0.42
39	0.51	0.42	0.50	0.40	0.72	0.55
40	0.49	0.35	0.47	0.41	0.60	0.43
41	0.40	0.41	0.44	0.41	0.34	0.49
42	0.49	0.35	0.42	0.43	0.51	0.43
43	0.47	0.47	0.44	0.36	0.53	0.43
44	0.66	0.42	0.65	0.41	0.60	0.42
45	0.72	0.41	0.44	0.35	0.31	0.39
46	0.37	0.37	0.49	0.45	0.53	0.44
47	0.58	0.51	0.52	0.49	0.51	0.48
48	0.55	0.46	0.50	0.49	0.56	0.46
49	0.38	0.28	0.62	0.44	0.52	0.44
50	0.44	0.41	0.52	0.42	0.50	0.41
51	0.48	0.35	0.35	0.42	0.46	0.26
52	0.48	0.33	0.57	0.51	0.42	0.31
53	0.62	0.45	0.43	0.34	0.46	0.36
54	0.54	0.40	0.38	0.30	0.47	0.31
55	0.54	0.53	0.45	0.40	0.60	0.51
56	0.46	0.35	0.59	0.53	0.63	0.52
57	0.57	0.41	0.51	0.42	0.44	0.44
58	0.50	0.39	0.37	0.35	0.42	0.33
59	0.59	0.36	0.49	0.42	0.50	0.48
60	0.44	0.43	0.32	0.35	0.61	0.42
61	0.55	0.36				
62	0.38	0.22				
63	0.57	0.53				
64	0.54	0.34				
65	0.52	0.41				
66	0.53	0.42				
67	0.63	0.54				
68	0.51	0.42				
69	0.49	0.47				
70	0.44	0.31				
71	0.60	0.55				
72	0.47	0.32				
73	0.49	0.38				
74	0.38	0.40				
75	0.55	0.43				

Table 7.A.3 Item-by-item p-value and Point-Biserial for Mathematics

Item-by-item p-value and Point-Biserial for Mathematics														
Tests	**2**		**3**		**4**		**5**		**6**		**7**		**Gen Math**	
Items	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**
1	0.81	0.44	0.91	0.39	0.89	0.40	0.93	0.20	0.83	0.33	0.62	0.44	0.72	0.45
2	0.80	0.50	0.86	0.49	0.88	0.38	0.78	0.35	0.60	0.37	0.54	0.51	0.38	0.34
3	0.56	0.40	0.76	0.51	0.66	0.35	0.50	0.54	0.54	0.42	0.36	0.40	0.50	0.39
4	0.79	0.54	0.85	0.43	0.90	0.35	0.78	0.47	0.50	0.39	0.28	0.41	0.55	0.25
5	0.64	0.36	0.58	0.52	0.87	0.46	0.63	0.53	0.59	0.46	0.56	0.33	0.48	0.17
6	0.71	0.40	0.60	0.47	0.84	0.40	0.69	0.43	0.81	0.35	0.62	0.50	0.72	0.43
7	0.81	0.32	0.77	0.45	0.79	0.41	0.56	0.53	0.66	0.47	0.75	0.52	0.25	0.23
8	0.79	0.44	0.76	0.51	0.88	0.39	0.81	0.45	0.74	0.41	0.78	0.36	0.77	0.31
9	0.56	0.51	0.76	0.52	0.78	0.56	0.69	0.32	0.63	0.49	0.59	0.48	0.36	0.35
10	0.51	0.49	0.82	0.47	0.64	0.52	0.68	0.43	0.59	0.45	0.57	0.45	0.41	0.32
11	0.77	0.41	0.60	0.47	0.78	0.52	0.69	0.47	0.49	0.40	0.65	0.48	0.57	0.46
12	0.79	0.52	0.89	0.45	0.66	0.49	0.37	0.35	0.64	0.47	0.60	0.51	0.37	0.42
13	0.90	0.36	0.88	0.50	0.71	0.58	0.89	0.39	0.32	0.43	0.51	0.30	0.44	0.44
14	0.78	0.56	0.84	0.47	0.55	0.48	0.73	0.42	0.71	0.33	0.50	0.30	0.26	0.14
15	0.84	0.46	0.71	0.42	0.71	0.49	0.49	0.58	0.40	0.47	0.62	0.29	0.25	0.40
16	0.83	0.45	0.53	0.49	0.43	0.37	0.39	0.53	0.68	0.45	0.51	0.44	0.46	0.27
17	0.84	0.47	0.84	0.49	0.79	0.52	0.50	0.32	0.58	0.41	0.50	0.51	0.29	0.26
18	0.66	0.44	0.89	0.48	0.66	0.52	0.35	0.40	0.47	0.47	0.49	0.42	0.55	0.30
19	0.81	0.52	0.65	0.53	0.70	0.46	0.60	0.59	0.58	0.40	0.57	0.53	0.49	0.44
20	0.73	0.52	0.64	0.48	0.61	0.43	0.56	0.46	0.49	0.48	0.45	0.43	0.35	0.31
21	0.81	0.43	0.91	0.45	0.63	0.48	0.43	0.61	0.71	0.55	0.41	0.31	0.33	0.38
22	0.43	0.40	0.67	0.50	0.87	0.43	0.36	0.46	0.69	0.52	0.45	0.53	0.55	0.26
23	0.83	0.51	0.66	0.42	0.71	0.53	0.78	0.48	0.41	0.33	0.56	0.47	0.56	0.43
24	0.87	0.43	0.75	0.54	0.62	0.48	0.57	0.55	0.61	0.48	0.76	0.54	0.44	0.27
25	0.79	0.46	0.66	0.57	0.76	0.51	0.59	0.50	0.54	0.47	0.38	0.23	0.67	0.42
26	0.73	0.44	0.72	0.54	0.57	0.49	0.65	0.50	0.52	0.40	0.45	0.47	0.53	0.31
27	0.91	0.35	0.75	0.47	0.80	0.45	0.68	0.58	0.91	0.38	0.55	0.34	0.75	0.50
28	0.90	0.43	0.67	0.55	0.76	0.50	0.64	0.37	0.82	0.51	0.48	0.27	0.32	0.35
29	0.77	0.55	0.73	0.51	0.55	0.36	0.31	0.43	0.74	0.45	0.30	0.47	0.80	0.47
30	0.67	0.50	0.37	0.40	0.82	0.58	0.84	0.46	0.60	0.34	0.56	0.47	0.33	0.21
31	0.20	0.34	0.53	0.48	0.67	0.52	0.77	0.44	0.45	0.41	0.58	0.49	0.43	0.25
32	0.60	0.57	0.46	0.32	0.83	0.57	0.72	0.46	0.39	0.45	0.72	0.48	0.60	0.45
33	0.92	0.44	0.76	0.57	0.64	0.45	0.49	0.34	0.57	0.49	0.74	0.54	0.56	0.41

Item-by-item p-value and Point-Biserial for Mathematics

Tests	2		3		4		5		6		7		Gen Math	
Items	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**
34	0.59	0.32	0.81	0.48	0.74	0.56	0.67	0.48	0.57	0.47	0.21	0.29	0.42	0.24
35	0.82	0.43	0.71	0.53	0.87	0.51	0.64	0.45	0.63	0.41	0.30	0.28	0.50	0.39
36	0.57	0.46	0.54	0.32	0.78	0.42	0.44	0.45	0.70	0.42	0.63	0.40	0.43	0.32
37	0.82	0.49	0.66	0.55	0.54	0.44	0.71	0.56	0.66	0.56	0.80	0.50	0.22	0.18
38	0.83	0.53	0.81	0.48	0.73	0.45	0.73	0.46	0.78	0.52	0.46	0.42	0.72	0.45
39	0.68	0.48	0.59	0.53	0.88	0.51	0.52	0.40	0.89	0.44	0.70	0.42	0.71	0.48
40	0.89	0.42	0.91	0.47	0.76	0.53	0.65	0.54	0.72	0.53	0.51	0.52	0.73	0.51
41	0.65	0.54	0.72	0.58	0.80	0.54	0.61	0.57	0.60	0.39	0.87	0.44	0.40	0.28
42	0.54	0.47	0.63	0.46	0.80	0.49	0.60	0.51	0.54	0.41	0.64	0.52	0.56	0.46
43	0.77	0.42	0.70	0.49	0.79	0.55	0.63	0.35	0.68	0.50	0.74	0.49	0.38	0.24
44	0.83	0.45	0.72	0.49	0.78	0.52	0.85	0.39	0.81	0.50	0.56	0.34	0.41	0.43
45	0.74	0.34	0.88	0.30	0.73	0.51	0.56	0.38	0.54	0.41	0.52	0.33	0.22	0.36
46	0.69	0.49	0.77	0.30	0.57	0.40	0.64	0.55	0.63	0.35	0.66	0.50	0.53	0.47
47	0.76	0.47	0.94	0.27	0.81	0.59	0.71	0.39	0.52	0.47	0.26	0.26	0.12	0.14
48	0.93	0.30	0.68	0.51	0.72	0.54	0.63	0.39	0.57	0.34	0.46	0.42	0.48	0.29
49	0.76	0.40	0.62	0.41	0.82	0.46	0.33	0.46	0.37	0.37	0.76	0.34	0.34	0.21
50	0.63	0.40	0.90	0.39	0.37	0.42	0.78	0.38	0.60	0.52	0.71	0.40	0.36	0.40
51	0.82	0.34	0.85	0.43	0.55	0.42	0.65	0.52	0.24	0.41	0.59	0.51	0.57	0.25
52	0.59	0.28	0.91	0.45	0.75	0.46	0.57	0.45	0.65	0.48	0.49	0.39	0.23	0.21
53	0.83	0.45	0.45	0.49	0.79	0.37	0.59	0.33	0.55	0.37	0.38	0.36	0.43	0.36
54	0.59	0.40	0.85	0.43	0.76	0.51	0.66	0.39	0.60	0.40	0.56	0.48	0.48	0.30
55	0.71	0.39	0.85	0.40	0.57	0.36	0.54	0.50	0.58	0.42	0.59	0.54	0.63	0.49
56	0.75	0.48	0.70	0.37	0.75	0.50	0.45	0.49	0.29	0.31	0.60	0.39	0.40	0.39
57	0.88	0.37	0.50	0.39	0.71	0.47	0.72	0.39	0.40	0.36	0.46	0.35	0.55	0.31
58	0.96	0.33	0.75	0.40	0.71	0.54	0.70	0.50	0.62	0.48	0.55	0.31	0.26	0.16
59	0.43	0.48	0.88	0.38	0.64	0.39	0.42	0.34	0.35	0.47	0.52	0.35	0.64	0.37
60	0.89	0.41	0.51	0.40	0.71	0.49	0.68	0.33	0.29	0.19	0.61	0.51	0.62	0.49
61	0.90	0.48	0.82	0.45	0.80	0.51	0.58	0.60	0.67	0.49	0.71	0.43	0.60	0.40
62	0.78	0.47	0.82	0.53	0.78	0.47	0.84	0.44	0.73	0.53	0.67	0.51	0.64	0.42
63	0.88	0.42	0.82	0.44	0.63	0.42	0.65	0.49	0.67	0.44	0.69	0.46	0.25	0.04
64	0.47	0.42	0.87	0.54	0.81	0.45	0.79	0.45	0.45	0.48	0.52	0.47	0.66	0.38
65	0.58	0.39	0.81	0.45	0.65	0.42	0.66	0.53	0.75	0.50	0.42	0.38	0.64	0.48

Table 7.A.4 Item-by-item p-value and Point-Biserial for Mathematics [continued]

Item-by-item p-value and Point-Biserial for Mathematics [continued]														
Tests	**Algeb I**		**Geom**		**Algeb II**		**HS Math**		**Integ M. 1**		**Integ M. 2**		**Integ M. 3**	
Items	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**
1	0.73	0.41	0.58	0.34	0.81	0.36	0.81	0.42	0.45	0.38	0.32	0.29	0.44	0.34
2	0.47	0.28	0.81	0.36	0.63	0.51	0.68	0.46	0.43	0.28	0.38	0.52	0.72	0.40
3	0.53	0.41	0.53	0.38	0.41	0.29	0.81	0.39	0.67	0.37	0.68	0.41	0.27	0.38
4	0.65	0.46	0.71	0.43	0.67	0.39	0.84	0.31	0.43	0.42	0.66	0.40	0.44	0.38
5	0.57	0.41	0.47	0.51	0.60	0.43	0.66	0.29	0.56	0.49	0.30	0.40	0.65	0.46
6	0.48	0.51	0.62	0.47	0.59	0.49	0.49	0.46	0.47	0.34	0.51	0.27	0.39	0.30
7	0.60	0.47	0.46	0.52	0.68	0.52	0.48	0.29	0.66	0.42	0.26	0.34	0.81	0.47
8	0.37	0.22	0.63	0.48	0.36	0.44	0.64	0.51	0.46	0.39	0.38	0.30	0.61	0.44
9	0.61	0.51	0.69	0.44	0.48	0.52	0.63	0.48	0.52	0.46	0.56	0.39	0.79	0.46
10	0.15	0.23	0.67	0.47	0.34	0.40	0.83	0.49	0.57	0.42	0.51	0.31	0.56	0.46
11	0.56	0.48	0.37	0.22	0.45	0.48	0.74	0.46	0.61	0.42	0.69	0.46	0.33	0.22
12	0.71	0.41	0.46	0.51	0.36	0.30	0.68	0.47	0.51	0.43	0.33	0.35	0.36	0.26
13	0.62	0.38	0.51	0.28	0.62	0.45	0.68	0.54	0.55	0.48	0.71	0.41	0.28	0.34
14	0.51	0.38	0.37	0.55	0.48	0.52	0.77	0.45	0.16	0.11	0.24	0.33	0.50	0.42
15	0.55	0.47	0.40	0.47	0.80	0.41	0.75	0.40	0.45	0.34	0.44	0.34	0.48	0.45
16	0.52	0.43	0.28	0.32	0.61	0.33	0.91	0.44	0.37	0.34	0.23	0.22	0.44	0.37
17	0.63	0.33	0.56	0.46	0.93	0.31	0.94	0.29	0.54	0.35	0.34	0.31	0.57	0.52
18	0.57	0.44	0.46	0.45	0.85	0.41	0.70	0.54	0.50	0.42	0.40	0.32	0.28	0.33
19	0.55	0.32	0.61	0.51	0.55	0.47	0.50	0.35	0.29	0.28	0.29	0.28	0.26	0.31
20	0.34	0.46	0.68	0.29	0.76	0.35	0.65	0.45	0.39	0.38	0.35	0.37	0.28	0.34
21	0.49	0.41	0.57	0.53	0.53	0.41	0.83	0.39	0.49	0.39	0.63	0.42	0.23	0.24
22	0.52	0.48	0.63	0.55	0.47	0.34	0.91	0.30	0.42	0.30	0.30	0.38	0.40	0.39
23	0.42	0.40	0.81	0.32	0.43	0.34	0.69	0.56	0.32	0.16	0.45	0.48	0.44	0.51
24	0.36	0.34	0.46	0.31	0.44	0.47	0.55	0.39	0.46	0.42	0.28	0.27	0.53	0.32
25	0.41	0.31	0.61	0.45	0.56	0.41	0.77	0.28	0.62	0.45	0.48	0.33	0.40	0.28
26	0.53	0.43	0.56	0.46	0.30	0.33	0.68	0.45	0.22	0.24	0.58	0.43	0.53	0.37
27	0.32	0.36	0.56	0.34	0.28	0.28	0.63	0.38	0.59	0.40	0.51	0.45	0.48	0.40
28	0.39	0.21	0.23	0.44	0.47	0.34	0.72	0.43	0.31	0.16	0.45	0.45	0.30	0.37
29	0.54	0.41	0.33	0.33	0.38	0.34	0.66	0.46	0.43	0.23	0.26	0.42	0.59	0.41
30	0.35	0.23	0.62	0.45	0.53	0.33	0.47	0.27	0.57	0.49	0.65	0.50	0.21	0.21
31	0.42	0.46	0.56	0.53	0.30	0.43	0.48	0.40	0.39	0.25	0.31	0.45	0.19	0.12
32	0.49	0.27	0.50	0.46	0.80	0.31	0.77	0.52	0.35	0.37	0.42	0.37	0.72	0.32
33	0.64	0.53	0.39	0.43	0.36	0.42	0.68	0.38	0.22	0.21	0.24	0.29	0.28	0.26
34	0.69	0.40	0.63	0.42	0.69	0.36	0.71	0.32	0.53	0.31	0.26	0.14	0.26	0.28

Item-by-item p-value and Point-Biserial for Mathematics [continued]

Tests	Algeb I		Geom		Algeb II		HS Math		Integ M. 1		Integ M. 2		Integ M. 3	
Items	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**
35	0.22	0.24	0.63	0.37	0.36	0.24	0.76	0.50	0.24	0.26	0.46	0.54	0.52	0.34
36	0.63	0.48	0.61	0.35	0.60	0.39	0.76	0.49	0.30	0.19	0.51	0.51	0.61	0.34
37	0.22	0.29	0.38	0.28	0.34	0.27	0.65	0.51	0.20	0.09	0.47	0.27	0.54	0.34
38	0.53	0.46	0.45	0.54	0.50	0.43	0.81	0.50	0.51	0.42	0.45	0.50	0.61	0.43
39	0.33	0.38	0.65	0.55	0.42	0.31	0.85	0.44	0.47	0.43	0.44	0.38	0.39	0.28
40	0.61	0.45	0.46	0.38	0.67	0.47	0.59	0.44	0.28	0.31	0.34	0.20	0.34	0.14
41	0.33	0.37	0.29	0.34	0.67	0.26	0.71	0.43	0.36	0.21	0.39	0.39	0.35	0.44
42	0.69	0.42	0.38	0.34	0.39	0.40	0.45	0.55	0.24	0.13	0.67	0.43	0.36	0.17
43	0.36	0.24	0.36	0.46	0.48	0.37	0.56	0.40	0.43	0.43	0.31	0.32	0.24	0.32
44	0.44	0.28	0.40	0.37	0.62	0.42	0.64	0.53	0.32	0.19	0.53	0.41	0.61	0.48
45	0.49	0.29	0.42	0.37	0.50	0.48	0.70	0.42	0.43	0.26	0.42	0.39	0.46	0.48
46	0.57	0.34	0.66	0.55	0.53	0.41	0.71	0.43	0.44	0.41	0.25	0.24	0.42	0.46
47	0.31	0.34	0.51	0.41	0.27	0.27	0.86	0.34	0.35	0.24	0.46	0.35	0.52	0.33
48	0.35	0.31	0.57	0.47	0.55	0.36	0.62	0.50	0.28	0.23	0.53	0.52	0.45	0.52
49	0.25	0.21	0.44	0.41	0.57	0.49	0.67	0.42	0.46	0.27	0.30	0.28	0.36	0.27
50	0.42	0.46	0.29	0.52	0.53	0.45	0.68	0.48	0.40	0.36	0.32	0.13	0.39	0.48
51	0.26	0.27	0.65	0.50	0.61	0.43	0.81	0.44	0.36	0.31	0.35	0.39	0.45	0.32
52	0.41	0.28	0.41	0.31	0.43	0.40	0.81	0.48	0.27	0.10	0.53	0.41	0.38	0.30
53	0.62	0.42	0.50	0.44	0.65	0.27	0.60	0.48	0.31	0.11	0.41	0.33	0.46	0.41
54	0.29	0.39	0.62	0.51	0.40	0.38	0.59	0.33	0.29	0.11	0.32	0.15	0.54	0.38
55	0.26	0.19	0.60	0.42	0.63	0.29	0.76	0.47	0.28	0.22	0.58	0.54	0.58	0.44
56	0.48	0.48	0.47	0.30	0.41	0.41	0.69	0.50	0.14	0.09	0.46	0.40	0.38	0.36
57	0.33	0.27	0.32	0.25	0.34	0.46	0.75	0.46	0.22	0.30	0.28	0.20	0.59	0.36
58	0.37	0.29	0.41	0.40	0.28	0.25	0.43	0.37	0.32	0.09	0.31	0.23	0.37	0.46
59	0.23	0.12	0.57	0.45	0.26	0.27	0.84	0.45	0.48	0.33	0.61	0.53	0.30	0.31
60	0.26	0.25	0.35	0.25	0.36	0.32	0.72	0.55	0.39	0.33	0.38	0.32	0.59	0.30
61	0.50	0.31	0.38	0.54	0.24	0.24	0.65	0.48	0.16	0.13	0.29	0.30	0.16	0.12
62	0.47	0.33	0.42	0.45	0.20	0.24	0.49	0.38	0.39	0.31	0.28	0.29	0.23	0.14
63	0.29	0.24	0.64	0.50	0.67	0.22	0.35	0.27	0.23	0.14	0.23	0.31	0.19	0.14
64	0.19	0.10	0.52	0.42	0.45	0.54	0.80	0.42	0.40	0.24	0.55	0.34	0.21	0.16
65	0.47	0.45	0.71	0.50	0.72	0.32	0.74	0.46	0.38	0.26	0.58	0.34	0.34	0.39

Table 7.A.5 Item-by-item p-value and Point-Biserial for Science

Item-by-item p-value and Point-Biserial for Science														
Tests	**Grade 5 Science**		**Grade 8 Science**		**Grade 10 Life Science**		**Biology**		**Chemistry**		**Earth Science**		**Physics**	
Items	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**
1	0.84	0.44	0.72	0.36	0.54	0.51	0.52	0.23	0.65	0.45	0.80	0.41	0.72	0.35
2	0.69	0.29	0.67	0.36	0.70	0.46	0.60	0.35	0.62	0.32	0.60	0.33	0.48	0.35
3	0.77	0.40	0.59	0.44	0.53	0.45	0.84	0.39	0.42	0.33	0.73	0.28	0.65	0.42
4	0.74	0.29	0.50	0.43	0.61	0.37	0.52	0.46	0.51	0.31	0.54	0.52	0.67	0.43
5	0.49	0.40	0.67	0.42	0.47	0.30	0.57	0.33	0.52	0.34	0.58	0.25	0.68	0.43
6	0.66	0.48	0.57	0.47	0.69	0.39	0.56	0.39	0.70	0.37	0.40	0.24	0.57	0.36
7	0.65	0.44	0.46	0.45	0.64	0.46	0.40	0.37	0.52	0.43	0.52	0.36	0.28	0.46
8	0.49	0.26	0.70	0.40	0.47	0.35	0.61	0.37	0.77	0.37	0.71	0.41	0.67	0.53
9	0.51	0.37	0.60	0.30	0.60	0.45	0.56	0.41	0.65	0.38	0.49	0.29	0.65	0.37
10	0.79	0.42	0.73	0.30	0.39	0.40	0.49	0.33	0.72	0.42	0.45	0.24	0.30	0.38
11	0.57	0.33	0.69	0.46	0.39	0.42	0.50	0.40	0.50	0.39	0.47	0.39	0.49	0.30
12	0.42	0.33	0.40	0.04	0.59	0.31	0.58	0.33	0.43	0.40	0.41	0.28	0.49	0.34
13	0.62	0.41	0.65	0.34	0.42	0.45	0.55	0.40	0.72	0.49	0.36	0.38	0.65	0.37
14	0.50	0.47	0.30	0.23	0.42	0.28	0.42	0.34	0.63	0.46	0.53	0.39	0.57	0.39
15	0.63	0.39	0.63	0.45	0.64	0.37	0.49	0.39	0.77	0.50	0.61	0.45	0.62	0.37
16	0.60	0.41	0.62	0.38	0.66	0.39	0.44	0.43	0.63	0.42	0.41	0.41	0.80	0.37
17	0.75	0.33	0.63	0.50	0.48	0.52	0.62	0.50	0.57	0.36	0.27	0.22	0.29	0.15
18	0.56	0.50	0.43	0.44	0.43	0.39	0.64	0.50	0.75	0.43	0.45	0.29	0.62	0.51
19	0.75	0.35	0.45	0.41	0.48	0.36	0.47	0.43	0.55	0.52	0.54	0.30	0.52	0.51
20	0.45	0.30	0.74	0.45	0.54	0.41	0.54	0.43	0.41	0.25	0.68	0.39	0.55	0.47
21	0.56	0.38	0.64	0.40	0.32	0.15	0.62	0.45	0.50	0.20	0.59	0.27	0.41	0.34
22	0.55	0.48	0.70	0.51	0.31	0.19	0.52	0.29	0.45	0.39	0.61	0.38	0.43	0.33
23	0.63	0.41	0.54	0.51	0.71	0.50	0.54	0.35	0.75	0.44	0.61	0.37	0.43	0.35
24	0.36	0.32	0.71	0.30	0.59	0.48	0.46	0.41	0.51	0.34	0.73	0.47	0.83	0.45
25	0.45	0.41	0.48	0.27	0.48	0.31	0.33	0.18	0.67	0.44	0.55	0.41	0.53	0.44
26	0.77	0.44	0.54	0.39	0.67	0.51	0.34	0.35	0.48	0.29	0.65	0.38	0.46	0.37
27	0.77	0.54	0.55	0.49	0.40	0.36	0.40	0.41	0.66	0.46	0.49	0.41	0.56	0.51
28	0.73	0.54	0.36	0.21	0.47	0.23	0.54	0.52	0.68	0.51	0.41	0.43	0.63	0.44
29	0.59	0.31	0.52	0.41	0.68	0.53	0.72	0.49	0.68	0.38	0.49	0.46	0.56	0.38
30	0.77	0.51	0.64	0.46	0.65	0.43	0.80	0.42	0.33	0.24	0.56	0.37	0.54	0.41
31	0.80	0.37	0.80	0.37	0.84	0.49	0.72	0.38	0.27	0.28	0.64	0.43	0.49	0.54
32	0.62	0.46	0.71	0.40	0.54	0.42	0.51	0.39	0.62	0.49	0.67	0.41	0.82	0.31
33	0.84	0.18	0.30	0.40	0.48	0.50	0.66	0.45	0.37	0.39	0.56	0.51	0.63	0.53

Item-by-item p-value and Point-Biserial for Science

Tests	Grade 5 Science		Grade 8 Science		Grade 10 Life Science		Biology		Chemistry		Earth Science		Physics	
Items	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**
34	0.41	0.28	0.52	0.42	0.55	0.55	0.69	0.44	0.79	0.49	0.34	0.27	0.45	0.35
35	0.78	0.45	0.70	0.40	0.52	0.44	0.57	0.44	0.56	0.48	0.49	0.34	0.60	0.47
36	0.49	0.46	0.46	0.38	0.42	0.34	0.54	0.49	0.32	0.33	0.58	0.52	0.67	0.41
37	0.70	0.47	0.50	0.36	0.80	0.51	0.50	0.50	0.51	0.28	0.58	0.36	0.74	0.30
38	0.73	0.51	0.55	0.45	0.54	0.45	0.50	0.35	0.35	0.39	0.43	0.35	0.66	0.56
39	0.58	0.53	0.66	0.48	0.62	0.49	0.61	0.33	0.70	0.36	0.50	0.43	0.55	0.38
40	0.40	0.30	0.41	0.18	0.58	0.50	0.55	0.51	0.52	0.37	0.57	0.36	0.58	0.30
41	0.64	0.30	0.26	0.34	0.45	0.32	0.41	0.31	0.65	0.52	0.45	0.35	0.73	0.50
42	0.79	0.48	0.52	0.31	0.46	0.48	0.57	0.50	0.54	0.31	0.34	0.26	0.62	0.46
43	0.64	0.46	0.63	0.47	0.65	0.50	0.52	0.29	0.48	0.34	0.49	0.38	0.65	0.41
44	0.39	0.21	0.49	0.46	0.65	0.52	0.52	0.40	0.62	0.50	0.49	0.41	0.33	0.35
45	0.37	0.26	0.69	0.46	0.48	0.35	0.47	0.36	0.58	0.47	0.42	0.41	0.46	0.36
46	0.45	0.34	0.45	0.32	0.61	0.38	0.74	0.48	0.68	0.45	0.43	0.46	0.33	0.25
47	0.62	0.44	0.34	0.27	0.57	0.48	0.54	0.50	0.54	0.47	0.45	0.39	0.48	0.44
48	0.54	0.36	0.47	0.23	0.50	0.48	0.55	0.44	0.36	0.32	0.53	0.43	0.61	0.46
49	0.35	0.38	0.34	0.27	0.54	0.50	0.55	0.41	0.34	0.28	0.51	0.49	0.35	0.40
50	0.35	0.28	0.56	0.44	0.59	0.45	0.49	0.45	0.72	0.52	0.48	0.43	0.45	0.42
51	0.43	0.28	0.43	0.30	0.60	0.51	0.43	0.47	0.67	0.49	0.46	0.42	0.59	0.35
52	0.47	0.34	0.62	0.43	0.50	0.51	0.52	0.47	0.55	0.45	0.56	0.34	0.56	0.30
53	0.47	0.25	0.46	0.33	0.50	0.33	0.64	0.52	0.53	0.30	0.50	0.45	0.66	0.41
54	0.68	0.43	0.52	0.37	0.51	0.40	0.50	0.39	0.49	0.53	0.55	0.47	0.44	0.36
55	0.80	0.36	0.40	0.29	0.37	0.34	0.52	0.50	0.62	0.35	0.40	0.33	0.67	0.45
56	0.74	0.41	0.49	0.33	0.47	0.49	0.44	0.32	0.51	0.38	0.45	0.51	0.37	0.31
57	0.51	0.29	0.64	0.53	0.53	0.49	0.52	0.50	0.63	0.36	0.39	0.21	0.49	0.36
58	0.32	0.34	0.61	0.43	0.52	0.54	0.57	0.49	0.51	0.30	0.42	0.28	0.62	0.48
59	0.66	0.48	0.66	0.48	0.60	0.53	0.53	0.50	0.69	0.44	0.55	0.52	0.48	0.40
60	0.71	0.46	0.64	0.47	0.70	0.46	0.61	0.52	0.72	0.50	0.63	0.51	0.64	0.50

Table 7.A.6 Item-by-item p-value and Point-Biserial for Science [continued]

Item-by-item p-value and Point-Biserial for Science [continued]								
CSTs	**Integ Science 1**		**Integ Science 2**		**Integ Science 3**		**Integ Science 4**	
Items	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**
1	0.59	0.36	0.48	0.28	0.53	0.34	0.43	0.06
2	0.38	0.17	0.39	0.40	0.32	0.27	0.53	0.26
3	0.46	0.32	0.77	0.34	0.46	0.37	0.62	0.41
4	0.43	0.34	0.44	0.32	0.47	0.33	0.23	0.15
5	0.41	0.39	0.44	0.36	0.41	0.41	0.58	0.37
6	0.55	0.44	0.52	0.29	0.48	0.33	0.48	0.41
7	0.20	0.10	0.42	0.29	0.38	0.21	0.30	0.26
8	0.57	0.28	0.38	0.38	0.38	0.36	0.39	0.26
9	0.42	0.38	0.51	0.28	0.44	0.27	0.52	0.37
10	0.50	0.39	0.54	0.45	0.46	0.37	0.38	0.30
11	0.31	0.18	0.36	0.22	0.35	0.16	0.26	0.01
12	0.33	0.24	0.43	0.37	0.30	0.20	0.44	0.40
13	0.44	0.29	0.53	0.38	0.26	0.14	0.40	0.24
14	0.40	0.30	0.32	0.23	0.54	0.37	0.48	0.26
15	0.55	0.47	0.51	0.33	0.27	0.28	0.44	0.37
16	0.52	0.48	0.41	0.39	0.37	0.39	0.35	0.43
17	0.66	0.42	0.51	0.33	0.30	0.32	0.46	0.36
18	0.42	0.26	0.36	0.15	0.40	0.28	0.48	0.48
19	0.52	0.39	0.33	0.20	0.56	0.45	0.57	0.42
20	0.44	0.31	0.44	0.26	0.53	0.32	0.46	0.37
21	0.25	0.17	0.34	0.32	0.54	0.37	0.38	0.15
22	0.47	0.38	0.36	0.27	0.38	0.37	0.31	0.29
23	0.28	0.22	0.36	0.30	0.61	0.38	0.21	0.12
24	0.19	0.11	0.32	0.12	0.39	0.39	0.41	0.32
25	0.46	0.36	0.38	0.28	0.50	0.35	0.32	0.29
26	0.38	0.25	0.20	0.20	0.42	0.25	0.38	0.45
27	0.43	0.44	0.47	0.35	0.40	0.27	0.36	0.26
28	0.65	0.33	0.21	0.03	0.22	0.12	0.36	0.27
29	0.63	0.40	0.29	0.20	0.31	0.16	0.40	0.37
30	0.56	0.30	0.30	0.19	0.31	0.20	0.44	0.22
31	0.59	0.38	0.44	0.23	0.61	0.42	0.67	0.37
32	0.36	0.35	0.44	0.32	0.38	0.39	0.50	0.49
33	0.57	0.46	0.63	0.46	0.41	0.33	0.36	0.23

Item-by-item p-value and Point-Biserial for Science [continued]

CSTs	Integ Science 1		Integ Science 2		Integ Science 3		Integ Science 4	
Items	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**
34	0.44	0.21	0.64	0.36	0.47	0.29	0.39	0.41
35	0.47	0.33	0.50	0.29	0.49	0.46	0.45	0.31
36	0.42	0.43	0.43	0.30	0.31	0.06	0.48	0.43
37	0.49	0.42	0.46	0.43	0.37	0.32	0.36	0.36
38	0.50	0.47	0.45	0.27	0.46	0.42	0.39	0.40
39	0.50	0.37	0.40	0.35	0.40	0.43	0.34	0.24
40	0.30	0.16	0.33	0.29	0.31	0.36	0.25	0.11
41	0.27	0.15	0.31	0.26	0.28	0.20	0.42	0.26
42	0.34	0.30	0.50	0.37	0.23	0.03	0.38	0.28
43	0.39	0.13	0.32	0.18	0.28	0.17	0.22	0.17
44	0.60	0.46	0.33	0.27	0.40	0.42	0.36	0.18
45	0.46	0.38	0.57	0.48	0.54	0.45	0.54	0.44
46	0.50	0.34	0.64	0.42	0.35	0.35	0.39	0.23
47	0.45	0.39	0.43	0.36	0.35	0.15	0.35	0.27
48	0.48	0.29	0.62	0.44	0.37	0.25	0.31	0.36
49	0.57	0.48	0.48	0.32	0.28	0.13	0.49	0.34
50	0.31	0.41	0.55	0.31	0.34	0.27	0.46	0.39
51	0.50	0.38	0.34	0.29	0.30	0.17	0.33	0.36
52	0.56	0.52	0.42	0.35	0.46	0.37	0.35	0.49
53	0.61	0.39	0.44	0.42	0.43	0.37	0.22	0.16
54	0.44	0.31	0.42	0.33	0.40	0.46	0.34	0.33
55	0.40	0.26	0.40	0.25	0.20	0.07	0.26	0.16
56	0.23	0.22	0.37	0.23	0.24	0.27	0.43	0.32
57	0.30	0.21	0.37	0.19	0.35	0.23	0.42	0.24
58	0.34	0.18	0.53	0.40	0.36	0.25	0.41	0.21
59	0.27	0.32	0.12	0.03	0.31	0.08	0.29	0.10
60	0.32	0.26	0.51	0.38	0.49	0.41	0.59	0.32

Table 7.A.7 Item-by-item p-value and Point-Biserial for Mathematics Grade Specific CSTs

Item-by-item p-value and Point-Biserial for Grade Specific Tests										
CST	**Algebra I (Grade 8)**		**Geometry (Grade 9)**		**Algebra II (Grade 10)**		**High Sc. Math (Grade 11)**		**World History (Grade 10)**	
Items	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**
1	0.59	0.36	0.48	0.28	0.53	0.34	0.43	0.06	0.59	0.36
2	0.38	0.17	0.39	0.40	0.32	0.27	0.53	0.26	0.38	0.17
3	0.46	0.32	0.77	0.34	0.46	0.37	0.62	0.41	0.46	0.32
4	0.43	0.34	0.44	0.32	0.47	0.33	0.23	0.15	0.43	0.34
5	0.41	0.39	0.44	0.36	0.41	0.41	0.58	0.37	0.41	0.39
6	0.55	0.44	0.52	0.29	0.48	0.33	0.48	0.41	0.55	0.44
7	0.20	0.10	0.42	0.29	0.38	0.21	0.30	0.26	0.20	0.10
8	0.57	0.28	0.38	0.38	0.38	0.36	0.39	0.26	0.57	0.28
9	0.42	0.38	0.51	0.28	0.44	0.27	0.52	0.37	0.42	0.38
10	0.50	0.39	0.54	0.45	0.46	0.37	0.38	0.30	0.50	0.39
11	0.31	0.18	0.36	0.22	0.35	0.16	0.26	0.01	0.31	0.18
12	0.33	0.24	0.43	0.37	0.30	0.20	0.44	0.40	0.33	0.24
13	0.44	0.29	0.53	0.38	0.26	0.14	0.40	0.24	0.44	0.29
14	0.40	0.30	0.32	0.23	0.54	0.37	0.48	0.26	0.40	0.30
15	0.55	0.47	0.51	0.33	0.27	0.28	0.44	0.37	0.55	0.47
16	0.52	0.48	0.41	0.39	0.37	0.39	0.35	0.43	0.52	0.48
17	0.66	0.42	0.51	0.33	0.30	0.32	0.46	0.36	0.66	0.42
18	0.42	0.26	0.36	0.15	0.40	0.28	0.48	0.48	0.42	0.26
19	0.52	0.39	0.33	0.20	0.56	0.45	0.57	0.42	0.52	0.39
20	0.44	0.31	0.44	0.26	0.53	0.32	0.46	0.37	0.44	0.31
21	0.25	0.17	0.34	0.32	0.54	0.37	0.38	0.15	0.25	0.17
22	0.47	0.38	0.36	0.27	0.38	0.37	0.31	0.29	0.47	0.38
23	0.28	0.22	0.36	0.30	0.61	0.38	0.21	0.12	0.28	0.22
24	0.19	0.11	0.32	0.12	0.39	0.39	0.41	0.32	0.19	0.11
25	0.46	0.36	0.38	0.28	0.50	0.35	0.32	0.29	0.46	0.36
26	0.38	0.25	0.20	0.20	0.42	0.25	0.38	0.45	0.38	0.25
27	0.43	0.44	0.47	0.35	0.40	0.27	0.36	0.26	0.43	0.44
28	0.65	0.33	0.21	0.03	0.22	0.12	0.36	0.27	0.65	0.33
29	0.63	0.40	0.29	0.20	0.31	0.16	0.40	0.37	0.63	0.40
30	0.56	0.30	0.30	0.19	0.31	0.20	0.44	0.22	0.56	0.30
31	0.59	0.38	0.44	0.23	0.61	0.42	0.67	0.37	0.59	0.38
32	0.36	0.35	0.44	0.32	0.38	0.39	0.50	0.49	0.36	0.35
33	0.57	0.46	0.63	0.46	0.41	0.33	0.36	0.23	0.57	0.46
34	0.44	0.21	0.64	0.36	0.47	0.29	0.39	0.41	0.44	0.21

Item-by-item p-value and Point-Biserial for Grade Specific Tests

CST	Algebra I (Grade 8)		Geometry (Grade 9)		Algebra II (Grade 10)		High Sc. Math (Grade 11)		World History (Grade 10)	
Items	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**	**p-value**	**Pt-Rbis**
35	0.47	0.33	0.50	0.29	0.49	0.46	0.45	0.31	0.47	0.33
36	0.42	0.43	0.43	0.30	0.31	0.06	0.48	0.43	0.42	0.43
37	0.49	0.42	0.46	0.43	0.37	0.32	0.36	0.36	0.49	0.42
38	0.50	0.47	0.45	0.27	0.46	0.42	0.39	0.40	0.50	0.47
39	0.50	0.37	0.40	0.35	0.40	0.43	0.34	0.24	0.50	0.37
40	0.30	0.16	0.33	0.29	0.31	0.36	0.25	0.11	0.30	0.16
41	0.27	0.15	0.31	0.26	0.28	0.20	0.42	0.26	0.27	0.15
42	0.34	0.30	0.50	0.37	0.23	0.03	0.38	0.28	0.34	0.30
43	0.39	0.13	0.32	0.18	0.28	0.17	0.22	0.17	0.39	0.13
44	0.60	0.46	0.33	0.27	0.40	0.42	0.36	0.18	0.60	0.46
45	0.46	0.38	0.57	0.48	0.54	0.45	0.54	0.44	0.46	0.38
46	0.50	0.34	0.64	0.42	0.35	0.35	0.39	0.23	0.50	0.34
47	0.45	0.39	0.43	0.36	0.35	0.15	0.35	0.27	0.45	0.39
48	0.48	0.29	0.62	0.44	0.37	0.25	0.31	0.36	0.48	0.29
49	0.57	0.48	0.48	0.32	0.28	0.13	0.49	0.34	0.57	0.48
50	0.31	0.41	0.55	0.31	0.34	0.27	0.46	0.39	0.31	0.41
51	0.50	0.38	0.34	0.29	0.30	0.17	0.33	0.36	0.50	0.38
52	0.56	0.52	0.42	0.35	0.46	0.37	0.35	0.49	0.56	0.52
53	0.61	0.39	0.44	0.42	0.43	0.37	0.22	0.16	0.61	0.39
54	0.44	0.31	0.42	0.33	0.40	0.46	0.34	0.33	0.44	0.31
55	0.40	0.26	0.40	0.25	0.20	0.07	0.26	0.16	0.40	0.26
56	0.23	0.22	0.37	0.23	0.24	0.27	0.43	0.32	0.23	0.22
57	0.30	0.21	0.37	0.19	0.35	0.23	0.42	0.24	0.30	0.21
58	0.34	0.18	0.53	0.40	0.36	0.25	0.41	0.21	0.34	0.18
59	0.27	0.32	0.12	0.03	0.31	0.08	0.29	0.10	0.27	0.32
60	0.32	0.26	0.51	0.38	0.49	0.41	0.59	0.32	0.32	0.26
61	0.59	0.36	0.48	0.28	0.53	0.34	0.43	0.06		
62	0.38	0.17	0.39	0.40	0.32	0.27	0.53	0.26		
63	0.46	0.32	0.77	0.34	0.46	0.37	0.62	0.41		
64	0.43	0.34	0.44	0.32	0.47	0.33	0.23	0.15		
65	0.41	0.39	0.44	0.36	0.41	0.41	0.58	0.37		

Appendix 7.B—IRT Tables

Table 7.B.1 IRT b-values for English–Language Arts Grade 2

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Word Analysis and Vocabulary Development	22	-0.38	0.77	-2.04	0.79
Reading Comprehension	15	0.00	0.82	-1.26	2.06
Literary Response and Analysis	6	-0.18	0.67	-1.42	0.69
Written Conventions	14	-0.20	0.49	-1.04	0.58
Writing Strategies	8	0.24	0.71	-0.94	1.42
All operational items	65	-0.16	0.74	-2.04	2.06
Field-test items	82	0.14	0.96	-2.35	2.78

Table 7.B.2 IRT b-values for English–Language Arts Grade 3

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Word Analysis and Vocabulary Development	20	-0.63	1.09	-2.52	1.32
Reading Comprehension	15	-0.09	0.52	-1.14	0.86
Literary Response and Analysis	8	-0.44	0.72	-1.98	0.35
Written Conventions	13	-0.33	0.70	-1.76	1.11
Writing Strategies	9	-0.01	0.67	-1.57	0.72
All operational items	65	-0.34	0.84	-2.52	1.32
Field-test items	84	-0.05	0.98	-2.27	2.06

Table 7.B.3 IRT b-values for English–Language Arts Grade 4

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Word Analysis and Vocabulary Development	18	-0.45	0.98	-2.14	1.45
Reading Comprehension	15	0.09	0.59	-1.21	0.88
Literary Response and Analysis	9	-0.07	0.43	-0.62	0.71
Written Conventions	18	0.12	0.80	-1.43	1.56
Writing Strategies	15	0.31	0.60	-1.18	1.01
Writing Applications Score	1	0.23	N/A	0.23	0.23
All operational mulitple-choice items	75	-0.01	0.79	-2.14	1.56
Field-test items	80	0.60	1.00	-1.71	2.50

Table 7.B.4 IRT b-values for English–Language Arts Grade 5

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Word Analysis and Vocabulary Development	14	-0.44	0.95	-2.49	1.32
Reading Comprehension	16	0.17	0.83	-1.68	1.56
Literary Response and Analysis	12	-0.41	0.70	-1.33	1.12
Written Conventions	17	-0.25	0.99	-1.79	1.71
Writing Strategies	16	0.24	0.49	-0.72	1.05
All operational items	75	-0.12	0.87	-2.49	1.71
Field-test items	82	0.34	0.88	-2.80	2.12

Table 7.B.5 IRT b-values for English–Language Arts Grade 6

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Word Analysis and Vocabulary Development	13	-0.19	0.59	-1.00	0.60
Reading Comprehension	17	0.29	0.60	-1.18	1.32
Literary Response and Analysis	12	0.07	0.58	-0.76	1.21
Written Conventions	16	-0.20	0.86	-1.62	1.09
Writing Strategies	17	0.11	0.48	-0.76	0.78
All operational items	75	0.03	0.66	-1.62	1.32
Field-test items	81	0.35	0.78	-1.16	2.27

Table 7.B.6 IRT b-values for English–Language Arts Grade 7

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Word Analysis and Vocabulary Development	11	-0.03	0.65	-0.75	1.21
Reading Comprehension	18	0.18	0.72	-0.76	1.41
Literary Response and Analysis	13	0.44	0.56	-0.52	1.37
Written Conventions	16	0.24	0.87	-1.79	1.76
Writing Strategies	17	0.35	0.61	-0.50	2.03
Writing Applications Score	1	-0.53	N/A	-0.53	-0.53
All operational mulitple-choice items	75	0.25	0.71	-1.79	2.03
Field-test items	80	0.67	0.89	-0.97	3.36

Table 7.B.7 IRT b-values for English–Language Arts Grade 8

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Word Analysis and Vocabulary Development	9	-0.46	0.63	-1.49	0.74
Reading Comprehension	18	-0.29	0.67	-1.39	0.82
Literary Response and Analysis	15	-0.07	0.50	-1.05	1.06
Written Conventions	16	-0.07	0.55	-1.39	0.83
Writing Strategies	17	-0.16	0.59	-1.13	0.64
All operational items	75	-0.19	0.61	-1.49	1.06
Field-test items	74	0.12	0.95	-2.11	1.97

Table 7.B.8 IRT b-values for English–Language Arts Grade 9

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Word Analysis and Vocabulary Development	8	0.10	0.38	-0.31	0.81
Reading Comprehension	18	-0.18	0.64	-2.04	0.81
Literary Response and Analysis	16	-0.25	0.45	-1.23	0.38
Written Conventions	13	0.01	0.57	-0.82	1.32
Writing Strategies	20	0.36	0.58	-1.26	1.19
All operational items	75	0.01	0.60	-2.04	1.32
Field-test items	73	0.88	0.69	-0.73	2.36

Table 7.B.9 IRT b-values for English–Language Arts Grade 10

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Word Analysis and Vocabulary Development	8	-0.48	0.57	-1.47	0.30
Reading Comprehension	18	-0.16	0.43	-1.19	0.58
Literary Response and Analysis	16	-0.11	0.59	-1.52	0.88
Written Conventions	13	-0.42	0.64	-1.42	0.46
Writing Strategies	20	-0.25	0.59	-1.14	1.02
All operational items	75	-0.25	0.58	-1.52	1.02
Field-test items	83	0.55	0.73	-0.99	1.95

Table 7.B.10 IRT b-values for English–Language Arts Grade 11

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Word Analysis and Vocabulary Development	8	-0.42	0.48	-1.33	0.01
Reading Comprehension	19	-0.04	0.61	-1.30	1.69
Literary Response and Analysis	17	0.05	0.76	-1.66	1.21
Written Conventions	9	-0.56	0.55	-1.54	0.49
Writing Strategies	22	-0.36	0.44	-1.01	0.42
All operational items	75	-0.22	0.63	-1.66	1.69
Field-test items	72	0.33	0.77	-1.60	2.42

Table 7.B.11 IRT b-values for History–Social Science Grade 8

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
World History and Geography: Ancient Civ.	16	0.14	0.51	-1.26	0.67
Late Antiquity and the Middle Ages	14	0.19	0.36	-0.46	0.82
Renaissance/Reformation	10	0.26	0.36	-0.42	0.68
U.S. Constitution and the Early Republic	22	0.15	0.43	-0.89	0.81
Civil War and Its Aftermath	13	0.15	0.32	-0.45	0.81
All operational items	75	0.17	0.41	-1.26	0.82
Field-test items	42	1.00	0.83	-1.17	2.30

Table 7.B.12 IRT b-values for World History

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Development of Modern Political Thought	13	0.09	0.29	-0.27	0.54
Industrial Expansion and Imperialism	10	0.02	0.27	-0.53	0.34
Causes and Effects of the First World War	14	0.16	0.45	-0.43	1.24
Causes and Effects of the Second World War	13	0.10	0.32	-0.59	0.50
International Developments in the Post-WW II Era	10	0.35	0.42	-0.33	1.00
All operational items	60	0.14	0.37	-0.59	1.24
Field-test items	42	0.59	0.56	-0.42	1.66

Table 7.B.13 IRT b-values for History–Social Science Grade 11

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Foundations of Amer. Pol. & Social Thought	10	0.02	0.56	-0.92	0.80
Industrialization and the U.S. Role as a World Power	13	0.09	0.50	-1.01	0.61
United States Between the World Wars	12	0.10	0.42	-0.81	0.84
World War II and Foreign Affairs	12	0.08	0.56	-1.02	1.07
Post-World War II Domestic Issues	13	0.06	0.34	-0.56	0.53
All operational items	60	0.07	0.48	-1.02	1.07
Field-test items	42	0.39	0.69	-0.84	1.92

Table 7.B.14 IRT b-values for Mathematics Grade 2

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Place Value, Addition, and Subtraction	15	-0.81	0.66	-1.42	0.54
Multiplication, Division, and Fractions	23	-0.86	1.08	-2.46	2.30
Algebra and Functions	6	-0.77	0.80	-2.03	0.39
Measurement and Geometry	14	-1.05	0.91	-3.11	0.11
Statistics, Data Analysis, and Probability	7	-0.76	1.25	-2.19	0.98
All operational items	65	-0.87	0.97	-3.11	2.30
Field-test items	42	-0.67	1.32	-3.06	1.75

Table 7.B.15 IRT b-values for Mathematics Grade 3

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Place Value, Fractions, and Decimals	16	-0.76	1.02	-2.13	1.46
Addition, Subtraction, Multiplication, Division	16	-0.42	0.73	-2.16	1.01
Algebra and Functions	12	-0.52	0.70	-2.16	0.57
Measurement and Geometry	16	-0.87	1.10	-2.50	1.00
Statistics, Data Analysis, and Probability	5	-1.29	0.19	-1.65	-1.11
All operational items	65	-0.70	0.92	-2.50	1.46
Field-test items	42	-0.06	1.05	-2.37	2.01

Table 7.B.16 IRT b-values for Mathematics Grade 4

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Decimals, Fractions, and Negative Numbers	17	-0.78	0.94	-2.09	1.09
Operations and Factoring	14	-0.51	0.55	-1.76	0.34
Algebra and Functions	18	-0.80	0.61	-1.85	0.53
Measurement and Geometry	12	-0.26	0.70	-1.02	1.45
Statistics, Data Analysis, and Probability	4	-0.54	0.52	-1.16	0.03
All operational items	65	-0.62	0.74	-2.09	1.45
Field-test items	42	0.39	1.08	-1.75	3.01

Table 7.B.17 IRT b-values for Mathematics Grade 5

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Estimation, Percents, and Factoring	12	-0.18	1.08	-2.53	1.57
Operations with Fractions and Decimals	17	-0.13	0.88	-2.02	1.31
Algebra and Functions	17	-0.35	0.65	-1.60	0.77
Measurement and Geometry	15	-0.04	0.67	-1.11	1.45
Statistics, Data Analysis, and Probability	4	-0.86	0.53	-1.60	-0.32
All operational items	65	-0.22	0.83	-2.53	1.57
Field-test items	42	0.53	0.89	-1.95	3.31

Table 7.B.18 IRT b-values for Mathematics Grade 6

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Ratios, Proportions, Percentages, Neg. Fractions	15	-0.06	0.68	-1.54	1.23
Operations and Problem Solving with Fractions	10	-0.47	0.55	-1.50	0.42
Algebra and Functions	19	-0.66	0.85	-2.41	0.84
Measurement and Geometry	10	0.14	0.64	-0.51	1.70
Statistics, Data Analysis, and Probability	11	0.13	0.90	-1.10	1.44
All operational items	65	-0.24	0.82	-2.41	1.70
Field-test items	42	0.37	0.76	-0.85	2.41

Table 7.B.19 IRT b-values for Mathematics Grade 7

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Rational Numbers	14	-0.13	0.58	-1.29	0.97
Exponents, Powers, and Roots	8	0.29	0.49	-0.51	1.39
Quant. Relationships and Evaluating Expressions	10	-0.43	0.99	-2.00	1.27
Multistep Problems, Graphing, and Functions	15	0.17	0.82	-1.02	1.87
Measurement and Geometry	13	-0.08	0.51	-1.11	0.81
Statistics, Data Analysis, and Probability	5	-0.29	0.57	-0.82	0.61
All operational items	65	-0.05	0.74	-2.00	1.87
Field-test items	42	0.81	0.81	-0.61	2.21

Table 7.B.20 IRT b-values for General Mathematics

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Rational Numbers	14	0.17	0.77	-1.19	1.29
Exponents, Powers, and Roots	10	0.53	0.48	-0.14	1.36
Quant. Relationships and Evaluating Expressions	11	-0.09	0.80	-1.44	0.94
Multistep Problems, Graphing, and Functions	10	0.26	0.82	-0.91	1.55
Measurement and Geometry	11	0.56	0.77	-0.48	2.37
Statistics, Data Analysis, and Probability	9	-0.04	0.75	-0.59	1.39
All operational items	65	0.23	0.78	-1.44	2.37
Field-test items	6	1.05	0.64	0.09	1.91

Table 7.B.21 IRT b-values for Algebra I

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Number Properties, Operations, and Linear Equations	17	-0.54	0.78	-1.52	1.83
Graphing and Systems of Linear Equations	14	0.01	0.47	-0.74	0.64
Quadratics and Polynomials	21	0.03	0.86	-1.41	1.37
Functions and Rational Expressions	13	0.48	0.80	-1.03	1.79
All operational items	65	-0.03	0.83	-1.52	1.83
Field-test items	42	0.51	0.84	-1.11	2.40

Table 7.B.22 IRT b-values for Geometry

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Logic and Geometric Proofs	23	-1.05	0.81	-2.46	0.71
Volume and Area Formulas	11	-0.63	0.74	-1.38	0.85
Angle Relationships, Constructions, and Lines	16	-0.51	0.74	-1.98	0.64
Trigonometry	15	-0.71	0.81	-2.16	0.68
All operational items	65	-0.77	0.81	-2.46	0.85
Field-test items	42	-0.06	1.03	-2.50	2.50

Table 7.B.23 IRT b-values for Algebra II

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Polynomials and Rational Expressions	19	-0.96	1.04	-3.55	0.42
Quadratics, Conics, and Complex Numbers	17	-0.29	0.81	-1.94	0.91
Exponents and Logarithms	15	-0.44	0.60	-1.35	0.90
Series, Combinatorics, Probability and Statistics	14	0.01	0.89	-1.49	1.40
All operational items	65	-0.45	0.93	-3.55	1.40
Field-test items	42	-0.01	0.81	-2.17	1.70

Table 7.B.24 IRT b-values for Summative High School Mathematics

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Algebra I	18	-1.02	0.81	-2.86	0.35
Geometry	19	-0.73	0.69	-2.44	0.39
Algebra II	23	-0.76	0.68	-1.93	0.61
Probability and Statistics	5	-0.34	0.89	-1.46	1.01
All operational items	65	-0.79	0.76	-2.86	1.01
Field-test items	42	-0.23	0.85	-2.10	2.42

Table 7.B.25 IRT b-values for Integrated Mathematics 1

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Number Properties, Operations, and Linear Equations	15	-0.43	0.59	-1.23	1.34
Graphing	9	-0.08	0.37	-0.61	0.56
Quadratics and Polynomials	14	0.05	0.68	-0.93	0.98
Functions and Rational Expressions	7	0.14	0.40	-0.36	0.79
Geometry	20	0.38	0.48	-0.34	1.45
All operational items	65	0.04	0.61	-1.23	1.45
Field-test items	6	0.29	0.70	-0.70	1.44

Table 7.B.26 IRT b-values for Integrated Mathematics 2

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Algebra I	20	-0.16	0.73	-1.53	0.82
Logic and Geometric Proofs	22	-0.20	0.55	-1.30	0.61
Angle Relationships, Constructions, and Lines	8	-0.04	0.44	-0.64	0.66
Trigonometry	10	-0.18	0.45	-0.87	0.38
Algebra II/ Probability and Statistics	5	0.03	0.75	-0.94	0.86
All operational items	65	-0.15	0.61	-1.53	0.86
Field-test items	6	0.17	0.54	-0.62	0.74

Table 7.B.27 IRT b-values for Integrated Mathematics 3

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Geometry	5	-0.25	0.82	-1.27	1.13
Polynomials and Rational Expressions	19	-0.21	0.74	-1.92	0.79
Quadratics, Conics, and Complex Numbers	17	-0.11	0.73	-1.63	1.17
Exponents and Logarithms	15	-0.15	0.45	-0.95	1.00
Series, Combinatorics, Probability and Statistics	9	0.44	0.72	-0.86	1.19
All operational items	65	-0.08	0.72	-1.92	1.19
Field-test items	6	0.10	0.54	-0.90	0.70

Table 7.B.28 IRT b-values for Science Grade 5

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Physical Science 5	11	-0.69	0.71	-1.97	0.35
Physical Science 4	8	-0.74	0.46	-1.29	-0.03
Life Science 5	13	-0.55	0.76	-1.91	0.62
Life Science 4	9	-0.75	0.73	-1.52	0.38
Earth Science 5	11	-0.44	0.81	-1.65	0.74
Earth Science 4	8	-0.06	0.70	-1.09	0.85
All operational items	60	-0.55	0.75	-1.97	0.85
Field-test items	120	-0.03	0.86	-2.06	2.55

Table 7.B.29 IRT b-values for Science Grade 8

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Motion	8	-0.13	0.53	-0.89	0.75
Forces, Density, and Buoyancy	13	-0.16	0.63	-0.90	1.23
Structure of Matter and Periodic Table	16	0.07	0.56	-1.01	0.97
Earth in the Solar system	7	-0.29	0.78	-1.33	1.18
Reactions and the Chemistry of Living Systems	10	0.16	0.62	-0.76	1.46
Investigation and Experimentation	6	-0.11	0.50	-0.77	0.72
All operational items	60	-0.05	0.62	-1.33	1.46
Field-test items	120	0.15	0.66	-1.39	1.56

Table 7.B.30 IRT b-values for Life Science

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Cell Biology	10	0.02	0.43	-0.66	0.58
Genetics	12	-0.06	0.68	-1.02	1.05
Physiology	10	-0.32	0.72	-1.91	0.53
Ecology	11	-0.34	0.52	-1.58	0.30
Evolution	11	-0.05	0.32	-0.46	0.73
Investigation and Experimentation	6	-0.45	0.41	-1.00	0.14
All operational items	60	-0.18	0.57	-1.91	1.05
Field-test items	120	0.13	0.73	-1.73	2.36

Table 7.B.31 IRT b-values for Biology

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Cell Biology	9	-0.03	0.33	-0.46	0.46
Genetics	18	-0.22	0.59	-1.67	0.88
Ecology and Evolution	16	-0.15	0.35	-0.97	0.46
Physiology	11	-0.45	0.69	-1.89	0.83
Investigation and Experimentation	6	-0.29	0.26	-0.69	-0.02
All operational items	60	-0.22	0.51	-1.89	0.88
Field-test items	120	0.22	0.76	-1.97	2.82

Table 7.B.32 IRT b-values for Chemistry

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Atomic and Molecular Structure	8	-0.65	0.43	-1.33	0.04
Chemical Bonds, Biochemistry	9	-0.53	0.69	-1.57	0.50
Kinetics, Thermodynamics	14	-0.17	0.61	-1.11	1.00
Chemical Reactions	13	0.04	0.65	-0.86	1.24
Conservation of Matter and Stoichiometry	10	-0.21	0.68	-1.46	0.85
Investigation and Experimentation	6	-0.73	0.27	-1.11	-0.27
All operational items	60	-0.30	0.66	-1.57	1.24
Field-test items	120	0.31	0.87	-1.57	2.33

Table 7.B.33 IRT b-values for Earth Science

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Astronomy and Cosmology	12	-0.06	0.61	-1.43	0.76
Solid Earth	14	-0.09	0.53	-1.02	1.28
The Earth's Energy	28	0.16	0.42	-0.70	0.91
Investigation and Experimentation	6	-0.18	0.46	-1.03	0.45
All operational items	60	0.02	0.51	-1.43	1.28
Field-test items	120	0.52	0.68	-1.09	2.52

Table 7.B.34 IRT b-values for Physics

Content Area	Number of items	Mean	Standard Deviation	Minimum	Maximum
Motion and Forces	12	-0.24	0.74	-1.05	1.20
Conservation of Energy and Momentum	12	-0.04	0.72	-1.83	1.24
Heat and Thermodynamics	9	-0.47	0.57	-1.61	0.39
Waves	10	-0.23	0.60	-1.09	0.94
Electric and Magnetic Phenomena	11	0.05	0.52	-0.73	0.87
Investigation and Experimentation	6	-0.26	0.76	-1.49	0.99
All operational items	60	-0.18	0.68	-1.83	1.24
Field-test items	120	0.03	0.92	-2.32	2.38

Table 7.B.35 Distribution of IRT b-values for English–Language Arts

IRT b-value	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11
>=3.5										
3.0 - < 3.5										
2.5 - < 3.0										
2.0 - < 2.5	1									
1.5 - < 2.0			1	3		1				1
1.0 - < 1.5	3	3	4	5	6	1	1	2	1	2
0.5 - < 1.0	8	7	19	10	16	9	8	13	5	3
0.0 - < 0.5	16	15	17	19	17	14	21	24	20	26
-0.5 - < 0.0	18	16	13	13	18	22	20	23	25	17
-1.0 - < -0.5	11	8	11	9	14	15	17	10	14	19
-1.5 - < -1.0	6	7	8	13	3	11	8	2	9	5
-2.0 - < -1.5	1	8	1	2	1	1			1	2
-2.5 - < -2.0	1		1	1		1		1		
-3.0 - < -2.5		1								
-3.5 - < -3.0										
< -3.5										
Total	65	65	75	75	75	75	75	75	75	75

Table 7.B.36 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		1	1
0.5 - < 1.0	19	7	12
0.0 - < 0.5	32	31	23
-0.5 - < 0.0	20	18	17
-1.0 - < -0.5	3	3	5
-1.5 - < -1.0	1		2
-2.0 - < -1.5			
-2.5 - < -2.0			
-3.0 - < -2.5			
-3.5 - < -3.0			
< -3.5			
Total	75	60	60

Table 7.B.37 Distribution of IRT b-values for Mathematics Grade 2 through 7

IRT b-value	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
>=3.5						
3.0 - < 3.5						
2.5 - < 3.0						
2.0 - < 2.5	1					
1.5 - < 2.0				1	1	2
1.0 - < 1.5		2	2	5	4	3
0.5 - < 1.0	4	6	2	6	7	5
0.0 - < 0.5	9	7	10	11	11	18
-0.5 - < 0.0	7	13	15	19	19	21
-1.0 - < -0.5	11	11	15	12	13	8
-1.5 - < -1.0	20	13	13	6	5	7
-2.0 - < -1.5	4	8	6	3	3	
-2.5 - < -2.0	7	5	2	1	2	1
-3.0 - < -2.5	1			1		
-3.5 - < -3.0	1					
< -3.5						
Total	65	65	65	65	65	65

Table 7.B.38 Distribution of IRT b-values for Mathematics End-of-Course CSTs

IRT b-value	General Math	Algebra I	Geometry	Algebra II	Summative H.S. Math	Integrated Math 1	Integrated Math 2	Integrated Math 3
>=3.5								
3.0 - < 3.5								
2.5 - < 3.0								
2.0 - < 2.5	1							
1.5 - < 2.0	2	2						
1.0 - < 1.5	7	7		2	1	3		4
0.5 - < 1.0	14	13	4	6	2	13	8	11
0.0 - < 0.5	14	8	8	15	6	17	21	14
-0.5 - < 0.0	14	14	14	12	11	20	17	17
-1.0 - < -0.5	9	12	11	13	20	10	12	14
-1.5 - < -1.0	4	8	16	11	15	2	6	2
-2.0 - < -1.5		1	9	2	7		1	3
-2.5 - < -2.0			3	2	2			
-3.0 - < -2.5				1	1			
-3.5 - < -3.0								
< -3.5				1				
Total	65	65	65	65	65	65	65	65

Table 7.B.39 Distribution of IRT b-values for Science

IRT b-value	Grade 5 Science	Grade 8 Science	Life Science	Biology	Chemistry	Earth Science	Physics
>=3.5							
3.0 - < 3.5							
2.5 - < 3.0							
2.0 - < 2.5							
1.5 - < 2.0							
1.0 - < 1.5		3	2		1	1	3
0.5 - < 1.0	5	8	4	3	6	11	5
0.0 - < 0.5	12	16	19	14	13	20	14
-0.5 - < 0.0	11	18	20	29	13	20	17
-1.0 - < -0.5	12	13	12	9	18	5	15
-1.5 - < -1.0	12	2	1	3	8	3	4
-2.0 - < -1.5	8		2	2	1		2
-2.5 - < -2.0							
-3.0 - < -2.5							
-3.5 - < -3.0							
< -3.5							
Total	60	60	60	60	60	60	60

Table 7.B.40 Distribution of IRT b-values for English–Language Arts (field-test items)

IRT b-value	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11
>=3.5										
3.0 - < 3.5						1				
2.5 - < 3.0	1		1			1				
2.0 - < 2.5	1	1	5	2	2	3		6		1
1.5 - < 2.0	3	5	11	5	3	10	7	9	11	7
1.0 - < 1.5	6	7	12	10	15	13	9	12	16	3
0.5 - < 1.0	23	11	15	19	15	14	8	22	17	16
0.0 - < 0.5	14	18	15	19	15	17	15	20	18	20
-0.5 - < 0.0	12	18	10	18	21	15	17	1	13	17
-1.0 - < -0.5	12	8	6	3	9	6	9	3	8	6
-1.5 - < -1.0	4	9	2	3	1		4			1
-2.0 - < -1.5	5	6	3	2			4			1
-2.5 - < -2.0	1	1					1			
-3.0 - < -2.5				1						
-3.5 - < -3.0										
< -3.5										
Total	82	84	80	82	81	80	74	73	83	72

Table 7.B.41 Distribution of IRT b-values for History–Social Science (field-test items)

IRT b-value	Grade 8	World History	Grade 11
>=3.5			
3.0 - < 3.5			
2.5 - < 3.0			
2.0 - < 2.5	4		
1.5 - < 2.0	8	2	4
1.0 - < 1.5	14	11	1
0.5 - < 1.0	4	7	14
0.0 - < 0.5	7	15	10
-0.5 - < 0.0	3	7	8
-1.0 - < -0.5	1		5
-1.5 - < -1.0	1		
-2.0 - < -1.5			
-2.5 - < -2.0			
-3.0 - < -2.5			
-3.5 - < -3.0			
< -3.5			
Total	42	42	42

Table 7.B.42 Distribution of IRT b-values for Mathematics Grade 2 through 7 (field-test items)

IRT b-value	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
>=3.5						
3.0 - < 3.5			1	1		
2.5 - < 3.0						
2.0 - < 2.5		1	2	2	2	4
1.5 - < 2.0	2		4		1	6
1.0 - < 1.5	3	4	6	8	5	6
0.5 - < 1.0	5	7	5	11	9	10
0.0 - < 0.5	4	13	7	10	10	8
-0.5 - < 0.0	6	6	7	5	9	6
-1.0 - < -0.5	5	3	8	3	6	2
-1.5 - < -1.0	5	1		1		
-2.0 - < -1.5	5	4	2	1		
-2.5 - < -2.0	1	3				
-3.0 - < -2.5	4					
-3.5 - < -3.0	2					
< -3.5						
Total	42	42	42	42	42	42

Table 7.B.43 Distribution of IRT b-values for Mathematics End-of-Course CSTs (field-test items)

IRT b-value	General Math	Algebra I	Geometry	Algebra II	Summative H.S. Math	Integrated Math 1	Integrated Math 2	Integrated Math 3
>=3.5								
3.0 - < 3.5								
2.5 - < 3.0			1					
2.0 - < 2.5		2			1			
1.5 - < 2.0	2	4	3	1	1			
1.0 - < 1.5		6	2	3	1	1		
0.5 - < 1.0	3	7	4	8	2	1	3	2
0.0 - < 0.5	1	12	11	13	10	2	1	1
-0.5 - < 0.0		7	8	7	11	1	1	2
-1.0 - < -0.5		2	7	4	10	1	1	1
-1.5 - < -1.0		2	2	4	4			
-2.0 - < -1.5			3	1	1			
-2.5 - < -2.0				1	1			
-3.0 - < -2.5			1					
-3.5 - < -3.0								
< -3.5								
Total	6	42	42	42	42	6	6	6

Table 7.B.44 Distribution of IRT b-values for Science (field-test items)

IRT b-value	Grade 5 Science	Grade 8 Science	Life Science	Biology	Chemistry	Earth Science	Physics
>=3.5							
3.0 - < 3.5							
2.5 - < 3.0	1			1		1	
2.0 - < 2.5			1		2	1	3
1.5 - < 2.0	4	1	4	6	11	6	3
1.0 - < 1.5	9	11	12	10	11	22	12
0.5 - < 1.0	20	23	19	21	26	31	22
0.0 - < 0.5	24	39	24	39	27	31	17
-0.5 - < 0.0	29	23	40	22	22	20	30
-1.0 - < -0.5	17	15	15	15	13	6	20
-1.5 - < -1.0	12	8	4	4	6	2	7
-2.0 - < -1.5	3		1	2	2		5
-2.5 - < -2.0	1						1
-3.0 - < -2.5							
-3.5 - < -3.0							
< -3.5							
Total	120	120	120	120	120	120	120

Table 7.B.45 IRT Model Data Fit Distribution for English–Language Arts

Operational Items	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Grade 7		Grade 8		Grade 9		Grade 10		Grade 11	
Flag	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
A	33	51%	29	45%	23	30%	25	33%	34	45%	26	34%	37	49%	40	53%	33	44%	26	35%
B	18	28%	14	22%	29	38%	25	33%	22	29%	30	39%	20	27%	10	13%	15	20%	20	27%
C	8	12%	18	28%	17	22%	21	28%	13	17%	15	20%	15	20%	14	19%	13	17%	9	12%
D	4	6%	4	6%	6	8%	4	5%	5	7%	5	7%	1	1%	8	11%	13	17%	16	21%
F	2	3%	0	0%	1	1%	0	0%	1	1%	0	0%	2	3%	3	4%	1	1%	4	5%
Total	65	100%	65	100%	76	100%	75	100%	75	100%	76	100%	75	100%	75	100%	75	100%	75	100%

Table 7.B.46 IRT Model Data Fit Distribution for History–Social Science Grade 8, World History, Grade 11

Operational Items	Grade 8		World History		Grade 11	
Flag	N	Pct.	N	Pct.	N	Pct.
A	48	64%	34	57%	30	50%
B	18	24%	18	30%	17	28%
C	6	8%	8	13%	7	12%
D	3	4%	0	0%	5	8%
F	0	0%	0	0%	1	2%
Total	75	100%	60	100%	60	100%

Table 7.B.47 IRT Model Data Fit Distribution for Mathematics Grade 2 through 7

Operational Items	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Grade 7	
Flag	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
A	37	57%	33	51%	38	58%	29	45%	32	49%	20	31%
B	22	34%	26	40%	16	25%	20	31%	16	25%	25	38%
C	5	8%	4	6%	9	14%	14	22%	11	17%	15	23%
D	1	2%	2	3%	2	3%	2	3%	5	8%	5	8%
F	0	0%	0	0%	0	0%	0	0%	1	2%	0	0%
Total	65	100%	65	100%	65	100%	65	100%	65	100%	65	100%

Table 7.B.48 IRT Model Data Fit Distribution for Mathematics End-of-Course Tests

Operational Items	General Mathematics		Algebra I		Geometry		Algebra II		Summative High School Mathematics		Integrated Mathematics 1		Integrated Mathematics 2		Integrated Mathematics 3	
Flag	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
A	19	29%	16	25%	22	34%	27	42%	34	52%	23	35%	16	25%	10	15%
B	29	45%	26	40%	23	35%	21	32%	18	28%	16	25%	18	28%	18	28%
C	13	20%	23	35%	20	31%	17	26%	13	20%	25	38%	21	32%	26	40%
D	4	6%	0	0%	0	0%	0	0%	0	0%	1	2%	10	15%	7	11%
F	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	4	6%
Total	65	100%	65	100%	65	100%	65	100%	65	100%	65	100%	65	100%	65	100%

Table 7.B.49 IRT Model Data Fit Distribution for Science

Operational Items	Grade 5 Science		Grade 8 Science		Grade 10 Life Science		Biology		Chemistry		Earth Science		Physics	
Flag	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
A	20	33%	25	42%	31	52%	33	55%	16	27%	24	40%	13	22%
B	26	43%	23	38%	12	20%	15	25%	29	48%	24	40%	16	27%
C	10	17%	7	12%	8	13%	9	15%	14	23%	12	20%	25	42%
D	4	7%	3	5%	6	10%	1	2%	1	2%	0	0%	5	8%
F	0	0%	2	3%	3	5%	2	3%	0	0%	0	0%	1	2%
Total	60	100%	60	100%	60	100%	60	100%	60	100%	60	100%	60	100%

Table 7.B.50 IRT Model Data Fit Distribution for English–Language Arts (field-test items)

Operational Items	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Grade 7		Grade 8		Grade 9		Grade 10		Grade 11	
Flag	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
A	17	21%	17	20%	15	19%	17	21%	12	15%	11	14%	14	19%	7	10%	11	13%	11	15%
B	16	20%	22	26%	12	15%	14	17%	17	21%	19	24%	16	22%	10	14%	13	16%	15	21%
C	28	34%	26	31%	24	30%	34	41%	33	41%	25	31%	32	43%	27	37%	24	29%	22	31%
D	11	13%	8	10%	8	10%	7	9%	12	15%	10	13%	6	8%	14	19%	10	12%	3	4%
F	10	12%	11	13%	21	26%	10	12%	7	9%	15	19%	6	8%	15	21%	25	30%	21	29%
Total	82	100%	84	100%	80	100%	82	100%	81	100%	80	100%	74	100%	73	100%	83	100%	72	100%

Table 7.B.51 IRT Model Data Fit Distribution for History–Social Science Grade 8, World History, Grade 11 (field-test items)

Field-test Items	Grade 8		World History		Grade 11	
Flag	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**
A	5	12%	2	5%	10	24%
B	6	14%	9	21%	6	14%
C	8	19%	20	48%	20	48%
D	3	7%	5	12%	3	7%
F	20	48%	6	14%	3	7%
Total	42	100%	42	100%	42	100%

Table 7.B.52 IRT Model Data Fit Distribution for Mathematics Grade 2 through 7 (field-test items)

Field-test Items	Grade 2		Grade 3		Grade 4		Grade 5		Grade 6		Grade 7	
Flag	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**
A	14	33%	9	21%	10	24%	11	26%	10	24%	3	7%
B	11	26%	15	36%	8	19%	10	24%	9	21%	11	26%
C	12	29%	13	31%	12	29%	17	40%	13	31%	11	26%
D	1	2%	3	7%	5	12%	1	2%	7	17%	6	14%
F	4	10%	2	5%	7	17%	3	7%	3	7%	11	26%
Total	42	100%	42	100%	42	100%	42	100%	42	100%	42	100%

Table 7.B.53 IRT Model Data Fit Distribution for Mathematics End-of-Course Tests (field-test items)

Field-test Items	General Mathematics		Algebra I		Geometry		Algebra II		Summative H.S. Mathematics		Integrated Mathematics 1		Integrated Mathematics 2		Integrated Mathematics 3	
Flag	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**
A	3	50%	2	5%	10	24%	12	29%	14	33%	3	50%	1	17%	0	0%
B	0	0%	9	21%	6	14%	11	26%	13	31%	1	17%	1	17%	1	17%
C	2	33%	18	43%	19	45%	15	36%	11	26%	2	33%	1	17%	4	67%
D	0	0%	7	17%	6	14%	4	10%	1	2%	0	0%	0	0%	0	0%
F	1	17%	6	14%	1	2%	0	0%	3	7%	0	0%	3	50%	1	17%
Total	6	100%	42	100%	42	100%	42	100%	42	100%	6	100%	6	100%	6	100%

Table 7.B.54 IRT Model Data Fit Distribution for Science (field-test items)

Field-test Items	Grade 5 Science		Grade 8 Science		Grade 10 Life Science		Biology		Chemistry		Earth Science		Physics	
Flag	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**	**N**	**Pct.**
A	29	24%	27	23%	26	22%	26	22%	32	27%	31	26%	19	16%
B	30	25%	32	27%	24	20%	24	20%	30	25%	30	25%	27	23%
C	41	34%	51	43%	46	38%	40	33%	41	34%	38	32%	36	30%
D	9	8%	6	5%	12	10%	13	11%	7	6%	7	6%	25	21%
F	11	9%	4	3%	12	10%	17	14%	10	8%	14	12%	13	11%
Total	120	100%	120	100%	120	100%	120	100%	120	100%	120	100%	120	100%

Chapter 8: Reliability

This chapter summarizes the evidence of reliability for the California Standardized Tests for the spring 2007 administration. These analyses were conducted for each of the 38 operational CSTs. The reliability analyses included the computation of overall and subscore reliabilities, standard errors of measurement (SEMs) and inter-correlations of reporting cluster subscores. IRT-based conditional SEMs were computed, and the analyses of accuracy and consistency of proficiency level classifications were also performed for the overall examinee population. Reliability analyses are also reported at the subgroup level.

Reliability

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 distributions 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 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 reported below:

$$\alpha = \frac{n}{n-1}\left[1 - \frac{\sum_{i=1}^{n}\sigma_i^2}{\sigma_t^2}\right] \tag{8.1}$$

where

n is the number of items,

σ_i^2 is the variance of scores on the i-th item, and

σ_t^2 is the variance of the total score (either the total raw score or scale score).

The Standard Error of Measurement provides a measure of score instability in the score metric. The SEM was computed as follows:

$$\sigma_e = \sigma_t\sqrt{1-\alpha} \tag{8.2}$$

where

α is the reliability estimated using (8.1) above, and

σ_t^2 is the standard deviation of the total raw scores.

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% confident that the examinee's true score lies between 11 and 19 points (15 ± 3.76 rounded to the nearest integer).

The reliability analyses were conducted for all valid cases of the overall P1 examinee population with valid scores (99.8% of the data that was used for the August 15 reporting and approximately 99% of the total examinee population). Table 8.1 presents the results of reliability analyses on 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 CSTs, i.e., grade 8 for Algebra I, grade 9 for Geometry, grade 10 for Algebra II, grade 11 for Summative High School Math, and grade 10 for World History, are also presented in Table 8.1.

Table 8.1 Reliabilities and Standard Errors of Measurement for the CSTs

					Scale Score			Raw Score		
Subject Area	**CST**	**No. of Items**	**No. of Examinees**	**Reliab.**	**Mean**	**Std. Dev.**	**SEM**	**Mean**	**Std. Dev.**	**SEM**
English–Language Arts	**2**	65	452,972	0.94	345	62	15.19	41.60	13.86	3.39
	3	65	455,219	0.93	330	59	15.61	40.77	12.45	3.29
	4*	75	457,829	0.94	353	58	14.21	46.35	15.24	3.73
	5	75	466,854	0.94	343	54	13.23	45.11	14.58	3.57
	6	75	474,863	0.94	340	54	13.23	43.21	15.09	3.70
	7*	75	479,840	0.94	343	58	14.21	44.30	14.80	3.63
	8	75	479,717	0.93	339	58	15.35	45.70	14.58	3.86
	9	75	505,104	0.94	345	60	14.70	44.11	15.41	3.77
	10	75	478,921	0.94	331	59	14.45	44.75	15.93	3.90
**MC Only*	**11**	75	437,551	0.95	328	71	15.88	43.61	16.41	3.67
History–Social Science	**8**	75	478,975	0.93	330	60	15.87	38.18	14.72	3.89
	World History	60	491,079	0.91	321	61	18.30	29.59	11.67	3.50
	11	60	427,071	0.91	330	61	18.30	30.30	11.80	3.54
Math	**2**	65	453,919	0.93	369	82	21.70	47.90	11.73	3.10
	3	65	456,269	0.94	371	85	20.82	47.76	12.53	3.07
	4	65	459,557	0.94	366	73	17.88	47.07	13.16	3.22
	5	65	468,049	0.94	357	87	21.31	40.65	13.66	3.35
	6	65	475,529	0.93	343	69	18.26	38.44	13.17	3.48
	7	65	458,543	0.93	336	65	17.20	36.14	13.10	3.47
	General Mathematics	65	303,461	0.88	311	49	16.97	31.15	10.59	3.67
	Algebra I	65	738,231	0.89	311	61	20.23	29.49	11.15	3.70
	Geometry	65	369,311	0.93	310	68	17.99	33.44	13.23	3.50
	Algebra II	65	230,757	0.91	314	64	19.20	33.18	11.62	3.49
	High School Math	65	108,750	0.93	347	75	19.84	44.82	12.40	3.28
	Integrated Math 1	65	6,901	0.85	282	51	19.75	25.85	9.35	3.62
	Integrated Math 2	65	3,615	0.90	312	57	18.02	27.38	11.15	3.53
	Integrated Math 3	65	1,657	0.89	304	64	21.23	27.90	10.73	3.56
Science	**Grade 5 Science**	60	467,541	0.90	334	55	17.39	35.93	10.75	3.40
	Grade 8 Science	60	477,974	0.90	340	78	24.67	33.26	11.01	3.48
	Grade 10 Life Science	60	463,572	0.92	328	59	16.69	32.65	12.36	3.50
	Biology	60	505,229	0.92	336	51	14.42	32.66	12.06	3.41
	Chemistry	60	227,375	0.91	330	49	14.70	34.19	11.32	3.40
	Earth Science	60	206,118	0.90	320	44	13.91	31.12	11.14	3.52
	Physics	60	63,321	0.91	335	49	14.70	33.42	11.50	3.45
	Integrated Science 1	60	96,209	0.86	300	36	13.47	26.39	9.48	3.55

Subject 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
	Integrated Science 2	60	13,785	0.83	298	34	14.02	25.71	8.77	3.62
	Integrated Science 3	60	1,973	0.82	304	33	14.00	23.42	8.52	3.61
	Integrated Science 4	60	951	0.83	292	34	14.02	24.15	8.67	3.57
Grade-Specific	**Algebra I – 8**	65	238,426	0.91	337	68	20.40	34.19	12.04	3.61
	Geometry – 9	65	115,839	0.93	345	70	18.52	40.59	12.86	3.40
	Algebra II – 10	65	102,505	0.90	329	62	19.61	36.09	11.29	3.57
	High School Math – 11	65	92,108	0.93	341	73	19.31	43.92	12.41	3.28
	World History – 10	60	436,552	0.90	323	60	18.97	30.02	11.46	3.62

The results in Table 8.1 indicated that all grade-level CSTs for ELA, math, and history–social science were highly reliable, with reliabilities ranging from 0.91 to 0.95. The reliabilities for the higher-level CSTs for mathematics and science were also high and ranged from 0.89 to 0.93. The reliabilities were highly consistent across all CSTs within the subject areas of ELA and history–social science and across grade-level CSTs for mathematics. CSTs for Grade 5 Science and Grade 8 Science proved to be more reliable than the previous years, with a reliability of 0.90 for each test.

Reliability estimates for the end-of-course CSTs were more variable. Geometry, Summative High School Math, Biology, and Grade 10 Life Science were the more reliable of the end-of-course assessments, with reliabilities ranging from 0.92 to 0.93. The reliabilities for the integrated CSTs were comparatively lower, in general, ranging from 0.85 to 0.90 for the integrated math CSTs and from 0.82 to 0.86 for the integrated science CSTs. The CST for Integrated Science 4 exhibited lower reliability compared to previous years; the reliability was reduced from 0.90 in 2005 and 0.86 in 2006 to 0.83 in 2007.

Inter-correlations, Reliabilities, and SEMs for Reporting Clusters

For each CST, number-correct scores are computed for four-to-six reporting clusters[15]. Inter-correlations and reliability estimates for the reporting clusters are presented in Table 8.A.1 through Table 8.A.4 for the 38 CSTs. Single grade results are reported in Table 8.A.5 for tests where grade specific samples are used for equating. Consistent with previous years, the reliabilities across reporting clusters varied significantly according to the number of items in each cluster. For example, the reliabilities for three of the reporting clusters in Summative High School Math were among the highest of all end-of-course CSTs. However, the fourth reporting cluster (Probability and Statistics) consisting of only five items had a coefficient alpha of 0.53. Similar results were observed for inter-correlations among reporting clusters, that is, the reporting clusters based on fewer items tended to have lower inter-correlations with the other clusters.

Subgroup Reliabilities and SEMs[1]

The reliabilities of the 38 operational CSTs and the five grade-specific CSTs (as described earlier) were also examined for various subgroups of the examinee population. The subgroups included in these analyses were gender, ethnicity, enrollment in the National School Lunch Program (NSLP), provision of special services, and language proficiency.

For each subgroup analysis, reliability and SEM information is first reported for the test overall and then at the cluster score level. The tables also include the corresponding sample sizes and the number of items used to compute those reliabilities and errors of measurement. Table 8.A.6 through Table 8.A.10 present the overall reliabilities, while Table 8.A.11 through Table 8.A.25 present the

[15] For readers' interest, statistics are presented for reporting clusters and subgroups with fewer than 11 items, however, such results should not be used in making inferences.

cluster-based reliabilities for the various subgroups. Table 8.A.11 through Table 8.A.15 present the cluster-based reliabilities for the subgroups based on Gender and NSLP enrollment. The next set of tables, Table 8.A.16 through Table 8.A.20, show the same analyses for the subgroups based on provision of special services and the language fluency. The last set of tables, Table 8.A.21 through Table 8.A.25, present results for the subgroups based on primary ethnicity of the examinees.

The overall reliabilities for the various subgroups are compiled in Tables 8.A.26 and 8.A.27.

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 item response theory and are calculated by the IRTEQUATE module in 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 tasks are located and larger at the extremes where there are fewer tasks. An examinee's CSEM under the IRT framework is equal to the inverse of the square root of the test information function:

$$\mathrm{CSEM}(\hat{\theta}) = \frac{1}{\sqrt{\mathrm{I}(\theta)}} a, \tag{8.3}$$

where $\mathrm{CSEM}(\hat{\theta})$ is the standard error of measurement and $\mathrm{I}(\theta)$ is the test information function. 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 subject.

Standard errors of measurement vary across the scale. When a test has cut scores it is important to provide CSEMs at the cut scores. Table 8.2 presents the scale score CSEMs at the lowest score defining below basic, basic, proficient, and advanced levels for each CST.[16] These CSEMS tend to be similar within families of tests.

The CSEMs tended to be higher at the advanced cut points for all tests. The pattern of lower values of CSEMs at 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 in the extremes of the scale.

Table 8.2 Scale Score Conditional Standard Error of Measurement at Cut Points

Subject 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	20
	4*	269	13	300	13	350	13	393	15
	5	271	13	300	13	350	13	395	15
	6	268	13	300	13	350	13	394	15
	7*	263	15	300	13	350	14	401	16
	8	266	15	300	14	350	14	395	17
	9	265	15	300	13	350	14	397	17
	10	263	13	300	13	350	14	392	16
	11	259	15	300	14	350	15	396	18

* Including writing prompt

[16] Scale score CSEMs are not provided for the Integrated Science tests because these tests were not scaled using the same procedures as the other CSTs. See Chapter 3 for additional details.

Subject Area	CST	Below Basic		Basic		Proficient		Advanced	
		Min SS	CSEM	Min SS	CSEM	Min SS	CSEM	Min SS	CSEM
History–Social Science	**8**	271	16	300	15	350	15	396	17
	World History	275	17	300	18	350	17	400	20
	11	270	19	300	18	350	17	401	20
Mathematics	**2**	236	18	300	17	350	19	414	25
	3	236	17	300	17	350	18	414	23
	4	245	15	300	13	350	15	401	20
	5	248	19	300	18	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	20	300	18	350	18	428	22
	Geometry*	247	17	300	15	350	16	418	21
	Algebra II*	257	18	300	18	350	18	416	22
	High School Mathematics*	235	17	300	16	350	18	420	25
	Integrated Mathematics 1	249	20	300	19	350	19	425	23
	Integrated Mathematics 2	258	20	300	18	350	17	418	20
	Integrated Mathematics 3	252	22	300	20	350	20	428	23
Science*	**Grade 5 Science**	268	16	300	16	350	17	410	21
	Grade 8 Science	253	24	300	23	350	23	403	25
	Grade 10 Life Science	269	16	300	15	350	16	399	19
	Biology	276	15	300	13	350	13	394	16
	Chemistry	276	14	300	13	350	14	394	17
	Earth Science	277	14	300	14	350	14	393	17
	Physics	276	14	300	14	350	14	393	16

* Grade Specific
** CSEMS for the CSTs for Integrated 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 4.12). RELCLASS-COMP 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. RELCLASS-COMP also 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). 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 proficiency levels) and summing the entries in the diagonal.

The results of these analyses are presented in Tables 8.B.1 through 8.B.40 in Appendix 8.B, which starts on page 510. Tables 8.B.41 through Table 8.B.45 present same analyses for the five grade-specific CSTs. For ELA grades 4 and 7, two sets of tables are presented for the decision

classification analyses; a table for all examinees who attempted MC items and a second table for examinees who attempted MC as well as the Essay section.

Each table includes the contingency tables for the various proficiency level classifications. The proportion of accurately classified students can be determined by summing across the diagonals of the upper tables; these proportions ranged from 0.67 to 0.88 across all of the CSTs. The proportion of students that were classified consistently (diagonals of the lower tables) ranged from 0.57 to 0.83 across all proficiency levels for these CSTs. These lower overall magnitudes of decision accuracy and decision consistency are not surprising considering the numbers of proficiency levels that are reported for CST results.

When the decisions 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 0.99 across all CSTs. Similarly, the proportion of students that were classified consistently ranged from 0.87 to 0.98 for students classified into below proficient versus proficient and advanced. The values for both classification accuracy and classification consistency indices were higher for the subject area of mathematics, ranging from 0.95 to 0.99 and 0.93 to 0.98, respectively.

The proportion of students classified accurately and consistently was higher for 2007 compared to previous years.

References

Crocker, L. and Algina, J. "Introduction to Classical and Modern Test Theory" New York: Holt, 1986.

Cronbach, L.J. "Coefficient Alpha and the Internal Structure of Tests," *Psychometrika*, Vol. 16, pp. 292–334, 1951.

Feldt, L. S. and Brennan, R. L. "Reliability," in *Educational Measurement*. Edited by R. L. Linn. New York: Macmillan, 1989.

Livingston, S. A., and Lewis, C. "Estimating the Consistency and Accuracy of Classification Based on Test Scores," *Journal on Educational Measurement*, Vol. 32, pp. 179–197, 1995.

Appendix 8.A—Reliabilities and SEM Tables

Table 8.A.1 Subscore Reliabilities and Correlations for English–Language Arts

Subscore Reliabilities and Correlations for English–Language Arts								
Subscore Area	**# of Items**	**Correlation**					***Reliab.***	***SEM***
Grade 2		1	2	3	4	5		
1. Word Analysis and Vocabulary	22	1.00	0.77	0.69	0.80	0.65	0.85	1.90
2. Reading Comprehension	15	0.77	1.00	0.69	0.74	0.65	0.80	1.60
3. Literary Response and Analysis	6	0.69	0.69	1.00	0.65	0.57	0.63	1.01
4. Written and Oral Language Conventions	14	0.80	0.74	0.65	1.00	0.66	0.84	1.50
5. Writing Strategies	8	0.65	0.65	0.57	0.66	1.00	0.57	1.25
Grade 3		1	2	3	4	5		
1. Word Analysis and Vocabulary	20	1.00	0.72	0.71	0.70	0.68	0.80	1.76
2. Reading Comprehension	15	0.72	1.00	0.71	0.66	0.68	0.74	1.71
3. Literary Response and Analysis	8	0.71	0.71	1.00	0.63	0.65	0.68	1.16
4. Written and Oral Language Conventions	13	0.70	0.66	0.63	1.00	0.65	0.69	1.55
5. Writing Strategies	9	0.68	0.68	0.65	0.65	1.00	0.66	1.30
Grade 4		1	2	3	4	5		
1. Word Analysis and Vocabulary	18	1.00	0.78	0.72	0.75	0.74	0.81	1.65
2. Reading Comprehension	15	0.78	1.00	0.72	0.73	0.75	0.78	1.67
3. Literary Response and Analysis	9	0.72	0.72	1.00	0.69	0.69	0.69	1.27
4. Written and Oral Language Conventions	18	0.75	0.73	0.69	1.00	0.76	0.79	1.81
5. Writing Strategies	15	0.74	0.75	0.69	0.76	1.00	0.77	1.69
Grade 5		1	2	3	4	5		
1. Word Analysis and Vocabulary	14	1.00	0.73	0.73	0.73	0.72	0.77	1.51
2. Reading Comprehension	16	0.73	1.00	0.71	0.68	0.72	0.74	1.75
3. Literary Response and Analysis	12	0.73	0.71	1.00	0.68	0.69	0.76	1.41
4. Written and Oral Language Conventions	17	0.73	0.68	0.68	1.00	0.71	0.78	1.68
5. Writing Strategies	16	0.72	0.72	0.69	0.71	1.00	0.75	1.79
Grade 6		1	2	3	4	5		
1. Word Analysis and Vocabulary	13	1.00	0.73	0.70	0.74	0.76	0.75	1.54
2. Reading Comprehension	17	0.73	1.00	0.69	0.71	0.75	0.74	1.86
3. Literary Response and Analysis	12	0.70	0.69	1.00	0.67	0.71	0.68	1.54
4. Written and Oral Language Conventions	16	0.74	0.71	0.67	1.00	0.75	0.77	1.67
5. Writing Strategies	17	0.76	0.75	0.71	0.75	1.00	0.82	1.79

Subscore Reliabilities and Correlations for English–Language Arts

Subscore Area	# of Items	Correlation					*Reliab.*	*SEM*
Grade 7		1	2	3	4	5		
1. Word Analysis and Vocabulary	11	1.00	0.72	0.68	0.67	0.68	0.67	1.41
2. Reading Comprehension	18	0.72	1.00	0.73	0.71	0.76	0.79	1.81
3. Literary Response and Analysis	13	0.68	0.73	1.00	0.67	0.71	0.71	1.60
4. Written and Oral Language Conventions	16	0.67	0.71	0.67	1.00	0.75	0.75	1.72
5. Writing Strategies	17	0.68	0.76	0.71	0.75	1.00	0.80	1.78
Grade 8		1	2	3	4	5		
1. Word Analysis and Vocabulary	9	1.00	0.67	0.64	0.64	0.65	0.61	1.27
2. Reading Comprehension	18	0.67	1.00	0.73	0.71	0.74	0.79	1.80
3. Literary Response and Analysis	15	0.64	0.73	1.00	0.68	0.73	0.75	1.71
4. Written and Oral Language Conventions	16	0.64	0.71	0.68	1.00	0.74	0.74	1.78
5. Writing Strategies	17	0.65	0.74	0.73	0.74	1.00	0.79	1.78
Grade 9		1	2	3	4	5		
1. Word Analysis and Vocabulary	8	1.00	0.65	0.65	0.64	0.65	0.62	1.26
2. Reading Comprehension	18	0.65	1.00	0.78	0.72	0.74	0.81	1.80
3. Literary Response and Analysis	16	0.65	0.78	1.00	0.71	0.72	0.80	1.69
4. Written and Oral Language Conventions	13	0.64	0.72	0.71	1.00	0.76	0.74	1.56
5. Writing Strategies	20	0.65	0.74	0.72	0.76	1.00	0.80	1.99
Grade 10		1	2	3	4	5		
1. Word Analysis and Vocabulary	8	1.00	0.67	0.66	0.66	0.71	0.64	1.20
2. Reading Comprehension	18	0.67	1.00	0.75	0.70	0.79	0.82	1.84
3. Literary Response and Analysis	16	0.66	0.75	1.00	0.66	0.75	0.78	1.75
4. Written and Oral Language Conventions	13	0.66	0.70	0.66	1.00	0.76	0.73	1.54
5. Writing Strategies	20	0.71	0.79	0.75	0.76	1.00	0.86	1.88
Grade 11		1	2	3	4	5		
1. Word Analysis and Vocabulary	8	1.00	0.72	0.68	0.70	0.74	0.67	1.21
2. Reading Comprehension	19	0.72	1.00	0.78	0.72	0.80	0.82	1.90
3. Literary Response and Analysis	17	0.68	0.78	1.00	0.68	0.75	0.75	1.82
4. Written and Oral Language Conventions	9	0.70	0.72	0.68	1.00	0.80	0.76	1.21
5. Writing Strategies	22	0.74	0.80	0.75	0.80	1.00	0.87	1.97

Table 8.A.2 Subscore Reliabilities and Correlations for History–Social Science

Subscore Reliabilities and Correlations for History–Social Science								
Subscore Area	**# of items**	**Correlation**					***Reliab***	***SEM***
Grade 8		1	2	3	4	5		
1. World History and Geography: Ancient Civilizations	16	1.00	0.70	0.66	0.69	0.63	0.71	1.82
2. Late Antiquity and the Middle Ages	14	0.70	1.00	0.68	0.71	0.67	0.73	1.69
3. Renaissance/Reformation	10	0.66	0.68	1.00	0.68	0.63	0.64	1.44
4. U.S. Constitution and the Early Republic	22	0.69	0.71	0.68	1.00	0.73	0.80	2.12
5. Civil War and Its Aftermath	13	0.63	0.67	0.63	0.73	1.00	0.73	1.63
World History		1	2	3	4	5		
1. Development of Modern Political Thought	13	1.00	0.61	0.64	0.64	0.59	0.65	1.67
2. Industrial Expansion and Imperialism	10	0.61	1.00	0.63	0.62	0.58	0.60	1.46
3. Causes and Effects of World War I	14	0.64	0.63	1.00	0.71	0.63	0.72	1.69
4. Causes and Effects of World War II	13	0.64	0.62	0.71	1.00	0.67	0.72	1.63
5. International Developments in the Post-World War II Era	10	0.59	0.58	0.63	0.67	1.00	0.66	1.42
Grade 11 (U.S. History)		1	2	3	4	5		
1. Foundations of American Political and Social Thought	10	1.00	0.63	0.62	0.64	0.60	0.61	1.43
2. Industrialization and the U.S. role as a World Power	13	0.63	1.00	0.65	0.67	0.63	0.69	1.63
3. United States between the World Wars	12	0.62	0.65	1.00	0.67	0.65	0.66	1.58
4. World War II and Foreign Affairs	12	0.64	0.67	0.67	1.00	0.68	0.73	1.52
5. Post-World War II Domestic Affairs	13	0.60	0.63	0.65	0.68	1.00	0.71	1.63

Table 8.A.3 Subscore Reliabilities and Correlations for Mathematics

Subscore Reliabilities and Correlations for Mathematics									
Subscore Area	**# of items**	**Correlation**						***Rel.***	***SEM***
Grade 2		**1**	**2**	**3**	**4**	**5**	**6**		
1. Number Sense: Place Value, Addition, and Subtraction	15	1.00	0.77	0.65	0.68	0.63	-	0.81	1.45
2. Number Sense: Multiplication, Division, and Fractions	23	0.77	1.00	0.68	0.71	0.65	-	0.84	1.77
3. Algebra and Functions	6	0.65	0.68	1.00	0.61	0.58	-	0.62	0.93
4. Measurement and Geometry	14	0.68	0.71	0.61	1.00	0.60	-	0.71	1.43
5. Statistics, Data Analysis, and Probability	7	0.63	0.65	0.58	0.60	1.00	-	0.63	0.98
Grade 3		1	2	3	4	5			
1. Number Sense: Place Value, Fractions, and Decimals	16	1.00	0.76	0.76	0.71	0.61	-	0.82	1.46
2. Number Sense: Addition, Subtraction, Multiplication, and Division	16	0.76	1.00	0.74	0.70	0.57	-	0.83	1.56
3. Algebra and Functions	12	0.76	0.74	1.00	0.71	0.61	-	0.79	1.33
4. Measurement and Geometry	16	0.71	0.70	0.71	1.00	0.61	-	0.74	1.48
5. Statistics, Data Analysis, and Probability	5	0.61	0.57	0.61	0.61	1.00	-	0.68	0.71
Grade 4		1	2	3	4	5			
1. Number Sense: Decimals, Fractions, and Negative Numbers	17	1.00	0.75	0.76	0.70	0.58	-	0.80	1.55
2. Number Sense: Operations and Factoring	14	0.75	1.00	0.77	0.69	0.55	-	0.83	1.44
3. Algebra and Functions	18	0.76	0.77	1.00	0.72	0.59	-	0.86	1.54
4. Measurement and Geometry	12	0.70	0.69	0.72	1.00	0.57	-	0.76	1.39
5. Statistics, Data Analysis, and Probability	4	0.58	0.55	0.59	0.57	1.00	-	0.50	0.79
Grade 5		1	2	3	4	5			
1. Number Sense: Estimation, Percents, and Factoring	12	1.00	0.75	0.73	0.70	0.57	-	0.76	1.40
2. Number Sense: Operations with Fractions and Decimals	17	0.75	1.00	0.75	0.73	0.60	-	0.82	1.70
3. Algebra and Functions	17	0.73	0.75	1.00	0.74	0.65	-	0.82	1.70
4. Measurement and Geometry	15	0.70	0.73	0.74	1.00	0.62	-	0.77	1.66
5. Statistics, Data Analysis, and Probability	4	0.57	0.60	0.65	0.62	1.00	-	0.57	0.75

Subscore Reliabilities and Correlations for Mathematics

Subscore Area	# of items	Correlation						*Rel.*	*SEM*
Grade 6		1	2	3	4	5	**6**		
1. Number Sense: Ratios, Proportions, Percentages, and Negative Fractions	15	1.00	0.71	0.76	0.67	0.69	-	0.77	1.68
2. Number Sense: Operations and Problem Solving with Fractions	10	0.71	1.00	0.73	0.61	0.64	-	0.67	1.35
3. Algebra and Functions	19	0.76	0.73	1.00	0.67	0.70	-	0.82	1.77
4. Measurement and Geometry	10	0.67	0.61	0.67	1.00	0.63	-	0.68	1.39
5. Statistics, Data Analysis, and Probability	11	0.69	0.64	0.70	0.63	1.00	-	0.71	1.41
Grade 7		1	2	3	4	5	6		
1. Number Sense: Rational Numbers	14	1.00	0.67	0.68	0.72	0.70	0.58	0.76	1.63
2. Number Sense: Exponent, Powers and Roots	8	0.67	1.00	0.60	0.63	0.60	0.51	0.61	1.27
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	10	0.68	0.60	1.00	0.67	0.64	0.58	0.68	1.30
4. Algebra and Functions: Multi-step Problems, Graphing, and Functions	15	0.72	0.63	0.67	1.00	0.71	0.58	0.74	1.68
5. Measurement and Geometry	13	0.70	0.60	0.64	0.71	1.00	0.58	0.72	1.60
6. Statistics, Data Analysis, and Probability	5	0.58	0.51	0.58	0.58	0.58	1.00	0.60	0.94
General Math		1	2	3	4	5	6		
1. Number Sense: Rational Numbers	14	1.00	0.54	0.56	0.58	0.54	0.47	0.62	1.68
2. Number Sense: Exponent, Powers and Roots	10	0.54	1.00	0.50	0.51	0.47	0.41	0.57	1.43
3. Algebra and Functions: Quantitative Relationships, and Evaluating Expressions	11	0.56	0.50	1.00	0.57	0.50	0.52	0.62	1.46
4. Algebra and Functions: Multi-step Problems, Graphing, and Functions	10	0.58	0.51	0.57	1.00	0.56	0.51	0.59	1.39
5. Measurement and Geometry	11	0.54	0.47	0.50	0.56	1.00	0.49	0.54	1.49
6. Statistics, Data Analysis, and Probability	9	0.47	0.41	0.52	0.51	0.49	1.00	0.58	1.32

Subscore Reliabilities and Correlations for Mathematics

Subscore Area	# of items	Correlation						*Rel.*	*SEM*
Algebra I		1	2	3	4	5	6		
1. Number Properties, Operations, and Linear Equations	17	1.00	0.66	0.67	0.56	-	-	0.77	1.81
2. Graphing and Systems of Linear Equations	14	0.66	1.00	0.66	0.56	-	-	0.69	1.70
3. Quadratics and Polynomials	21	0.67	0.66	1.00	0.60	-	-	0.73	2.04
4. Functions and Rational Expressions	13	0.56	0.56	0.60	1.00	-	-	0.55	1.61
Geometry		1	2	3	4	5	6		
1. Logic and Geometric Proofs	23	1.00	0.71	0.75	0.74	-	-	0.83	2.07
2. Volume and Area Formulas	11	0.71	1.00	0.69	0.67	-	-	0.70	1.46
3. Angle Relationships, Constructions, and Lines	16	0.75	0.69	1.00	0.72	-	-	0.77	1.77
4. Trigonometry	15	0.74	0.67	0.72	1.00	-	-	0.75	1.71
Algebra II		1	2	3	4	5	6		
1. Polynomials and Rational Expressions	19	1.00	0.67	0.69	0.61	-	-	0.81	1.82
2. Quadratics, Conics, and Complex Numbers	17	0.67	1.00	0.65	0.60	-	-	0.71	1.84
3. Exponents and Logarithms	15	0.69	0.65	1.00	0.62	-	-	0.72	1.75
4. Series, Combinatorics, and Probability and Statistics	14	0.61	0.60	0.62	1.00	-	-	0.63	1.65
Summative High School Math		1	2	3	4	5	6		
1. Algebra I	18	1.00	0.74	0.79	0.54	-	-	0.79	1.66
2. Geometry	19	0.74	1.00	0.75	0.56	-	-	0.79	1.81
3. Algebra II	23	0.79	0.75	1.00	0.57	-	-	0.85	1.93
4. Probability and Statistics	5	0.54	0.56	0.57	1.00	-	-	0.53	0.93
Integrated Math 1		1	2	3	4	5	6		
1. Algebra I: Number Properties, Operations and Linear Equations	15	1.00	0.56	0.57	0.40	0.44	-	0.74	1.73
2. Algebra I: Graphing	9	0.56	1.00	0.48	0.34	0.42	-	0.54	1.37
3. Algebra I: Quadratics and Polynomials	14	0.57	0.48	1.00	0.41	0.41	-	0.55	1.67
4. Algebra I: Functions and Relations Expressions	7	0.40	0.34	0.41	1.00	0.34	-	0.42	1.19
5. Geometry	20	0.44	0.42	0.41	0.34	1.00	-	0.54	2.00

Subscore Reliabilities and Correlations for Mathematics

Subscore Area	# of items	Correlation						*Rel.*	*SEM*
Integrated Math 2		1	2	3	4	5	6		
1. Algebra I	20	1.00	0.71	0.55	0.59	0.49	-	0.72	1.98
2. Geometry: Logic and Geometric Proofs	22	0.71	1.00	0.60	0.63	0.50	-	0.79	2.08
3. Geometry: Angle Relationships, Construction and Lines	8	0.55	0.60	1.00	0.50	0.38	-	0.47	1.28
4. Trigonometry	10	0.59	0.63	0.50	1.00	0.42	-	0.57	1.43
5. Algebra II/Probability and Statistics	5	0.49	0.50	0.38	0.42	1.00	-	0.31	0.99
Integrated Math 3		1	2	3	4	5	6		
1. Geometry	5	1.00	0.54	0.50	0.55	0.42	-	0.49	0.97
2. Algebra II: Polynomials and Relations Expressions	19	0.54	1.00	0.66	0.68	0.50	-	0.75	1.91
3. Algebra II: Quadratics, Conics and Complex Numbers	17	0.50	0.66	1.00	0.62	0.47	-	0.63	1.85
4. Algebra II: Exponents and Logarithms	15	0.55	0.68	0.62	1.00	0.50	-	0.71	1.75
5. Algebra II: Series, Combinatorics, Probability and Statistics	9	0.42	0.50	0.47	0.50	1.00	-	0.39	1.29

Table 8.A.4 Subscore Reliabilities and Correlations for Science

Subscore Reliabilities and Correlations for Science									
Subscore Area	**# of items**	**Correlation**						***Reliab***	***SEM***
Grade 5 Science		1	2	3	4	5	6		
1. Physical Science (Grade 5)	11	1.00	0.59	0.62	0.63	0.56	0.54	0.63	1.44
2. Physical Science (Grade 4)	8	0.59	1.00	0.59	0.58	0.53	0.51	0.58	1.23
3. Life Science (Grade 5)	13	0.62	0.59	1.00	0.65	0.59	0.58	0.66	1.57
4. Life Science (Grade 4)	9	0.63	0.58	0.65	1.00	0.58	0.56	0.68	1.24
5. Earth Science (Grade 5)	11	0.56	0.53	0.59	0.58	1.00	0.54	0.57	1.47
6. Earth Science (Grade 4)	8	0.54	0.51	0.58	0.56	0.54	1.00	0.56	1.26
Grade 8 Science		1	2	3	4	5	6		
1. Motion	8	1.00	0.58	0.58	0.48	0.52	0.47	0.56	1.27
2. Forces, Density, and Buoncy	13	0.58	1.00	0.66	0.57	0.61	0.57	0.67	1.60
3. Structure of Matter and Periodic Table	16	0.58	0.66	1.00	0.58	0.64	0.56	0.72	1.80
4. Earth in the Solar System	7	0.48	0.57	0.58	1.00	0.53	0.44	0.59	1.12
5. Reactions and the Chemistry of Living Systems	10	0.52	0.61	0.64	0.53	1.00	0.51	0.58	1.43
6. Investigation and Experimentation	6	0.47	0.57	0.56	0.44	0.51	1.00	0.52	1.09
Grade 10 Life Science		1	2	3	4	5	6		
1. Cell Biology	10	1.00	0.63	0.61	0.61	0.60	0.53	0.66	1.43
2. Genetics	12	0.63	1.00	0.62	0.62	0.63	0.56	0.67	1.54
3. Physiology	10	0.61	0.62	1.00	0.69	0.66	0.58	0.69	1.36
4. Ecology	11	0.61	0.62	0.69	1.00	0.69	0.61	0.73	1.44
5. Evolution	11	0.60	0.63	0.66	0.69	1.00	0.62	0.76	1.45
6. Investigation and Experimentation	6	0.53	0.56	0.58	0.61	0.62	1.00	0.52	1.09

Subscore Reliabilities and Correlations for Science

Subscore Area	# of items	Correlation						*Reliab*	*SEM*
Biology		1	2	3	4	5	6		
1. Cell Biology	9	1.00	0.64	0.64	0.58	0.53	-	0.60	1.37
2. Genetics	18	0.64	1.00	0.74	0.69	0.63	-	0.74	1.91
3. Ecology and Evolution	16	0.64	0.74	1.00	0.72	0.65	-	0.78	1.79
4. Physiology	11	0.58	0.69	0.72	1.00	0.62	-	0.70	1.43
5. Investigation and Experimentation	6	0.53	0.63	0.65	0.62	1.00	-	0.55	1.10
Chemistry		1	2	3	4	5	6		
1. Atomic and Molecular Structure	8	1.00	0.57	0.58	0.57	0.58	0.52	0.60	1.23
2. Chemical Bonds, Biochemistry	9	0.57	1.00	0.60	0.58	0.55	0.54	0.58	1.31
3. Kinetics, Thermodynamics	14	0.58	0.60	1.00	0.66	0.62	0.57	0.68	1.69
4. Chemical Reactions	13	0.57	0.58	0.66	1.00	0.60	0.58	0.68	1.62
5. Conservation of Matter and Stoichiometry	10	0.58	0.55	0.62	0.60	1.00	0.54	0.70	1.37
6. Investigation and Experimentation	6	0.52	0.54	0.57	0.58	0.54	1.00	0.62	1.03
Earth Science		1	2	3	4	5	6		
1. Astronomy and Cosmology	12	1.00	0.62	0.67	0.53	-	-	0.63	1.57
2. Solid Earth	14	0.62	1.00	0.73	0.60	-	-	0.67	1.70
3. The Earth's Energy	28	0.67	0.73	1.00	0.63	-	-	0.82	2.42
4. Investigation and Experimentation	6	0.53	0.60	0.63	1.00	-	-	0.49	1.11
Physics		1	2	3	4	5	6		
1. Motion and Forces	12	1.00	0.66	0.62	0.61	0.60	0.54	0.68	1.51
2. Conservation of Energy and Momentum	12	0.66	1.00	0.62	0.61	0.61	0.53	0.69	1.53
3. Heat and Thermodynamics	9	0.62	0.62	1.00	0.63	0.58	0.59	0.68	1.28
4. Waves	10	0.61	0.61	0.63	1.00	0.59	0.55	0.63	1.40
5. Electric and Magnetic Phenomena	11	0.60	0.61	0.58	0.59	1.00	0.53	0.66	1.50
6. Investigation and Experimentation	6	0.54	0.53	0.59	0.55	0.53	1.00	0.48	1.08

Subscore Reliabilities and Correlations for Science

Subscore Area	# of items	Correlation						*Reliab*	*SEM*
Integrated Science 1		1	2	3	4	5	6		
1. Biology/Life Sciences	10	1.00	0.48	0.60	0.43	0.53	-	0.55	1.47
2. Chemistry	15	0.48	1.00	0.55	0.43	0.49	-	0.54	1.79
3. Earth Sciences	17	0.60	0.55	1.00	0.49	0.61	-	0.72	1.89
4. Physics	12	0.43	0.43	0.49	1.00	0.44	-	0.42	1.56
5. Investigation and Experimentation	6	0.53	0.49	0.61	0.44	1.00	-	0.54	1.10
Integrated Science 2		1	2	3	4	5	6		
1. Biology/Life Sciences	15	1.00	0.44	0.59	0.44	0.44	-	0.64	1.79
2. Chemistry	6	0.44	1.00	0.44	0.33	0.34	-	0.30	1.15
3. Earth Sciences	15	0.59	0.44	1.00	0.44	0.46	-	0.69	1.77
4. Physics	18	0.44	0.33	0.44	1.00	0.33	-	0.48	1.93
5. Investigation and Experimentation	6	0.44	0.34	0.46	0.33	1.00	-	0.35	1.14
Integrated Science 3		1	2	3	4	5	6		
1. Biology/Life Sciences	16	1.00	0.54	0.52	0.35	0.48	-	0.62	1.85
2. Chemistry	23	0.54	1.00	0.48	0.31	0.48	-	0.60	2.19
3. Earth Sciences	7	0.52	0.48	1.00	0.30	0.46	-	0.50	1.23
4. Physics	8	0.35	0.31	0.30	1.00	0.31	-	0.23	1.28
5. Investigation and Experimentation	6	0.48	0.48	0.46	0.31	1.00	-	0.50	1.11
Integrated Science 4		1	2	3	4	5	6		
1. Biology/Life Sciences	13	1.00	0.35	0.60	0.45	0.42	-	0.60	1.65
2. Chemistry	10	0.35	1.00	0.41	0.36	0.28	-	0.36	1.46
3. Earth Sciences	15	0.60	0.41	1.00	0.51	0.45	-	0.66	1.78
4. Physics	16	0.45	0.36	0.51	1.00	0.37	-	0.55	1.84
5. Investigation and Experimentation	6	0.42	0.28	0.45	0.37	1.00	-	0.27	1.13

Table 8.A.5 Subscore Reliabilities and Correlations for Grade Specific Tests

Subscore Reliabilities and Correlations for Grade Specific Tests									
Subscore Area	**# of items**	**Correlation**						***Rel.***	***SEM***
Algebra I – 8		1	2	3	4	5	6		
1. Number Properties, Operations, and Linear Equations	17	1.00	0.70	0.70	0.61	-	-	0.78	1.73
2. Graphing and Systems of Linear Equations	14	0.70	1.00	0.71	0.63	-	-	0.74	1.67
3. Quadratics and Polynomials	21	0.70	0.71	1.00	0.67	-	-	0.77	2.01
4. Functions and Rational Expressions	13	0.61	0.63	0.67	1.00	-	-	0.64	1.59
Geometry – 9		1	2	3	4	5	6		
1. Logic and Geometric Proofs	23	1.00	0.72	0.75	0.74	-	-	0.83	1.95
2. Volume and Area Formulas	11	0.72	1.00	0.71	0.68	-	-	0.72	1.40
3. Angle Relationships, Constructions, and Lines	16	0.75	0.71	1.00	0.72	-	-	0.78	1.72
4. Trigonometry	15	0.74	0.68	0.72	1.00	-	-	0.76	1.64
Algebra II – 10		1	2	3	4	5	6		
1. Polynomials and Rational Expressions	19	1.00	0.66	0.68	0.59	-	-	0.80	1.78
2. Quadratics, Conics, and Complex Numbers	17	0.66	1.00	0.64	0.59	-	-	0.71	1.83
3. Exponents and Logarithms	15	0.68	0.64	1.00	0.61	-	-	0.70	1.73
4. Series, Combinatorics, and Probability and Statistics	14	0.59	0.59	0.61	1.00	-	-	0.62	1.65
Summative High School Math – 11		1	2	3	4	5	6		
1. Algebra I	18	1.00	0.73	0.79	0.53	-	-	0.79	1.68
2. Geometry	19	0.73	1.00	0.74	0.55	-	-	0.79	1.83
3. Algebra II	23	0.79	0.74	1.00	0.56	-	-	0.85	1.95
4. Probability and Statistics	5	0.53	0.55	0.56	1.00	-	-	0.52	0.94

Subscore Reliabilities and Correlations for Grade Specific Tests

Subscore Area	# of items	Correlation						*Rel.*	*SEM*
World History – 10		1	2	3	4	5	6		
1. Development of Modern Political Thought	13	1.00	0.60	0.63	0.62	0.58	-	0.64	1.68
2. Industrial Expansion and Imperialism	10	0.60	1.00	0.62	0.61	0.57	-	0.59	1.47
3. Causes and Effects of World War I	14	0.63	0.62	1.00	0.70	0.62	-	0.71	1.70
4. Causes and Effects of World War II	13	0.62	0.61	0.70	1.00	0.66	-	0.71	1.64
5. International Developments in the Post-World War II Era	10	0.58	0.57	0.62	0.66	1.00	-	0.65	1.42

Table 8.A.6 Reliabilities and SEM for the CSTs by GENDER

Subject Area	CST	Male			Female		
		N	*Rel.*	*SEM*	*N*	*Rel.*	*SEM*
English–Language Arts	2	231,668	0.94	3.44	221,093	0.94	3.31
	3	232,475	0.93	3.35	222,559	0.92	3.43
	4*	233,620	0.94	3.80	224,046	0.94	3.63
	5	237,934	0.94	3.65	228,708	0.93	3.73
	6	242,497	0.94	3.79	232,130	0.93	3.84
	7*	245,189	0.94	3.70	234,375	0.93	3.76
	8	245,335	0.93	3.95	234,154	0.93	3.69
	9	259,522	0.94	3.86	245,301	0.94	3.61
	10	243,853	0.95	3.66	234,825	0.94	3.71
	11	221,116	0.95	3.75	216,210	0.95	3.52
History–Social Science	8	244,958	0.93	4.05	233,795	0.92	3.98
	World History	249,783	0.92	3.52	241,067	0.89	3.57
	11	215,332	0.92	3.49	211,534	0.90	3.54
Math	2	232,475	0.94	2.95	221,231	0.93	3.01
	3	233,336	0.94	3.16	222,747	0.94	2.97
	4	234,902	0.95	3.05	224,493	0.94	3.09
	5	238,818	0.94	3.47	229,016	0.93	3.47
	6	243,031	0.94	3.33	232,261	0.93	3.36
	7	234,127	0.93	3.61	224,149	0.92	3.53
	General Mathematics	165,030	0.89	3.65	138,232	0.87	3.62
	Algebra I	380,872	0.90	3.58	356,970	0.89	3.63
	Geometry	179,762	0.93	3.59	189,447	0.92	3.65
	Algebra II	108,128	0.91	3.60	122,587	0.90	3.55
	High School Mathematics	51,251	0.93	3.25	57,485	0.93	3.26
	Integrated Math 1	3,728	0.85	3.66	3,167	0.84	3.69
	Integrated Math 2	1,858	0.90	3.67	1,756	0.89	3.53
	Integrated Math 3	815	0.90	3.54	839	0.88	3.55
Science	Grade 5 Science	238,539	0.91	3.39	228,787	0.89	3.36
	Grade 8 Science	244,310	0.91	3.48	233,445	0.89	3.43
	Grade 10 Life Science	235,491	0.93	3.44	227,866	0.91	3.5
	Biology	250,650	0.93	3.34	254,390	0.91	3.44
	Chemistry	105,142	0.92	3.38	122,185	0.89	3.54
	Earth Science	110,050	0.91	3.52	95,955	0.88	3.6
	Physics	33,203	0.92	3.39	30,106	0.89	3.55
	Integrated Science 1	50,911	0.87	3.62	45,244	0.84	3.52
	Integrated Science 2	7,387	0.85	3.57	6,392	0.81	3.58
	Integrated Science 3	1,076	0.85	3.58	896	0.77	3.59
	Integrated Science 4	527	0.84	3.57	424	0.82	3.55
Grade-Specific	Algebra I – 8	116,542	0.92	3.47	121,805	0.91	3.54
	Geometry – 9	54,240	0.93	3.44	61,574	0.93	3.36
	Algebra II – 10	47,019	0.91	3.48	55,472	0.90	3.47
	High School Math – 11	42,810	0.93	3.26	49,285	0.92	3.48
	World History – 10	220,431	0.92	3.46	215,934	0.88	3.65

* *MC Only*

Table 8.A.7 Reliabilities and SEM for the CSTs by NSLP

Subject Area	CST	Not in NSLP			NSLP		
		N	*Rel.*	*SEM*	*N*	*Rel.*	*SEM*
English–Language Arts	**2**	195,287	0.94	3.04	256,329	0.93	3.55
	3	198,861	0.92	3.22	254,974	0.91	3.52
	4*	201,662	0.94	3.37	254,920	0.93	3.78
	5	208,102	0.93	3.56	257,374	0.92	3.81
	6	218,909	0.93	3.76	254,796	0.92	3.89
	7*	234,588	0.93	3.70	243,761	0.92	3.88
	8	244,518	0.93	3.67	233,832	0.91	4.03
	9	284,851	0.94	3.67	218,796	0.92	4.03
	10	286,638	0.95	3.51	190,892	0.93	3.86
	11	276,698	0.95	3.67	159,652	0.93	3.94
** MC Only*							
History–Social Science	**8**	244,088	0.93	3.92	233,523	0.90	4.04
	World History	294,488	0.91	3.58	195,223	0.87	3.65
	11	270,821	0.92	3.39	155,141	0.89	3.48
Math	**2**	195,646	0.92	2.89	256,901	0.93	3.15
	3	199,305	0.94	2.70	255,569	0.94	3.11
	4	202,268	0.94	2.82	256,042	0.94	3.27
	5	208,399	0.94	3.18	258,258	0.93	3.40
	6	219,074	0.93	3.39	255,296	0.91	3.61
	7	218,547	0.93	3.43	238,548	0.91	3.64
	General Mathematics	142,100	0.89	3.63	160,138	0.86	3.68
	Algebra I	397,420	0.91	3.52	338,685	0.86	3.66
	Geometry	230,287	0.93	3.55	138,373	0.90	3.62
	Algebra II	159,100	0.91	3.49	71,309	0.89	3.53
	High School Mathematics	84,633	0.93	3.16	23,994	0.92	3.56
	Integrated Math 1	3,919	0.85	3.66	2,962	0.84	3.64
	Integrated Math 2	2,056	0.91	3.51	1,553	0.86	3.66
	Integrated Math 3	1,140	0.88	3.53	516	0.91	3.55
Science	**Grade 5 Science**	208,268	0.90	3.15	257,899	0.87	3.56
	Grade 8 Science	243,669	0.90	3.45	232,954	0.87	3.56
	Grade 10 Life Science	278,568	0.93	3.30	183,718	0.90	3.47
	Biology	308,151	0.92	3.41	195,929	0.89	3.54
	Chemistry	154,372	0.91	3.31	72,738	0.89	3.47
	Earth Science	115,949	0.91	3.42	89,570	0.87	3.64
	Physics	43,656	0.91	3.36	19,546	0.88	3.50
	Integrated Science 1	46,015	0.87	3.60	49,943	0.82	3.58
	Integrated Science 2	7,164	0.85	3.61	6,574	0.78	3.61
	Integrated Science 3	1,229	0.84	3.58	735	0.77	3.61
	Integrated Science 4	551	0.86	3.51	394	0.77	3.62
Grade-Specific	**Algebra I – 8**	128,848	0.92	3.38	109,069	0.89	3.61
	Geometry – 9	78,708	0.92	3.39	37,009	0.92	3.50
	Algebra II – 10	72,932	0.90	3.47	29,435	0.89	3.62
	High School Math – 11	71,397	0.93	3.18	20,604	0.92	3.52
	World History – 10	264,093	0.91	3.51	171,291	0.87	3.61

Table 8.A.8 Reliabilities and SEM for the CSTs by SPECIAL SERVICES

Subject Area	CST	No Special Services			Special Services		
		N	*Rel.*	*SEM*	*N*	*Rel.*	*SEM*
English–Language Arts	2	418,543	0.94	3.30	34,369	0.94	3.56
	3	414,275	0.92	3.38	40,872	0.93	3.50
	4*	413,863	0.94	3.59	43,904	0.94	3.76
	5	420,822	0.93	3.70	45,937	0.92	3.94
	6	430,350	0.93	3.85	44,465	0.91	3.97
	7*	437,084	0.93	3.78	42,710	0.90	3.91
	8	438,437	0.93	3.71	41,237	0.90	3.91
	9	464,264	0.94	3.67	40,801	0.89	3.96
	10	440,139	0.94	3.80	38,742	0.89	4.02
	11	402,816	0.95	3.58	34,687	0.89	3.93
** MC Only,*							
History–Social Science	8	437,042	0.93	3.85	41,887	0.88	3.97
	World History	451,579	0.91	3.48	39,452	0.85	3.47
	11	393,602	0.91	3.51	33,424	0.85	3.48
Math	2	418,365	0.93	2.95	35,485	0.95	3.26
	3	414,082	0.94	2.89	42,108	0.95	3.36
	4	413,890	0.94	3.03	45,599	0.95	3.34
	5	420,726	0.94	3.23	47,222	0.92	3.67
	6	430,076	0.93	3.37	45,400	0.90	3.61
	7	415,547	0.92	3.60	42,945	0.88	3.68
	General Mathematics	255,178	0.88	3.60	48,235	0.82	3.65
	Algebra I	682,659	0.90	3.53	55,506	0.79	3.61
	Geometry	354,665	0.93	3.49	14,637	0.88	3.62
	Algebra II	226,934	0.91	3.48	3,818	0.89	3.65
	High School Mathematics	107,951	0.93	3.27	798	0.95	3.52
	Integrated Math 1	6,133	0.85	3.65	768	0.71	3.63
	Integrated Math 2	3,451	0.90	3.55	164	0.74	3.59
	Integrated Math 3	1,604	0.89	3.56	52	0.80	3.48
Science	Grade 5 Science	420,163	0.89	3.44	47,274	0.90	3.48
	Grade 8 Science	436,374	0.90	3.40	41,552	0.86	3.51
	Grade 10 Life Science	426,719	0.92	3.45	36,818	0.86	3.51
	Biology	472,565	0.91	3.57	32,618	0.87	3.46
	Chemistry	222,846	0.91	3.37	4,527	0.90	3.44
	Earth Science	184,106	0.90	3.49	21,989	0.86	3.52
	Physics	61,443	0.91	3.42	1,878	0.89	3.43
	Integrated Science 1	86,510	0.86	3.54	9,685	0.79	3.52
	Integrated Science 2	12,406	0.83	3.60	1,379	0.75	3.51
	Integrated Science 3	1,767	0.83	3.53	206	0.64	3.47
	Integrated Science 4	846	0.84	3.53	105	0.70	3.57
Grade-Specific	Algebra I – 8	229,482	0.91	3.59	8,931	0.88	3.64
	Geometry – 9	113,973	0.93	3.38	1,865	0.94	3.48
	Algebra II – 10	101,427	0.90	3.56	1,077	0.92	3.50
	High School Math – 11	91,476	0.93	3.28	631	0.95	3.31
	World History – 10	402,516	0.90	3.60	33,997	0.84	3.57

Table 8.A.9 Reliabilities and SEM for the CSTs by ENGLISH-LANGUAGE FLUENCY

Subject Area	CST	English only			Initially Desig. Fluent		
		N	*Rel.*	*SEM*	*N*	*Rel.*	*SEM*
English–Language Arts	**2**	249,006	0.94	3.24	33,811	0.93	3.14
	3	250,394	0.92	3.40	36,878	0.91	3.21
	4*	248,717	0.94	3.59	32,708	0.93	3.53
	5	254,079	0.94	3.49	31,891	0.93	3.44
	6	260,128	0.94	3.63	39,527	0.93	3.65
	7*	263,275	0.94	3.55	38,496	0.93	3.60
	8	265,764	0.93	3.79	38,686	0.92	3.73
	9	285,660	0.94	3.71	41,344	0.94	3.52
	10	279,388	0.95	3.56	41,034	0.94	3.64
	11	263,867	0.95	3.71	39,660	0.95	3.52
** MC Only*							
History–Social Science	**8**	265,194	0.93	3.93	38,620	0.93	3.90
	World History	284,628	0.91	3.56	43,101	0.91	3.55
	11	257,674	0.92	3.40	38,975	0.91	3.50
Math	**2**	249,567	0.93	2.98	33,813	0.91	2.82
	3	251,035	0.94	2.98	36,878	0.93	2.71
	4	249,661	0.94	3.13	32,751	0.93	2.88
	5	254,641	0.94	3.34	31,912	0.94	3.14
	6	260,406	0.93	3.48	39,523	0.93	3.37
	7	250,393	0.93	3.47	35,085	0.93	3.39
	General Mathematics	166,946	0.89	3.61	17,646	0.89	3.54
	Algebra I	409,436	0.90	3.57	59,837	0.92	3.46
	Geometry	214,034	0.93	3.47	35,098	0.94	3.45
	Algebra II	140,259	0.90	3.57	25,347	0.92	3.52
	High School Mathematics	67,611	0.93	3.17	15,843	0.93	3.21
	Integrated Math 1	4,229	0.85	3.66	636	0.87	3.58
	Integrated Math 2	2,199	0.89	3.58	302	0.94	3.39
	Integrated Math 3	1,090	0.88	3.57	168	0.93	3.51
Science	**Grade 5 Science**	254,325	0.90	3.34	31,891	0.89	3.24
	Grade 8 Science	264,529	0.90	3.51	38,580	0.9	3.40
	Grade 10 Life Science	270,397	0.93	3.30	39,984	0.92	3.45
	Biology	292,913	0.92	3.41	46,038	0.92	3.39
	Chemistry	135,166	0.90	3.48	26,136	0.91	3.41
	Earth Science	123,213	0.91	3.43	14,181	0.89	3.55
	Physics	37,839	0.91	3.39	7,480	0.91	3.40
	Integrated Science 1	47,315	0.87	3.59	7,379	0.86	3.57
	Integrated Science 2	6,721	0.84	3.63	1,348	0.86	3.55
	Integrated Science 3	1,148	0.84	3.57	160	0.82	3.54
	Integrated Science 4	473	0.87	3.56	63	0.85	3.57
Grade-Specific	**Algebra I – 8**	134,087	0.91	3.58	22,565	0.92	3.50
	Geometry – 9	69,672	0.92	3.41	12,963	0.93	3.41
	Algebra II – 10	63,289	0.89	3.60	12,057	0.91	3.49
	High School Math – 11	58,011	0.92	3.40	12,849	0.93	3.26
	World History – 10	254,881	0.91	3.49	38,056	0.91	3.45

Subject Area	CST	Learner			Redesignated Fluent		
		N	*Rel.*	*SEM*	*N*	*Rel.*	*SEM*
English–Language Arts	**2**	164,070	0.93	3.53	5,282	0.91	3.10
	3	150,459	0.90	3.54	16,632	0.85	3.24
	4*	144,910	0.91	3.92	30,842	0.89	3.34
	5	128,161	0.89	3.85	51,988	0.88	3.51
	6	106,090	0.87	4.01	68,378	0.89	3.86
	7*	100,024	0.87	3.96	77,046	0.89	3.78
	8	91,635	0.85	4.06	82,719	0.89	3.71
	9	93,408	0.87	3.95	83,571	0.91	3.74
	10	78,341	0.86	4.00	79,201	0.92	3.66
	11	60,629	0.86	4.01	72,564	0.92	3.87
* MC Only							
History–Social Science	**8**	91,677	0.83	3.98	82,577	0.90	4.07
	World History	80,140	0.79	3.57	82,281	0.88	3.63
	11	58,164	0.79	3.52	71,506	0.89	3.48
Math	**2**	164,450	0.93	3.18	5,282	0.90	2.73
	3	150,865	0.93	3.34	16,633	0.90	2.59
	4	145,651	0.93	3.48	30,843	0.90	2.65
	5	128,757	0.91	3.51	51,997	0.92	3.06
	6	106,481	0.88	3.62	68,376	0.91	3.32
	7	99,666	0.88	3.65	72,430	0.91	3.38
	General Mathematics	81,527	0.83	3.68	36,493	0.86	3.53
	Algebra I	143,446	0.81	3.63	123,926	0.89	3.59
	Geometry	45,968	0.88	3.58	73,786	0.92	3.53
	Algebra II	16,113	0.90	3.59	48,822	0.90	3.60
	High School Mathematics	2,922	0.94	3.47	22,309	0.93	3.40
	Integrated Math 1	1,017	0.73	3.65	1,003	0.85	3.70
	Integrated Math 2	481	0.79	3.60	625	0.91	3.55
	Integrated Math 3	115	0.91	3.42	283	0.87	3.62
Science	**Grade 5 Science**	128,624	0.84	3.55	51,967	0.83	3.31
	Grade 8 Science	91,463	0.81	3.64	82,502	0.86	3.47
	Grade 10 Life Science	74,999	0.81	3.59	77,313	0.90	3.43
	Biology	75,827	0.81	3.59	89,655	0.89	3.53
	Chemistry	16,200	0.86	3.51	49,667	0.89	3.55
	Earth Science	41,491	0.81	3.57	26,728	0.87	3.52
	Physics	4,986	0.84	3.54	12,962	0.89	3.44
	Integrated Science 1	21,807	0.73	3.53	19,528	0.82	3.57
	Integrated Science 2	2,981	0.70	3.56	2,716	0.79	3.64
	Integrated Science 3	281	0.52	3.47	379	0.78	3.57
	Integrated Science 4	272	0.65	3.60	142	0.76	3.64
Grade-Specific	**Algebra I – 8**	31,505	0.86	3.68	49,924	0.90	3.56
	Geometry – 9	7,630	0.93	3.56	25,484	0.92	3.57
	Algebra II – 10	5,138	0.92	3.48	21,915	0.90	3.58
	High School Math – 11	2,486	0.94	3.43	18,702	0.93	3.39
	World History – 10	68,760	0.79	3.57	74,063	0.88	3.54

Table 8.A.10 Reliabilities and SEM for the CSTs by PRIMARY ETHNICITY

Subject Area	CST	American Indian			Asian		
		N	*Rel.*	*SEM*	*N*	*Rel.*	*SEM*
English–Language Arts	**2**	3,628	0.94	3.33	36,140	0.94	2.93
	3	3,675	0.92	3.41	36,564	0.92	3.23
	4*	3,674	0.94	3.64	38,392	0.94	3.45
	5	3,843	0.93	3.73	39,502	0.94	3.38
	6	3,995	0.93	3.85	39,940	0.94	3.50
	7*	3,960	0.93	3.78	40,742	0.94	3.38
	8	3,878	0.93	3.77	41,415	0.94	3.38
	9	4,413	0.93	3.95	43,587	0.94	3.51
	10	4,128	0.94	3.88	43,438	0.95	3.35
	11	4,008	0.94	3.91	42,358	0.95	3.56
* *MC Only*							
History–Social Science	**8**	3,863	0.92	3.89	41,405	0.94	3.62
	World History	4,187	0.90	3.52	45,813	0.92	3.33
	11	3,866	0.90	3.57	41,714	0.92	3.33
Math	**2**	3,632	0.92	3.25	36,212	0.92	2.68
	3	3,691	0.93	3.30	36,618	0.93	2.60
	4	3,694	0.94	3.29	38,470	0.94	2.48
	5	3,849	0.93	3.48	39,541	0.94	2.99
	6	4,003	0.92	3.51	39,960	0.94	2.99
	7	3,876	0.92	3.53	34,311	0.94	3.09
	General Mathematics	3,158	0.88	3.60	12,869	0.90	3.57
	Algebra I	6,594	0.87	3.64	54,351	0.93	3.39
	Geometry	2,633	0.91	3.62	40,974	0.95	3.15
	Algebra II	1,439	0.88	3.58	35,243	0.92	3.48
	High School Mathematics	536	0.92	3.34	27,423	0.92	3.04
	Integrated Math 1	65	0.85	3.61	421	0.92	3.49
	Integrated Math 2	33	0.89	3.57	494	0.94	3.46
	Integrated Math 3	8	0.87	3.45	259	0.92	3.54
Science	**Grade 5 Science**	3,839	0.89	3.42	39,520	0.91	3.10
	Grade 8 Science	3,844	0.89	3.50	41,375	0.91	3.19
	Grade 10 Life Science	3,949	0.92	3.43	42,839	0.93	3.21
	Biology	4,023	0.91	3.52	50,928	0.92	3.34
	Chemistry	1,359	0.89	3.54	34,532	0.91	3.30
	Earth Science	2,264	0.89	3.58	11,975	0.90	3.54
	Physics	369	0.91	3.46	10,535	0.90	3.37
	Integrated Science 1	808	0.85	3.58	5431	0.88	3.46
	Integrated Science 2	89	0.80	3.55	1,028	0.88	3.48
	Integrated Science 3	25	0.88	3.47	180	0.82	3.58
	Integrated Science 4	17	0.68	3.48	60	0.76	3.62
Grade-Specific	**Algebra I – 8**	1,681	0.90	3.59	25,246	0.92	3.31
	Geometry – 9	659	0.92	3.37	18,840	0.93	3.15
	Algebra II – 10	553	0.88	3.63	17,772	0.91	3.31
	High School Math – 11	474	0.92	3.34	21,418	0.93	2.93
	World History – 10	3,693	0.89	3.65	40,027	0.91	3.47

,

Subject Area	CST	Pacific Islander			Filipino		
		N	*Rel.*	*SEM*	*N*	*Rel.*	*SEM*
English–Language Arts	**2**	2,967	0.93	3.38	12,353	0.92	3.16
	3	3,025	0.91	3.39	12,603	0.90	3.28
	4*	3,036	0.93	3.74	12,934	0.93	3.38
	5	2,882	0.93	3.58	13,075	0.92	3.50
	6	3,145	0.92	3.90	13,182	0.92	3.67
	7*	3,164	0.92	3.89	12,908	0.91	3.71
	8	3,119	0.92	3.86	13,222	0.91	3.66
	9	3,379	0.93	3.82	13,900	0.92	3.68
	10	3,235	0.94	3.68	14,165	0.93	3.52
	11	3,056	0.94	3.78	13,714	0.94	3.51
* *MC Only,*							
History–Social Science	**8**	3,112	0.91	4.06	13,209	0.91	3.99
	World History	3,288	0.89	3.54	14,743	0.89	3.49
	11	2,959	0.89	3.59	13,536	0.89	3.52
Math	**2**	2,969	0.93	2.99	12,367	0.92	2.75
	3	3,025	0.93	3.14	12,611	0.93	2.69
	4	3,036	0.94	3.07	12,957	0.93	2.77
	5	2,886	0.93	3.42	13,094	0.93	3.19
	6	3,143	0.92	3.46	13,189	0.92	3.35
	7	3,048	0.92	3.46	12,065	0.92	3.33
	General Mathematics	2,013	0.88	3.64	5,562	0.88	3.59
	Algebra I	5,193	0.88	3.62	19,524	0.90	3.49
	Geometry	2,529	0.91	3.66	13,298	0.92	3.54
	Algebra II	1,433	0.89	3.54	9,450	0.88	3.65
	High School Mathematics	515	0.92	3.39	5,043	0.91	3.46
	Integrated Math 1	41	0.86	3.57	335	0.86	3.68
	Integrated Math 2	26	0.87	3.62	123	0.93	3.52
	Integrated Math 3	10	0.52	3.44	115	0.91	3.50
Science	**Grade 5 Science**	2,880	0.89	3.36	13,078	0.87	3.30
	Grade 8 Science	3,099	0.89	3.48	13,206	0.87	3.44
	Grade 10 Life Science	3,128	0.91	3.46	13,956	0.90	3.44
	Biology	3,381	0.90	3.51	16,318	0.89	3.49
	Chemistry	1,454	0.89	3.49	9,748	0.88	3.47
	Earth Science	1,399	0.89	3.50	4,314	0.88	3.56
	Physics	387	0.89	3.58	2,786	0.87	3.53
	Integrated Science 1	671	0.84	3.58	2,720	0.84	3.58
	Integrated Science 2	117	0.82	3.55	323	0.82	3.55
	Integrated Science 3	4	0.86	3.15	40	0.82	3.54
	Integrated Science 4	6	0.85	3.19	34	0.80	3.52
Grade-Specific	**Algebra I – 8**	1,543	0.90	3.57	8,042	0.90	3.52
	Geometry – 9	706	0.92	3.45	4,984	0.91	3.49
	Algebra II – 10	577	0.88	3.56	4,476	0.88	3.54
	High School Math – 11	448	0.92	3.38	4,373	0.91	3.45
	World History – 10	2,941	0.88	3.63	13,499	0.88	3.59

Subject Area	CST	Hispanic			African American			White		
		N	*Rel.*	*SEM*	*N*	*Rel.*	*SEM*	*N*	*Rel.*	*SEM*
English–Language Arts	**2**	234,469	0.93	3.55	32,769	0.94	3.35	124,677	0.94	3.03
	3	233,587	0.91	3.52	33,557	0.92	3.44	127,204	0.92	3.19
	4*	232,220	0.93	3.78	33,838	0.93	3.88	129,230	0.94	3.33
	5	233,648	0.92	3.80	34,864	0.93	3.70	134,777	0.93	3.55
	6	234,783	0.92	3.88	36,421	0.93	3.76	139,013	0.93	3.69
	7*	234,819	0.92	3.86	37,961	0.92	3.99	142,170	0.93	3.57
	8	230,178	0.91	4.02	38,004	0.92	3.91	145,839	0.93	3.53
	9	239,293	0.92	4.01	40,346	0.93	3.83	154,864	0.94	3.49
	10	214,603	0.93	3.85	37,537	0.93	3.96	153,267	0.94	3.72
	11	182,916	0.93	3.92	33,738	0.94	3.73	153,267	0.95	3.61
* *MC Only*										
History–Social Science	**8**	229,868	0.90	4.03	37,913	0.90	4.08	145,569	0.93	3.82
	World History	219,045	0.87	3.62	38,159	0.87	3.54	160,974	0.91	3.55
	11	177,986	0.89	3.48	32,351	0.88	3.59	150,428	0.92	3.39
Math	**2**	234,902	0.93	3.12	32,854	0.93	3.32	124,993	0.92	2.82
	3	234,089	0.93	3.31	33,688	0.94	3.21	127,543	0.93	2.91
	4	233,108	0.94	3.22	34,090	0.94	3.39	129,677	0.94	2.84
	5	234,369	0.92	3.59	35,026	0.93	3.44	135,007	0.94	3.17
	6	235,242	0.91	3.55	36,482	0.91	3.60	139,135	0.93	3.32
	7	230,394	0.91	3.59	37,234	0.91	3.52	133,670	0.93	3.34
	General Mathematics	163,677	0.86	3.64	26,784	0.86	3.61	86,174	0.89	3.64
	Algebra I	369,453	0.85	3.65	61,977	0.84	3.63	214,195	0.90	3.60
	Geometry	153,947	0.89	3.62	26,230	0.88	3.61	126,516	0.92	3.59
	Algebra II	77,462	0.87	3.56	13,830	0.86	3.62	89,988	0.90	3.47
	HS Mathematics	23,467	0.91	3.61	3,760	0.92	3.54	47,151	0.92	3.26
	Integrated Math 1	2,930	0.80	3.71	687	0.82	3.67	2,364	0.85	3.60
	Integrated Math 2	1,301	0.83	3.67	360	0.82	3.64	1,203	0.89	3.63
	Integrated Math 3	393	0.89	3.58	139	0.87	3.49	698	0.85	3.59
Science	**Grade 5 Science**	234,128	0.87	3.53	34,927	0.88	3.54	134,907	0.89	3.24
	Grade 8 Science	229,377	0.87	3.52	37,771	0.87	3.56	145,290	0.90	3.36
	Grade 10 Life Science	206,728	0.89	3.59	35,303	0.89	3.58	153,147	0.93	3.22
	Biology	221,608	0.89	3.50	37,646	0.89	3.52	166,727	0.91	3.47
	Chemistry	80,110	0.88	3.51	14,757	0.87	3.60	83,676	0.90	3.30
	Earth Science	99,854	0.87	3.62	16,319	0.87	3.60	67,842	0.91	3.39
	Physics	20,140	0.87	3.54	4,086	0.86	3.54	24,477	0.90	3.42
	Integrated Scie. 1	55,878	0.82	3.53	8,712	0.82	3.52	21,162	0.88	3.49
	Integrated Scie. 2	7,525	0.78	3.58	1,068	0.76	3.58	3,485	0.85	3.60
	Integrated Scie. 3	869	0.77	3.59	151	0.78	3.55	692	0.86	3.50
	Integrated Scie. 4	561	0.78	3.56	57	0.77	3.51	208	0.90	3.52
Grade-Specific	**Algebra I – 8**	106,567	0.88	3.68	17,595	0.88	3.60	75,983	0.91	3.41
	Geometry – 9	38,760	0.91	3.63	5,737	0.91	3.61	45,148	0.91	3.31
	Algebra II – 10	30,855	0.88	3.60	5,064	0.87	3.65	42,380	0.89	3.47
	High School Math – 11	20,545	0.91	3.58	3,387	0.91	3.67	40,733	0.92	3.28
	World History – 10	193,116	0.87	3.59	33,189	0.86	3.64	146,050	0.91	3.47

Table 8.A.11 Subscore Reliabilities and SEM for English–Language Arts by GENDER/NSLP

Subscore Reliabilities and SEM for English–Language Arts by GENDER/NSLP									
	# of	Male		Female		Not in NSLP		NSLP	
Subscore Area	items	*Reliab.*	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*
Grade 2									
1. Word Analysis and Vocabulary	22	0.85	1.91	0.84	1.88	0.83	1.77	0.83	1.98
2. Reading Comprehension	15	0.80	1.63	0.80	1.57	0.79	1.50	0.77	1.67
3. Literary Response and Analysis	6	0.64	1.01	0.62	1.00	0.62	0.93	0.57	1.06
4. Written and Oral Language Conventions	14	0.83	1.53	0.83	1.46	0.83	1.38	0.82	1.58
5. Writing Strategies	8	0.56	1.26	0.57	1.24	0.57	1.20	0.50	1.29
Grade 3									
1. Word Analysis and Vocabulary	20	0.81	1.77	0.79	1.75	0.77	1.65	0.77	1.84
2. Reading Comprehension	15	0.74	1.72	0.74	1.69	0.74	1.64	0.69	1.76
3. Literary Response and Analysis	8	0.68	1.18	0.68	1.14	0.67	1.08	0.63	1.22
4. Written and Oral Language Conventions	13	0.70	1.57	0.68	1.53	0.68	1.47	0.65	1.60
5. Writing Strategies	9	0.66	1.31	0.66	1.30	0.65	1.25	0.61	1.34
Grade 4									
1. Word Analysis and Vocabulary	18	0.82	1.66	0.81	1.64	0.79	1.50	0.79	1.76
2. Reading Comprehension	15	0.78	1.67	0.77	1.66	0.77	1.57	0.73	1.74
3. Literary Response and Analysis	9	0.70	1.28	0.68	1.26	0.68	1.18	0.65	1.33
4. Written and Oral Language Conventions	18	0.79	1.83	0.78	1.79	0.77	1.72	0.75	1.87
5. Writing Strategies	15	0.77	1.71	0.77	1.68	0.77	1.62	0.72	1.75
Grade 5									
1. Word Analysis and Vocabulary	14	0.78	1.52	0.77	1.50	0.75	1.40	0.73	1.58
2. Reading Comprehension	16	0.75	1.76	0.73	1.73	0.75	1.68	0.66	1.80
3. Literary Response and Analysis	12	0.76	1.42	0.74	1.40	0.73	1.31	0.73	1.49
4. Written and Oral Language Conventions	17	0.79	1.71	0.77	1.65	0.76	1.60	0.76	1.74
5. Writing Strategies	16	0.75	1.80	0.75	1.78	0.76	1.73	0.69	1.83

Subscore Reliabilities and SEM for English–Language Arts by GENDER/NSLP

Subscore Area	# of items	Male		Female		Not in NSLP		NSLP	
		Reliab.	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*
Grade 6									
1. Word Analysis and Vocabulary	13	0.76	1.54	0.74	1.53	0.74	1.45	0.70	1.61
2. Reading Comprehension	17	0.75	1.86	0.72	1.85	0.74	1.82	0.67	1.88
3. Literary Response and Analysis	12	0.69	1.54	0.67	1.54	0.66	1.49	0.63	1.57
4. Written and Oral Language Conventions	16	0.78	1.70	0.75	1.64	0.75	1.60	0.73	1.73
5. Writing Strategies	17	0.82	1.80	0.81	1.78	0.81	1.71	0.77	1.85
Grade 7									
1. Word Analysis and Vocabulary	11	0.69	1.42	0.65	1.41	0.65	1.33	0.63	1.49
2. Reading Comprehension	18	0.80	1.82	0.78	1.80	0.79	1.72	0.75	1.89
3. Literary Response and Analysis	13	0.71	1.61	0.70	1.59	0.70	1.56	0.66	1.64
4. Written and Oral Language Conventions	16	0.75	1.74	0.73	1.71	0.74	1.67	0.70	1.77
5. Writing Strategies	17	0.80	1.80	0.79	1.76	0.80	1.71	0.76	1.84
Grade 8									
1. Word Analysis and Vocabulary	9	0.62	1.28	0.58	1.27	0.58	1.22	0.57	1.33
2. Reading Comprehension	18	0.80	1.82	0.77	1.78	0.79	1.72	0.75	1.88
3. Literary Response and Analysis	15	0.75	1.72	0.74	1.69	0.75	1.64	0.68	1.77
4. Written and Oral Language Conventions	16	0.74	1.79	0.72	1.76	0.73	1.72	0.69	1.83
5. Writing Strategies	17	0.79	1.80	0.78	1.75	0.79	1.70	0.73	1.86
Grade 9									
1. Word Analysis and Vocabulary	8	0.65	1.25	0.58	1.27	0.60	1.23	0.59	1.29
2. Reading Comprehension	18	0.82	1.82	0.80	1.79	0.81	1.74	0.78	1.88
3. Literary Response and Analysis	16	0.81	1.70	0.79	1.68	0.80	1.62	0.77	1.78
4. Written and Oral Language Conventions	13	0.74	1.59	0.73	1.54	0.75	1.51	0.69	1.63
5. Writing Strategies	20	0.80	2.00	0.79	1.99	0.80	1.96	0.74	2.03

Subscore Reliabilities and SEM for English–Language Arts by GENDER/NSLP

Subscore Area	# of items	Male		Female		Not in NSLP		NSLP	
		Reliab.	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*
Grade 10									
1. Word Analysis and Vocabulary	8	0.67	1.21	0.60	1.19	0.64	1.16	0.59	1.25
2. Reading Comprehension	18	0.83	1.85	0.81	1.84	0.83	1.79	0.77	1.92
3. Literary Response and Analysis	16	0.78	1.76	0.76	1.74	0.78	1.71	0.72	1.81
4. Written and Oral Language Conventions	13	0.74	1.56	0.70	1.51	0.73	1.50	0.70	1.60
5. Writing Strategies	20	0.85	1.91	0.85	1.84	0.86	1.81	0.82	1.96
Grade 11									
1. Word Analysis and Vocabulary	8	0.70	1.21	0.64	1.20	0.69	1.17	0.62	1.26
2. Reading Comprehension	19	0.82	1.91	0.82	1.88	0.83	1.86	0.77	1.95
3. Literary Response and Analysis	17	0.75	1.83	0.75	1.80	0.76	1.79	0.68	1.86
4. Written and Oral Language Conventions	9	0.76	1.24	0.75	1.18	0.77	1.16	0.71	1.29
5. Writing Strategies	22	0.88	1.98	0.86	1.95	0.88	1.90	0.84	2.07

Table 8.A.12 Subscore Reliabilities and SEM for History–Social Science by GENDER/NSLP

Subscore Area	# of items	Male		Female		Not in NSLP		NSLP	
		Reliab.	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*
Grade 8									
1. World History and Geography: Ancient Civilizations	16	0.73	1.81	0.70	1.83	0.72	1.79	0.63	1.85
2. Late Antiquity and the Middle Ages	14	0.76	1.67	0.70	1.71	0.74	1.67	0.67	1.71
3. Renaissance/Reformation	10	0.67	1.43	0.61	1.45	0.67	1.41	0.54	1.46
4. U.S. Constitution and the Early Republic	22	0.82	2.10	0.79	2.13	0.81	2.08	0.75	2.15
5. Civil War and Its Aftermath	13	0.75	1.61	0.71	1.64	0.74	1.60	0.67	1.66
World History									
1. Development of Modern Political Thought	13	0.68	1.66	0.62	1.69	0.67	1.66	0.58	1.69
2. Industrial Expansion and Imperialism	10	0.65	1.44	0.55	1.48	0.62	1.45	0.52	1.48
3. Causes and Effects of World War I	14	0.75	1.67	0.66	1.72	0.73	1.67	0.64	1.72
4. Causes and Effects of World War II	13	0.75	1.61	0.67	1.66	0.74	1.62	0.65	1.66
5. International Developments in the Post-World War II Era	10	0.70	1.40	0.61	1.43	0.68	1.41	0.57	1.42
Grade 11 (U.S. History)									
1. Foundations of American Political and Social Thought	10	0.64	1.42	0.58	1.43	0.62	1.42	0.54	1.45
2. Industrialization and the U.S. role as a World Power	13	0.71	1.62	0.66	1.64	0.70	1.62	0.62	1.65
3. United States between the World Wars	12	0.68	1.58	0.65	1.58	0.67	1.57	0.60	1.59
4. World War II and Foreign Affairs	12	0.76	1.51	0.69	1.54	0.74	1.51	0.65	1.56
5. Post-World War II Domestic Affairs	13	0.74	1.62	0.68	1.65	0.72	1.62	0.67	1.65

Table 8.A.13 Subscore Reliabilities and SEM for Mathematics by GENDER/NSLP

Subscore Reliabilities and SEM for Mathematics by GENDER/NSLP									
Subscore Area	**# of items**	**Male**		**Female**		**Not in NSLP**		**NSLP**	
		Reliab.	***SEM***	***Reliab.***	***SEM***	***Reliab.***	***SEM***	***Reliab.***	***SEM***
Grade 2									
1. Number Sense: Place Value, Addition, and Subtraction	15	0.82	1.45	0.80	1.46	0.79	1.33	0.80	1.54
2. Number Sense: Multiplication, Division, and Fractions	23	0.85	1.77	0.83	1.77	0.82	1.64	0.83	1.86
3. Algebra and Functions	6	0.64	0.93	0.61	0.93	0.61	0.85	0.59	0.99
4. Measurement and Geometry	14	0.72	1.42	0.69	1.44	0.67	1.31	0.69	1.51
5. Statistics, Data Analysis, and Probability	7	0.65	0.98	0.61	0.97	0.61	0.93	0.62	1.01
Grade 3									
1. Number Sense: Place Value, Fractions, and Decimals	16	0.83	1.43	0.81	1.48	0.79	1.34	0.81	1.54
2. Number Sense: Addition, Subtraction, Multiplication, and Division	16	0.84	1.56	0.82	1.55	0.83	1.45	0.82	1.63
3. Algebra and Functions	12	0.81	1.31	0.78	1.35	0.79	1.20	0.77	1.42
4. Measurement and Geometry	16	0.76	1.49	0.73	1.48	0.72	1.39	0.73	1.55
5. Statistics, Data Analysis, and Probability	5	0.70	0.72	0.66	0.69	0.65	0.61	0.68	0.77
Grade 4									
1. Number Sense: Decimals, Fractions, and Negative Numbers	17	0.81	1.54	0.77	1.57	0.77	1.43	0.78	1.65
2. Number Sense: Operations and Factoring	14	0.83	1.46	0.82	1.43	0.81	1.33	0.81	1.52
3. Algebra and Functions	18	0.87	1.55	0.85	1.54	0.84	1.39	0.85	1.65
4. Measurement and Geometry	12	0.78	1.39	0.75	1.39	0.76	1.30	0.74	1.46
5. Statistics, Data Analysis, and Probability	4	0.54	0.79	0.45	0.80	0.47	0.73	0.48	0.84
Grade 5									
1. Number Sense: Estimation, Percents, and Factoring	12	0.78	1.39	0.74	1.41	0.78	1.34	0.71	1.45
2. Number Sense: Operations with Fractions and Decimals	17	0.83	1.70	0.81	1.69	0.82	1.62	0.80	1.76
3. Algebra and Functions	17	0.83	1.69	0.80	1.70	0.82	1.59	0.79	1.78
4. Measurement and Geometry	15	0.79	1.65	0.75	1.67	0.78	1.58	0.73	1.72
5. Statistics, Data Analysis, and Probability	4	0.61	0.74	0.52	0.76	0.58	0.67	0.52	0.81

Subscore Reliabilities and SEM for Mathematics by GENDER/NSLP

Subscore Area	# of items	Male		Female		Not in NSLP		NSLP	
		Reliab.	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*
Grade 6									
1. Number Sense: Ratios, Proportions, Percentages, and Negative Fractions	15	0.78	1.67	0.76	1.69	0.78	1.62	0.72	1.73
2. Number Sense: Operations and Problem Solving with Fractions	10	0.70	1.34	0.64	1.37	0.68	1.27	0.61	1.42
3. Algebra and Functions	19	0.84	1.76	0.81	1.77	0.82	1.66	0.80	1.85
4. Measurement and Geometry	10	0.69	1.39	0.67	1.39	0.70	1.35	0.60	1.43
5. Statistics, Data Analysis, and Probability	11	0.73	1.41	0.69	1.40	0.73	1.35	0.64	1.45
Grade 7									
1. Number Sense: Rational Numbers	14	0.78	1.62	0.75	1.62	0.77	1.58	0.72	1.67
2. Number Sense: Exponent, Powers and Roots	8	0.63	1.26	0.59	1.28	0.63	1.25	0.55	1.28
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	10	0.71	1.30	0.66	1.29	0.68	1.24	0.66	1.34
4. Algebra and Functions: Multi-step Problems, Graphing, and Functions	15	0.77	1.67	0.72	1.69	0.76	1.64	0.70	1.72
5. Measurement and Geometry	13	0.74	1.59	0.69	1.61	0.73	1.55	0.66	1.65
6. Statistics, Data Analysis, and Probability	5	0.61	0.94	0.58	0.92	0.61	0.90	0.56	0.97
General Mathematics									
1. Number Sense: Rational Numbers	14	0.65	1.67	0.58	1.68	0.64	1.66	0.58	1.69
2. Number Sense: Exponent, Powers and Roots	10	0.59	1.43	0.55	1.44	0.61	1.43	0.51	1.43
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	11	0.64	1.46	0.59	1.45	0.62	1.43	0.60	1.48
4. Algebra and Functions: Multi-step Problems, Graphing, and Functions	10	0.61	1.38	0.57	1.40	0.61	1.37	0.55	1.40
5. Measurement and Geometry	11	0.56	1.49	0.51	1.49	0.57	1.48	0.47	1.49
6. Statistics, Data Analysis, and Probability	9	0.60	1.33	0.56	1.30	0.60	1.29	0.55	1.34

Subscore Reliabilities and SEM for Mathematics by GENDER/NSLP

Subscore Area	# of items	Male		Female		Not in NSLP		NSLP	
		Reliab.	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*
Algebra I									
1. Number Properties, Operations, and Linear Equations	17	0.78	1.81	0.75	1.81	0.78	1.77	0.73	1.86
2. Graphing and Systems of Linear Equations	14	0.69	1.70	0.68	1.70	0.72	1.69	0.61	1.71
3. Quadratics and Polynomials	21	0.73	2.05	0.72	2.04	0.75	2.03	0.66	2.06
4. Functions and Rational Expressions	13	0.54	1.61	0.55	1.60	0.60	1.61	0.41	1.60
Geometry									
1. Logic and Geometric Proofs	23	0.84	2.06	0.82	2.08	0.84	2.03	0.78	2.14
2. Volume and Area Formulas	11	0.71	1.46	0.68	1.47	0.72	1.44	0.60	1.49
3. Angle Relationships, Constructions, and Lines	16	0.78	1.76	0.75	1.77	0.78	1.75	0.69	1.79
4. Trigonometry	15	0.77	1.71	0.74	1.72	0.76	1.69	0.69	1.75
Algebra II									
1. Polynomials and Rational Expressions	19	0.82	1.82	0.81	1.82	0.81	1.80	0.80	1.86
2. Quadratics, Conics, and Complex Numbers	17	0.72	1.83	0.69	1.84	0.72	1.83	0.64	1.85
3. Exponents and Logarithms	15	0.74	1.74	0.70	1.75	0.72	1.74	0.68	1.76
4. Series, Combinatorics, and Probability and Statistics	14	0.65	1.65	0.60	1.64	0.63	1.65	0.54	1.64
Summative High School Math									
1. Algebra I	18	0.80	1.62	0.79	1.69	0.79	1.62	0.78	1.76
2. Geometry	19	0.79	1.76	0.78	1.84	0.78	1.78	0.78	1.91
3. Algebra II	23	0.86	1.88	0.84	1.96	0.85	1.89	0.84	2.04
4. Probability and Statistics	5	0.55	0.90	0.50	0.95	0.51	0.91	0.47	0.98
Integrated Math 1									
1. Algebra I: Number Properties, Operations and Linear Equations	15	0.74	1.73	0.73	1.72	0.73	1.72	0.73	1.73
2. Algebra I: Graphing	9	0.56	1.37	0.52	1.38	0.54	1.38	0.55	1.37
3. Algebra I: Quadratics and Polynomials	14	0.55	1.67	0.55	1.68	0.55	1.67	0.56	1.67
4. Algebra I: Functions and Relations Expressions	7	0.39	1.20	0.46	1.18	0.45	1.19	0.37	1.19
5. Geometry	20	0.56	2.01	0.50	2.00	0.57	2.01	0.48	2.00

Subscore Reliabilities and SEM for Mathematics by GENDER/NSLP

Subscore Area	# of items	Male		Female		Not in NSLP		NSLP	
		Reliab.	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*
Integrated Math 2									
1. Algebra I	20	0.74	1.98	0.70	1.98	0.75	1.98	0.65	1.98
2. Geometry: Logic and Geometric Proofs	22	0.80	2.07	0.77	2.08	0.81	2.06	0.73	2.09
3. Geometry: Angle Relationships, Construction and Lines	8	0.49	1.28	0.44	1.29	0.50	1.27	0.41	1.29
4. Trigonometry	10	0.58	1.43	0.57	1.43	0.59	1.42	0.52	1.43
5. Algebra II/Probability and Statistics	5	0.37	1.00	0.23	0.99	0.36	1.00	0.18	0.99
Integrated Math 3									
1. Geometry	5	0.53	0.95	0.44	0.98	0.47	0.97	0.51	0.97
2. Algebra II: Polynomials and Relations Expressions	19	0.76	1.91	0.73	1.90	0.71	1.91	0.80	1.89
3. Algebra II: Quadratics, Conics and Statistics	17	0.65	1.85	0.60	1.85	0.59	1.85	0.69	1.84
4. Algebra II: Exponents and Logarithms	15	0.73	1.74	0.68	1.76	0.68	1.76	0.75	1.73
5. Algebra II: Series, Combinatorics, Probability and Statistics	9	0.42	1.30	0.36	1.27	0.38	1.28	0.42	1.30

Table 8.A.14 Subscore Reliabilities and SEM for Science by GENDER/NSLP

Subscore Reliabilities and SEM for Science by GENDER/NSLP									
	# of	Male		Female		Not in NSLP		NSLP	
Subscore Area	items	*Reliab.*	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*
Grade 5 Science									
1. Physical Science (Grade 5)	11	0.65	1.43	0.60	1.45	0.60	1.36	0.57	1.49
2. Physical Science (Grade 4)	8	0.61	1.22	0.56	1.23	0.58	1.16	0.52	1.28
3. Life Science (Grade 5)	13	0.70	1.56	0.62	1.59	0.65	1.51	0.60	1.62
4. Life Science (Grade 4)	9	0.70	1.24	0.67	1.24	0.66	1.15	0.63	1.31
5. Earth Science (Grade 5)	11	0.60	1.46	0.54	1.47	0.54	1.42	0.53	1.50
6. Earth Science (Grade 4)	8	0.60	1.25	0.51	1.26	0.59	1.22	0.44	1.28
Grade 8 Science									
1. Motion	8	0.59	1.26	0.52	1.28	0.57	1.23	0.49	1.31
2. Forces, Density, and Buoncy	13	0.70	1.58	0.62	1.62	0.67	1.55	0.60	1.65
3. Structure of Matter and Periodic Table	16	0.75	1.79	0.70	1.81	0.74	1.76	0.65	1.84
4. Earth in the Solar System	7	0.61	1.11	0.56	1.13	0.57	1.09	0.55	1.15
5. Reactions and the Chemistry of Living Systems	10	0.61	1.42	0.55	1.44	0.60	1.41	0.51	1.46
6. Investigation and Experimentation	6	0.56	1.09	0.46	1.10	0.53	1.06	0.45	1.12
Grade 10 Life Science									
1. Cell Biology	10	0.69	1.41	0.61	1.44	0.68	1.41	0.58	1.45
2. Genetics	12	0.69	1.54	0.65	1.54	0.69	1.52	0.60	1.58
3. Physiology	10	0.73	1.35	0.66	1.38	0.70	1.33	0.63	1.40
4. Ecology	11	0.77	1.41	0.69	1.46	0.74	1.40	0.68	1.49
5. Evolution	11	0.77	1.44	0.74	1.46	0.77	1.42	0.67	1.50
6. Investigation and Experimentation	6	0.55	1.09	0.49	1.09	0.53	1.06	0.45	1.13

Subscore Reliabilities and SEM for Science by GENDER/NSLP

Subscore Area	# of items	Male		Female		Not in NSLP		NSLP	
		Reliab.	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*
Biology									
1. Cell Biology	9	0.64	1.36	0.56	1.39	0.62	1.36	0.51	1.40
2. Genetics	18	0.76	1.91	0.72	1.91	0.75	1.88	0.68	1.95
3. Ecology and Evolution	16	0.80	1.77	0.76	1.81	0.79	1.76	0.72	1.83
4. Physiology	11	0.73	1.42	0.67	1.44	0.71	1.39	0.64	1.48
5. Investigation and Experimentation	6	0.57	1.09	0.54	1.11	0.56	1.08	0.48	1.13
Chemistry									
1. Atomic and Molecular Structure	8	0.64	1.20	0.56	1.25	0.59	1.20	0.58	1.28
2. Chemical Bonds, Biochemistry	9	0.61	1.29	0.55	1.33	0.56	1.29	0.56	1.36
3. Kinetics, Thermodynamics	14	0.72	1.65	0.63	1.71	0.68	1.66	0.60	1.73
4. Chemical Reactions	13	0.70	1.60	0.65	1.63	0.68	1.60	0.61	1.64
5. Conservation of Matter and Stoichiometry	10	0.73	1.35	0.68	1.38	0.71	1.34	0.63	1.42
6. Investigation and Experimentation	6	0.64	1.02	0.59	1.04	0.61	1.00	0.57	1.09
Earth Science									
1. Astronomy and Cosmology	12	0.65	1.55	0.59	1.58	0.64	1.55	0.59	1.59
2. Solid Earth	14	0.69	1.69	0.64	1.72	0.68	1.68	0.61	1.73
3. The Earth's Energy	28	0.84	2.39	0.79	2.44	0.83	2.40	0.77	2.44
4. Investigation and Experimentation	6	0.53	1.10	0.45	1.11	0.51	1.09	0.43	1.13
Physics									
1. Motion and Forces	12	0.70	1.49	0.64	1.54	0.67	1.49	0.59	1.57
2. Conservation of Energy and Momentum	12	0.72	1.52	0.65	1.55	0.69	1.51	0.61	1.57
3. Heat and Thermodynamics	9	0.71	1.26	0.65	1.31	0.67	1.25	0.63	1.34
4. Waves	10	0.66	1.38	0.58	1.42	0.63	1.39	0.55	1.44
5. Electric and Magnetic Phenomena	11	0.69	1.48	0.61	1.51	0.66	1.48	0.56	1.52
6. Investigation and Experimentation	6	0.51	1.06	0.44	1.10	0.46	1.06	0.40	1.12

Subscore Reliabilities and SEM for Science by GENDER/NSLP

Subscore Area	# of items	Male		Female		Not in NSLP		NSLP	
		Reliab.	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*
Integrated Science 1									
1. Biology/Life Sciences	10	0.57	1.47	0.53	1.47	0.57	1.46	0.47	1.48
2. Chemistry	15	0.58	1.78	0.49	1.79	0.57	1.79	0.49	1.79
3. Earth Sciences	17	0.75	1.87	0.68	1.91	0.74	1.86	0.66	1.91
4. Physics	12	0.47	1.57	0.35	1.55	0.48	1.57	0.31	1.55
5. Investigation and Experimentation	6	0.57	1.08	0.50	1.11	0.56	1.08	0.48	1.11
Integrated Science 2									
1. Biology/Life Sciences	15	0.66	1.78	0.61	1.79	0.66	1.77	0.58	1.80
2. Chemistry	6	0.31	1.15	0.28	1.15	0.33	1.15	0.22	1.14
3. Earth Sciences	15	0.72	1.76	0.64	1.79	0.71	1.76	0.62	1.79
4. Physics	18	0.50	1.93	0.45	1.93	0.52	1.93	0.42	1.93
5. Investigation and Experimentation	6	0.38	1.14	0.31	1.15	0.39	1.14	0.25	1.14
Integrated Science 3									
1. Biology/Life Sciences	16	0.66	1.84	0.54	1.87	0.64	1.85	0.55	1.85
2. Chemistry	23	0.67	2.17	0.48	2.20	0.64	2.18	0.51	2.19
3. Earth Sciences	7	0.54	1.22	0.44	1.24	0.52	1.22	0.46	1.23
4. Physics	8	0.22	1.29	0.24	1.26	0.26	1.28	0.18	1.28
5. Investigation and Experimentation	6	0.55	1.08	0.45	1.13	0.55	1.09	0.40	1.13
Integrated Science 4									
1. Biology/Life Sciences	13	0.62	1.64	0.58	1.65	0.64	1.64	0.53	1.66
2. Chemistry	10	0.37	1.45	0.35	1.46	0.42	1.45	0.24	1.47
3. Earth Sciences	15	0.68	1.78	0.63	1.78	0.71	1.76	0.57	1.80
4. Physics	16	0.54	1.83	0.55	1.84	0.59	1.83	0.46	1.85
5. Investigation and Experimentation	6	0.32	1.12	0.23	1.14	0.31	1.13	0.21	1.13

Table 8.A.15 Subscore Reliabilities and SEM for Grade Specific Tests by GENDER/NSLP

Subscore Reliabilities and SEM for Grade Specific Tests by GENDER/NSLP									
Subscore Area	**# of items**	**Male**		**Female**		**Not in NSLP**		**NSLP**	
		Reliab.	***SEM***	***Reliab.***	***SEM***	***Reliab.***	***SEM***	***Reliab.***	***SEM***
Algebra I – 8									
1. Number Properties, Operations, and Linear Equations	17	0.79	1.73	0.77	1.73	0.77	1.66	0.75	1.82
2. Graphing and Systems of Linear Equations	14	0.75	1.67	0.73	1.68	0.75	1.65	0.68	1.70
3. Quadratics and Polynomials	21	0.78	2.01	0.77	2.00	0.78	1.98	0.72	2.04
4. Functions and Rational Expressions	13	0.64	1.59	0.64	1.59	0.67	1.59	0.53	1.60
Geometry – 9									
1. Logic and Geometric Proofs	23	0.84	1.92	0.82	1.98	0.82	1.88	0.81	2.09
2. Volume and Area Formulas	11	0.73	1.39	0.72	1.41	0.71	1.36	0.67	1.46
3. Angle Relationships, Constructions, and Lines	16	0.78	1.71	0.77	1.73	0.77	1.70	0.74	1.78
4. Trigonometry	15	0.77	1.63	0.75	1.65	0.74	1.61	0.73	1.71
Algebra II – 10									
1. Polynomials and Rational Expressions	19	0.81	1.78	0.80	1.78	0.79	1.76	0.80	1.83
2. Quadratics, Conics, and Complex Numbers	17	0.72	1.82	0.69	1.83	0.71	1.82	0.66	1.85
3. Exponents and Logarithms	15	0.72	1.72	0.69	1.74	0.69	1.72	0.69	1.76
4. Series, Combinatorics, and Probability and Statistics	14	0.64	1.65	0.60	1.65	0.61	1.65	0.57	1.65
Summative High School Math – 11									
1. Algebra I	18	0.79	1.65	0.78	1.71	0.79	1.65	0.77	1.78
2. Geometry	19	0.79	1.79	0.78	1.86	0.78	1.80	0.77	1.92
3. Algebra II	23	0.85	1.91	0.84	1.99	0.84	1.92	0.84	2.05
4. Probability and Statistics	5	0.54	0.91	0.49	0.96	0.51	0.92	0.46	0.98

Subscore Reliabilities and SEM for Grade Specific Tests by GENDER/NSLP

Subscore Area	# of items	Male		Female		Not in NSLP		NSLP	
		Reliab.	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*	*Reliab.*	*SEM*
World History – 10									
1. Development of Modern Political Thought	13	0.67	1.66	0.60	1.69	0.65	1.66	0.57	1.70
2. Industrial Expansion and Imperialism	10	0.63	1.45	0.54	1.49	0.60	1.45	0.51	1.49
3. Causes and Effects of World War I	14	0.74	1.67	0.65	1.72	0.72	1.68	0.63	1.72
4. Causes and Effects of World War II	13	0.75	1.61	0.66	1.66	0.73	1.62	0.64	1.66
5. International Developments in the Post-World War II Era	10	0.69	1.40	0.60	1.43	0.67	1.42	0.57	1.43

Table 8.A.16 Subscore Reliabilities and SEM for ELA by SPECIAL SERVICES/LANGUAGE FLUENCY

Subscore Reliabilities and SEM for ELA by SPECIAL SERVICES/LANGUAGE FLUENCY													
Subscore Area	**# of items**	**No Spec. Ser.**		**Spec. Ser.**		**Eng. only**		**Ini. Fluent**		**Learner**		**Red. Fluent**	
		Rel.	***SEM***	***Rel.***	***SEM***	***Rel.***	***SEM***	***Rel.***	***SEM***	***Rel.***	***SEM***	***Rel.***	***SEM***
Grade 2													
1. Word Analysis and Vocabulary	22	0.84	1.88	0.85	2.03	0.84	1.84	0.81	1.76	0.83	2.00	0.77	1.72
2. Reading Comprehension	15	0.80	1.59	0.79	1.68	0.80	1.55	0.77	1.51	0.76	1.69	0.71	1.51
3. Literary Response and Analysis	6	0.62	1.00	0.62	1.06	0.63	0.97	0.59	0.94	0.55	1.08	0.52	0.94
4. Written and Oral Language Conventions	14	0.83	1.49	0.82	1.60	0.83	1.46	0.82	1.35	0.82	1.59	0.79	1.31
5. Writing Strategies	8	0.56	1.25	0.53	1.29	0.57	1.23	0.55	1.20	0.49	1.29	0.50	1.20
Grade 3													
1. Word Analysis and Vocabulary	20	0.78	1.75	0.83	1.91	0.78	1.70	0.72	1.65	0.75	1.90	0.57	1.62
2. Reading Comprehension	15	0.73	1.70	0.73	1.75	0.74	1.68	0.71	1.65	0.66	1.77	0.62	1.65
3. Literary Response and Analysis	8	0.67	1.16	0.67	1.23	0.68	1.12	0.64	1.09	0.59	1.24	0.52	1.08
4. Written and Oral Language Conventions	13	0.67	1.54	0.69	1.63	0.69	1.52	0.66	1.46	0.62	1.61	0.54	1.43
5. Writing Strategies	9	0.65	1.30	0.64	1.33	0.66	1.28	0.64	1.26	0.57	1.35	0.53	1.26
Grade 4													
1. Word Analysis and Vocabulary	18	0.80	1.63	0.82	1.83	0.80	1.57	0.77	1.50	0.75	1.83	0.64	1.46
2. Reading Comprehension	15	0.77	1.66	0.76	1.72	0.78	1.62	0.75	1.59	0.67	1.76	0.63	1.59
3. Literary Response and Analysis	9	0.68	1.26	0.68	1.33	0.69	1.23	0.67	1.18	0.60	1.37	0.53	1.15
4. Written and Oral Language Conventions	18	0.77	1.80	0.77	1.89	0.79	1.77	0.77	1.71	0.72	1.90	0.64	1.67
5. Writing Strategies	15	0.77	1.69	0.72	1.74	0.78	1.66	0.77	1.62	0.65	1.77	0.66	1.62
Grade 5													
1. Word Analysis and Vocabulary	14	0.76	1.49	0.74	1.63	0.76	1.46	0.73	1.41	0.64	1.63	0.60	1.43
2. Reading Comprehension	16	0.73	1.74	0.69	1.79	0.75	1.72	0.73	1.68	0.55	1.82	0.61	1.71
3. Literary Response and Analysis	12	0.74	1.40	0.74	1.52	0.75	1.37	0.71	1.31	0.68	1.55	0.60	1.31
4. Written and Oral Language Conventions	17	0.76	1.66	0.75	1.82	0.78	1.66	0.76	1.57	0.71	1.79	0.64	1.54
5. Writing Strategies	16	0.75	1.79	0.68	1.81	0.76	1.77	0.75	1.74	0.57	1.85	0.65	1.77

Subscore Reliabilities and SEM for ELA by SPECIAL SERVICES/LANGUAGE FLUENCY

Subscore Area	# of items	No Spec. Ser.		Spec. Ser.		Eng. only		Ini. Fluent		Learner		Red. Fluent	
		Rel.	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*
Grade 6													
1. Word Analysis and Vocabulary	13	0.74	1.53	0.69	1.62	0.75	1.49	0.72	1.46	0.59	1.66	0.61	1.54
2. Reading Comprehension	17	0.73	1.85	0.66	1.86	0.74	1.84	0.72	1.82	0.55	1.89	0.62	1.86
3. Literary Response and Analysis	12	0.66	1.54	0.63	1.54	0.68	1.52	0.64	1.51	0.52	1.57	0.53	1.56
4. Written and Oral Language Conventions	16	0.75	1.66	0.71	1.79	0.77	1.65	0.75	1.59	0.65	1.78	0.66	1.62
5. Writing Strategies	17	0.81	1.78	0.74	1.83	0.82	1.75	0.81	1.73	0.64	1.87	0.74	1.81
Grade 7													
1. Word Analysis and Vocabulary	11	0.65	1.40	0.60	1.53	0.67	1.36	0.63	1.34	0.51	1.55	0.52	1.41
2. Reading Comprehension	18	0.78	1.79	0.70	1.93	0.80	1.76	0.78	1.72	0.64	1.95	0.69	1.79
3. Literary Response and Analysis	13	0.70	1.60	0.61	1.63	0.71	1.58	0.68	1.57	0.52	1.66	0.59	1.61
4. Written and Oral Language Conventions	16	0.73	1.72	0.64	1.79	0.74	1.70	0.74	1.67	0.58	1.81	0.64	1.72
5. Writing Strategies	17	0.79	1.77	0.70	1.85	0.81	1.75	0.79	1.71	0.65	1.89	0.72	1.77
Grade 8													
1. Word Analysis and Vocabulary	9	0.58	1.26	0.54	1.37	0.59	1.25	0.55	1.21	0.48	1.38	0.44	1.26
2. Reading Comprehension	18	0.78	1.79	0.71	1.94	0.79	1.75	0.77	1.72	0.62	1.96	0.70	1.79
3. Literary Response and Analysis	15	0.74	1.70	0.64	1.78	0.75	1.67	0.72	1.67	0.53	1.80	0.63	1.74
4. Written and Oral Language Conventions	16	0.72	1.77	0.63	1.84	0.74	1.75	0.71	1.72	0.56	1.86	0.60	1.78
5. Writing Strategies	17	0.78	1.77	0.69	1.87	0.80	1.72	0.77	1.73	0.58	1.90	0.68	1.81
Grade 9													
1. Word Analysis and Vocabulary	8	0.60	1.26	0.53	1.28	0.61	1.24	0.60	1.23	0.45	1.31	0.51	1.28
2. Reading Comprehension	18	0.80	1.79	0.70	1.94	0.81	1.77	0.80	1.72	0.66	1.95	0.74	1.79
3. Literary Response and Analysis	16	0.80	1.68	0.71	1.82	0.80	1.64	0.78	1.62	0.64	1.85	0.72	1.71
4. Written and Oral Language Conventions	13	0.73	1.55	0.57	1.66	0.75	1.53	0.73	1.51	0.55	1.68	0.64	1.57
5. Writing Strategies	20	0.79	1.99	0.64	2.00	0.80	1.98	0.79	1.96	0.60	2.03	0.72	2.01

Subscore Reliabilities and SEM for ELA by SPECIAL SERVICES/LANGUAGE FLUENCY

Subscore Area	# of items	No Spec. Ser.		Spec. Ser.		Eng. only		Ini. Fluent		Learner		Red. Fluent	
		Rel.	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*
Grade 10													
1. Word Analysis and Vocabulary	8	0.62	1.19	0.54	1.29	0.64	1.17	0.59	1.16	0.45	1.29	0.49	1.19
2. Reading Comprehension	18	0.82	1.84	0.67	1.92	0.83	1.81	0.81	1.80	0.61	1.95	0.76	1.87
3. Literary Response and Analysis	16	0.77	1.74	0.64	1.82	0.78	1.72	0.77	1.70	0.53	1.84	0.70	1.77
4. Written and Oral Language Conventions	13	0.72	1.53	0.62	1.64	0.74	1.51	0.71	1.48	0.59	1.65	0.63	1.53
5. Writing Strategies	20	0.85	1.86	0.72	2.01	0.86	1.83	0.85	1.81	0.67	2.02	0.80	1.90
Grade 11													
1. Word Analysis and Vocabulary	8	0.66	1.20	0.50	1.29	0.69	1.18	0.68	1.14	0.47	1.32	0.59	1.20
2. Reading Comprehension	19	0.82	1.89	0.67	1.95	0.83	1.87	0.82	1.86	0.59	1.97	0.76	1.93
3. Literary Response and Analysis	17	0.75	1.81	0.57	1.87	0.76	1.80	0.76	1.78	0.47	1.88	0.67	1.83
4. Written and Oral Language Conventions	9	0.75	1.20	0.56	1.35	0.77	1.17	0.76	1.15	0.54	1.38	0.68	1.22
5. Writing Strategies	22	0.87	1.95	0.76	2.11	0.88	1.92	0.87	1.89	0.72	2.16	0.82	2.00

Table 8.A.17 Subscore Reliabilities and SEM for History–Social Science by SPECIAL SERVICES/LANGUAGE FLUENCY

Subscore Area	# of items	No Spec. Ser.		Spec. Ser.		Eng. only		Ini. Fluent		Learner		Red. Fluent	
		Rel.	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*
Grade 8													
1. World History and Geography: Ancient Civilizations	16	0.71	1.82	0.60	1.82	0.72	1.81	0.72	1.80	0.47	1.84	0.63	1.85
2. Late Antiquity and the Middle Ages	14	0.72	1.69	0.65	1.66	0.74	1.68	0.73	1.67	0.55	1.69	0.65	1.72
3. Renaissance/Reformation	10	0.64	1.44	0.48	1.44	0.66	1.43	0.67	1.41	0.35	1.46	0.58	1.46
4. U.S. Constitution and the Early Republic	22	0.80	2.12	0.70	2.13	0.81	2.10	0.81	2.08	0.63	2.15	0.76	2.13
5. Civil War and Its Aftermath	13	0.73	1.63	0.62	1.63	0.74	1.61	0.74	1.60	0.55	1.65	0.67	1.65
World History													
1. Development of Modern Political Thought	13	0.65	1.67	0.52	1.66	0.67	1.66	0.65	1.66	0.42	1.68	0.57	1.70
2. Industrial Expansion and Imperialism	10	0.60	1.46	0.48	1.46	0.62	1.45	0.61	1.45	0.39	1.47	0.52	1.48
3. Causes and Effects of World War I	14	0.71	1.69	0.58	1.69	0.73	1.68	0.73	1.67	0.49	1.71	0.67	1.71
4. Causes and Effects of World War II	13	0.72	1.63	0.58	1.63	0.73	1.62	0.73	1.61	0.51	1.65	0.67	1.66
5. International Developments in the Post-World War II Era	10	0.66	1.42	0.48	1.39	0.67	1.42	0.69	1.40	0.40	1.41	0.63	1.42
Grade 11 (U.S. History)													
1. Foundations of American Political and Social Thought	10	0.61	1.43	0.46	1.45	0.62	1.42	0.61	1.42	0.33	1.45	0.54	1.44
2. Industrialization and the U.S. role as a World Power	13	0.69	1.63	0.55	1.63	0.70	1.63	0.70	1.61	0.46	1.64	0.63	1.64
3. United States between the World Wars	12	0.66	1.58	0.51	1.57	0.68	1.57	0.65	1.57	0.42	1.59	0.59	1.59
4. World War II and Foreign Affairs	12	0.73	1.52	0.58	1.54	0.74	1.51	0.74	1.51	0.47	1.55	0.68	1.55
5. Post-World War II Domestic Affairs	13	0.71	1.64	0.61	1.61	0.72	1.62	0.70	1.62	0.53	1.64	0.65	1.66

Table 8.A.18 Subscore Reliabilities and SEM for Mathematics by SPECIAL SERVICES/LANGUAGE FLUENCY

Subscore Reliabilities and SEM for Mathematics by SPECIAL SERVICES/LANGUAGE FLUENCY													
	# of	No Spec. Ser		Spec. Ser.		Eng. only		Ini. Fluent		Learner		Red. Fluent	
Subscore Area	**items**	***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	1.44	0.84	1.59	0.80	1.41	0.77	1.30	0.80	1.55	0.75	1.27
2. Number Sense: Multiplication, Division, and Fractions	23	0.82	1.75	0.87	1.96	0.84	1.72	0.80	1.61	0.83	1.87	0.78	1.58
3. Algebra and Functions	6	0.61	0.92	0.63	1.03	0.62	0.90	0.59	0.83	0.59	0.99	0.56	0.81
4. Measurement and Geometry	14	0.68	1.42	0.78	1.56	0.70	1.38	0.63	1.31	0.70	1.52	0.60	1.29
5. Statistics, Data Analysis, and Probability	7	0.62	0.97	0.67	1.07	0.63	0.96	0.57	0.92	0.62	1.02	0.54	0.91
Grade 3													
1. Number Sense: Place Value, Fractions, and Decimals	16	0.80	1.44	0.85	1.62	0.81	1.41	0.77	1.33	0.80	1.57	0.70	1.26
2. Number Sense: Addition, Subtraction, Multiplication, and Division	16	0.82	1.54	0.84	1.70	0.83	1.53	0.82	1.41	0.81	1.65	0.78	1.32
3. Algebra and Functions	12	0.78	1.31	0.80	1.47	0.80	1.28	0.77	1.19	0.76	1.45	0.70	1.12
4. Measurement and Geometry	16	0.72	1.46	0.78	1.66	0.74	1.45	0.70	1.35	0.72	1.58	0.62	1.29
5. Statistics, Data Analysis, and Probability	5	0.66	0.69	0.72	0.86	0.68	0.67	0.60	0.59	0.67	0.80	0.46	0.52
Grade 4													
1. Number Sense: Decimals, Fractions, and Negative Numbers	17	0.77	1.53	0.82	1.74	0.79	1.51	0.75	1.41	0.77	1.70	0.66	1.34
2. Number Sense: Operations and Factoring	14	0.82	1.42	0.81	1.61	0.82	1.42	0.82	1.29	0.80	1.56	0.76	1.20
3. Algebra and Functions	18	0.85	1.51	0.86	1.79	0.86	1.50	0.84	1.34	0.84	1.70	0.77	1.22
4. Measurement and Geometry	12	0.75	1.38	0.75	1.52	0.77	1.36	0.75	1.27	0.72	1.49	0.68	1.22
5. Statistics, Data Analysis, and Probability	4	0.47	0.78	0.52	0.87	0.50	0.77	0.44	0.73	0.45	0.86	0.31	0.69

Subscore Reliabilities and SEM for Mathematics by SPECIAL SERVICES/LANGUAGE FLUENCY

Subscore Area	# of items	No Spec. Ser		Spec. Ser.		Eng. only		Ini. Fluent		Learner		Red. Fluent	
		Rel.	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*
Grade 5													
1. Number Sense: Estimation, Percents, and Factoring	12	0.76	1.39	0.70	1.46	0.77	1.38	0.78	1.32	0.65	1.46	0.73	1.34
2. Number Sense: Operations with Fractions and Decimals	17	0.81	1.69	0.78	1.80	0.82	1.68	0.82	1.59	0.76	1.79	0.77	1.58
3. Algebra and Functions	17	0.81	1.68	0.79	1.83	0.82	1.66	0.81	1.57	0.74	1.83	0.74	1.57
4. Measurement and Geometry	15	0.76	1.65	0.71	1.74	0.78	1.64	0.78	1.56	0.67	1.76	0.72	1.57
5. Statistics, Data Analysis, and Probability	4	0.55	0.74	0.52	0.87	0.59	0.72	0.55	0.66	0.45	0.86	0.44	0.65
Grade 6													
1. Number Sense: Ratios, Proportions, Percentages, and Negative Fractions	15	0.76	1.67	0.67	1.73	0.77	1.67	0.79	1.60	0.63	1.75	0.73	1.65
2. Number Sense: Operations and Problem Solving with Fractions	10	0.66	1.34	0.59	1.45	0.68	1.32	0.67	1.28	0.51	1.46	0.58	1.33
3. Algebra and Functions	19	0.81	1.75	0.79	1.94	0.83	1.73	0.81	1.65	0.75	1.93	0.75	1.69
4. Measurement and Geometry	10	0.68	1.39	0.52	1.43	0.69	1.38	0.71	1.34	0.51	1.44	0.65	1.38
5. Statistics, Data Analysis, and Probability	11	0.70	1.40	0.60	1.46	0.72	1.38	0.71	1.36	0.52	1.48	0.64	1.39
Grade 7													
1. Number Sense: Rational Numbers	14	0.75	1.62	0.65	1.68	0.77	1.61	0.77	1.57	0.65	1.69	0.72	1.61
2. Number Sense: Exponent, Powers and Roots	8	0.61	1.27	0.43	1.26	0.62	1.26	0.64	1.24	0.45	1.28	0.58	1.27
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	10	0.66	1.28	0.63	1.39	0.69	1.27	0.66	1.24	0.61	1.39	0.58	1.25
4. Algebra and Functions: Multi-step Problems, Graphing, and Functions	15	0.74	1.68	0.62	1.72	0.75	1.67	0.75	1.64	0.61	1.74	0.70	1.66

Subscore Reliabilities and SEM for Mathematics by SPECIAL SERVICES/LANGUAGE FLUENCY

Subscore Area	# of items	No Spec. Ser		Spec. Ser.		Eng. only		Ini. Fluent		Learner		Red. Fluent	
		Rel.	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*
5. Measurement and Geometry	13	0.71	1.60	0.61	1.63	0.73	1.58	0.72	1.56	0.58	1.67	0.65	1.60
6. Statistics, Data Analysis, and Probability	5	0.59	0.93	0.45	1.00	0.61	0.92	0.59	0.89	0.48	1.00	0.54	0.90
General Mathematics													
1. Number Sense: Rational Numbers	14	0.61	1.67	0.50	1.70	0.63	1.67	0.63	1.66	0.53	1.70	0.57	1.65
2. Number Sense: Exponent, Powers and Roots	10	0.58	1.44	0.39	1.41	0.60	1.43	0.61	1.43	0.45	1.43	0.57	1.44
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	11	0.60	1.44	0.56	1.50	0.63	1.44	0.61	1.42	0.56	1.50	0.53	1.41
4. Algebra and Functions: Multi-step Problems, Graphing, and Functions	10	0.59	1.38	0.46	1.40	0.61	1.38	0.60	1.37	0.50	1.41	0.54	1.37
5. Measurement and Geometry	11	0.54	1.49	0.36	1.47	0.57	1.49	0.55	1.49	0.37	1.48	0.49	1.49
6. Statistics, Data Analysis, and Probability	9	0.58	1.31	0.47	1.38	0.61	1.30	0.59	1.28	0.48	1.37	0.52	1.26
Algebra I													
1. Number Properties, Operations, and Linear Equations	17	0.76	1.81	0.64	1.88	0.77	1.79	0.78	1.76	0.64	1.89	0.74	1.80
2. Graphing and Systems of Linear Equations	14	0.69	1.70	0.44	1.70	0.70	1.70	0.74	1.68	0.49	1.71	0.69	1.70
3. Quadratics and Polynomials	21	0.73	2.04	0.54	2.05	0.73	2.04	0.78	2.01	0.59	2.06	0.73	2.03
4. Functions and Rational Expressions	13	0.55	1.61	0.26	1.59	0.56	1.61	0.64	1.60	0.31	1.59	0.54	1.60
Geometry													
1. Logic and Geometric Proofs	23	0.83	2.07	0.76	2.15	0.83	2.05	0.85	2.02	0.73	2.15	0.80	2.11
2. Volume and Area Formulas	11	0.70	1.46	0.52	1.50	0.70	1.45	0.74	1.42	0.53	1.50	0.67	1.47
3. Angle Relationships, Constructions, and Lines	16	0.77	1.77	0.64	1.77	0.76	1.76	0.80	1.73	0.66	1.77	0.75	1.78
4. Trigonometry	15	0.75	1.71	0.65	1.74	0.75	1.71	0.78	1.68	0.65	1.74	0.73	1.73

Subscore Reliabilities and SEM for Mathematics by SPECIAL SERVICES/LANGUAGE FLUENCY

Subscore Area	# of items	No Spec. Ser		Spec. Ser.		Eng. only		Ini. Fluent		Learner		Red. Fluent	
		Rel.	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*
Algebra II													
1. Polynomials and Rational Expressions	19	0.81	1.82	0.80	1.89	0.80	1.82	0.83	1.76	0.82	1.86	0.81	1.83
2. Quadratics, Conics, and Complex Numbers	17	0.71	1.84	0.66	1.85	0.70	1.84	0.75	1.81	0.66	1.85	0.69	1.84
3. Exponents and Logarithms	15	0.72	1.75	0.69	1.75	0.70	1.75	0.75	1.71	0.72	1.73	0.71	1.75
4. Series, Combinatorics, and Probability and Statistics	14	0.63	1.65	0.58	1.64	0.61	1.65	0.68	1.65	0.57	1.62	0.60	1.64
Summative High School Math													
1. Algebra I	18	0.79	1.66	0.86	1.73	0.78	1.66	0.80	1.56	0.82	1.74	0.80	1.70
2. Geometry	19	0.79	1.81	0.85	1.85	0.77	1.80	0.80	1.73	0.83	1.87	0.80	1.85
3. Algebra II	23	0.85	1.92	0.90	1.97	0.84	1.93	0.86	1.82	0.88	1.99	0.86	1.96
4. Probability and Statistics	5	0.53	0.93	0.59	0.94	0.51	0.92	0.53	0.91	0.50	0.97	0.52	0.96
Integrated Math 1													
1. Algebra I: Number Properties, Operations and Linear Equations	15	0.73	1.72	0.60	1.75	0.74	1.72	0.73	1.73	0.61	1.76	0.72	1.72
2. Algebra I: Graphing	9	0.55	1.37	0.37	1.37	0.54	1.38	0.58	1.36	0.40	1.38	0.59	1.36
3. Algebra I: Quadratics and Polynomials	14	0.56	1.67	0.40	1.66	0.55	1.67	0.58	1.67	0.46	1.67	0.60	1.67
4. Algebra I: Functions and Relations Expressions	7	0.43	1.19	0.29	1.17	0.42	1.19	0.46	1.18	0.32	1.19	0.46	1.19
5. Geometry	20	0.55	2.01	0.29	1.96	0.55	2.01	0.64	1.98	0.25	1.99	0.53	2.01

Subscore Reliabilities and SEM for Mathematics by SPECIAL SERVICES/LANGUAGE FLUENCY

Subscore Area	# of items	No Spec. Ser		Spec. Ser.		Eng. only		Ini. Fluent		Learner		Red. Fluent	
		Rel.	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*
Integrated Math 2													
1. Algebra I	20	0.72	1.98	0.52	1.99	0.70	1.99	0.82	1.93	0.55	1.97	0.74	1.97
2. Geometry: Logic and Geometric Proofs	22	0.79	2.08	0.57	2.10	0.78	2.08	0.85	2.03	0.61	2.10	0.80	2.07
3. Geometry: Angle Relationships, Construction and Lines	8	0.47	1.28	0.32	1.26	0.44	1.28	0.59	1.26	0.33	1.28	0.52	1.28
4. Trigonometry	10	0.58	1.43	0.26	1.44	0.55	1.43	0.67	1.39	0.42	1.45	0.63	1.41
5. Algebra II/Probability and Statistics	5	0.31	0.99	0.07	0.98	0.29	1.00	0.42	0.99	0.08	0.99	0.40	0.96
Integrated Math 3													
1. Geometry	5	0.48	0.97	0.48	0.93	0.48	0.97	0.61	0.92	0.34	0.98	0.44	0.97
2. Algebra II: Polynomials and Relations Expressions	19	0.75	1.90	0.51	1.93	0.71	1.91	0.85	1.83	0.74	1.91	0.76	1.90
3. Algebra II: Quadratics, Conics and Statistics	17	0.63	1.85	0.58	1.81	0.60	1.85	0.76	1.80	0.67	1.81	0.58	1.86
4. Algebra II: Exponents and Logarithms	15	0.70	1.76	0.53	1.67	0.69	1.76	0.80	1.69	0.72	1.69	0.66	1.77
5. Algebra II: Series, Combinatorics, Probability and Statistics	9	0.40	1.29	0.11	1.28	0.38	1.29	0.41	1.29	0.67	1.22	0.22	1.28

Table 8.A.19 Subscore Reliabilities and SEM for Science by SPECIAL SERVICES/LANGUAGE FLUENCY

Subscore Reliabilities and SEM for Science by SPECIAL SERVICES/LANGUAGE FLUENCY													
	# of	No Spec. Ser.		Spec. Ser.		Eng. only		Ini. Fluent		Learner		Red. Fluent	
Subscore Area	**items**	***Rel.***	***SEM***	***Rel.***	***SEM***	***Rel.***	***SEM***	***Rel.***	***SEM***	***Rel.***	***SEM***	***Rel.***	***SEM***
Grade 5 Science													
1. Physical Science (Grade 5)	11	0.60	1.43	0.63	1.50	0.62	1.40	0.58	1.37	0.51	1.53	0.46	1.39
2. Physical Science (Grade 4)	8	0.57	1.22	0.57	1.28	0.59	1.20	0.56	1.16	0.45	1.30	0.45	1.20
3. Life Science (Grade 5)	13	0.65	1.57	0.65	1.63	0.67	1.54	0.65	1.51	0.54	1.65	0.55	1.53
4. Life Science (Grade 4)	9	0.67	1.23	0.67	1.33	0.68	1.20	0.64	1.17	0.55	1.36	0.54	1.20
5. Earth Science (Grade 5)	11	0.55	1.46	0.59	1.51	0.57	1.44	0.52	1.42	0.50	1.52	0.38	1.44
6. Earth Science (Grade 4)	8	0.56	1.25	0.51	1.28	0.59	1.24	0.58	1.22	0.33	1.29	0.47	1.24
Grade 8 Science													
1. Motion	8	0.54	1.27	0.46	1.30	0.57	1.25	0.56	1.23	0.40	1.32	0.46	1.28
2. Forces, Density, and Buoncy	13	0.65	1.59	0.58	1.66	0.68	1.57	0.65	1.56	0.50	1.69	0.55	1.61
3. Structure of Matter and Periodic Table	16	0.72	1.80	0.60	1.84	0.74	1.78	0.74	1.76	0.53	1.86	0.67	1.81
4. Earth in the Solar System	7	0.58	1.12	0.54	1.18	0.58	1.11	0.58	1.08	0.47	1.18	0.52	1.10
5. Reactions and the Chemistry of Living Systems	10	0.58	1.43	0.46	1.44	0.60	1.42	0.59	1.41	0.40	1.46	0.50	1.44
6. Investigation and Experimentation	6	0.51	1.09	0.41	1.13	0.54	1.08	0.53	1.05	0.39	1.14	0.43	1.08
Grade 10 Life Science													
1. Cell Biology	10	0.65	1.43	0.52	1.43	0.67	1.42	0.68	1.40	0.43	1.45	0.60	1.45
2. Genetics	12	0.67	1.54	0.48	1.59	0.68	1.53	0.69	1.51	0.46	1.59	0.62	1.54
3. Physiology	10	0.69	1.36	0.59	1.42	0.70	1.35	0.69	1.32	0.50	1.43	0.62	1.36
4. Ecology	11	0.73	1.43	0.63	1.48	0.74	1.41	0.72	1.40	0.56	1.51	0.67	1.46
5. Evolution	11	0.75	1.45	0.56	1.48	0.77	1.43	0.76	1.43	0.45	1.50	0.69	1.49
6. Investigation and Experimentation	6	0.51	1.08	0.37	1.15	0.53	1.07	0.51	1.06	0.27	1.16	0.43	1.10

Subscore Reliabilities and SEM for Science by SPECIAL SERVICES/LANGUAGE FLUENCY

Subscore Area	# of items	No Spec. Ser.		Spec. Ser.		Eng. only		Ini. Fluent		Learner		Red. Fluent	
		Rel.	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*
Biology													
1. Cell Biology	9	0.60	1.37	0.44	1.37	0.61	1.37	0.64	1.35	0.37	1.39	0.55	1.39
2. Genetics	18	0.74	1.91	0.62	1.94	0.75	1.89	0.75	1.87	0.55	1.96	0.68	1.93
3. Ecology and Evolution	16	0.78	1.79	0.67	1.79	0.79	1.77	0.78	1.76	0.56	1.82	0.72	1.83
4. Physiology	11	0.70	1.43	0.61	1.49	0.71	1.40	0.69	1.40	0.49	1.52	0.63	1.46
5. Investigation and Experimentation	6	0.54	1.10	0.40	1.12	0.55	1.09	0.54	1.08	0.32	1.14	0.47	1.12
Chemistry													
1. Atomic and Molecular Structure	8	0.60	1.23	0.62	1.28	0.59	1.21	0.61	1.19	0.55	1.31	0.58	1.25
2. Chemical Bonds, Biochemistry	9	0.58	1.31	0.60	1.36	0.56	1.30	0.58	1.28	0.52	1.38	0.55	1.34
3. Kinetics, Thermodynamics	14	0.68	1.69	0.64	1.71	0.68	1.67	0.69	1.67	0.52	1.73	0.62	1.72
4. Chemical Reactions	13	0.68	1.62	0.62	1.62	0.67	1.61	0.70	1.60	0.53	1.62	0.65	1.63
5. Conservation of Matter and Stoichiometry	10	0.70	1.37	0.61	1.42	0.70	1.36	0.73	1.33	0.59	1.42	0.67	1.39
6. Investigation and Experimentation	6	0.61	1.03	0.60	1.09	0.61	1.00	0.60	1.01	0.45	1.13	0.57	1.07
Earth Science													
1. Astronomy and Cosmology	12	0.62	1.56	0.57	1.59	0.63	1.55	0.60	1.56	0.51	1.60	0.56	1.57
2. Solid Earth	14	0.66	1.70	0.58	1.73	0.69	1.68	0.64	1.70	0.47	1.75	0.57	1.71
3. The Earth's Energy	28	0.82	2.42	0.74	2.42	0.83	2.40	0.81	2.42	0.66	2.45	0.78	2.44
4. Investigation and Experimentation	6	0.49	1.10	0.39	1.14	0.51	1.09	0.46	1.10	0.31	1.14	0.39	1.11
Physics													
1. Motion and Forces	12	0.67	1.51	0.60	1.56	0.67	1.50	0.68	1.49	0.53	1.58	0.62	1.55
2. Conservation of Energy and Momentum	12	0.69	1.53	0.59	1.55	0.69	1.53	0.71	1.50	0.56	1.55	0.65	1.55
3. Heat and Thermodynamics	9	0.68	1.28	0.64	1.32	0.68	1.26	0.67	1.26	0.52	1.33	0.61	1.32
4. Waves	10	0.63	1.40	0.60	1.43	0.63	1.39	0.63	1.38	0.49	1.43	0.56	1.43
5. Electric and Magnetic Phenomena	11	0.65	1.49	0.58	1.50	0.66	1.49	0.67	1.47	0.50	1.50	0.60	1.51
6. Investigation and Experimentation	6	0.47	1.08	0.43	1.10	0.47	1.06	0.43	1.08	0.24	1.11	0.38	1.12

Subscore Reliabilities and SEM for Science by SPECIAL SERVICES/LANGUAGE FLUENCY

Subscore Area	# of items	No Spec. Ser.		Spec. Ser.		Eng. only		Ini. Fluent		Learner		Red. Fluent	
		Rel.	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*
Integrated Science 1													
1. Biology/Life Sciences	10	0.55	1.47	0.43	1.46	0.58	1.46	0.53	1.47	0.32	1.46	0.47	1.49
2. Chemistry	15	0.54	1.79	0.41	1.75	0.56	1.79	0.56	1.79	0.40	1.76	0.50	1.80
3. Earth Sciences	17	0.72	1.89	0.62	1.91	0.75	1.87	0.72	1.87	0.55	1.93	0.66	1.90
4. Physics	12	0.43	1.56	0.28	1.53	0.48	1.57	0.44	1.57	0.20	1.53	0.33	1.56
5. Investigation and Experimentation	6	0.53	1.10	0.43	1.08	0.56	1.09	0.53	1.09	0.33	1.10	0.45	1.12
Integrated Science 2													
1. Biology/Life Sciences	15	0.63	1.79	0.51	1.77	0.65	1.78	0.70	1.76	0.48	1.80	0.59	1.80
2. Chemistry	6	0.30	1.15	0.14	1.11	0.31	1.16	0.30	1.16	0.11	1.11	0.29	1.15
3. Earth Sciences	15	0.68	1.78	0.62	1.76	0.71	1.76	0.70	1.76	0.50	1.78	0.62	1.78
4. Physics	18	0.49	1.93	0.26	1.89	0.48	1.93	0.52	1.94	0.36	1.90	0.50	1.94
5. Investigation and Experimentation	6	0.35	1.14	0.23	1.12	0.39	1.14	0.35	1.14	0.16	1.12	0.25	1.16
Integrated Science 3													
1. Biology/Life Sciences	16	0.62	1.86	0.39	1.79	0.63	1.85	0.69	1.82	0.27	1.78	0.52	1.89
2. Chemistry	23	0.61	2.19	0.35	2.11	0.65	2.19	0.50	2.18	0.28	2.14	0.53	2.20
3. Earth Sciences	7	0.51	1.22	0.28	1.25	0.51	1.22	0.58	1.19	0.22	1.23	0.45	1.24
4. Physics	8	0.23	1.29	0.13	1.20	0.25	1.30	0.27	1.25	0.06	1.21	0.20	1.28
5. Investigation and Experimentation	6	0.50	1.11	0.36	1.09	0.54	1.09	0.46	1.11	0.24	1.12	0.42	1.12
Integrated Science 4													
1. Biology/Life Sciences	13	0.62	1.64	0.37	1.69	0.66	1.63	0.67	1.62	0.48	1.66	0.45	1.64
2. Chemistry	10	0.37	1.46	0.13	1.45	0.45	1.45	0.32	1.41	0.18	1.46	0.22	1.46
3. Earth Sciences	15	0.67	1.78	0.51	1.78	0.73	1.75	0.71	1.76	0.33	1.80	0.56	1.83
4. Physics	16	0.56	1.84	0.31	1.82	0.60	1.83	0.58	1.80	0.51	1.83	0.39	1.87
5. Investigation and Experimentation	6	0.28	1.13	0.12	1.12	0.34	1.12	0.05	1.17	0.07	1.12	0.27	1.13

Table 8.A.20 Subscore Reliabilities and SEM for Grade Specific Tests by SPECIAL SERVICES/LANGUAGE FLUENCY

Subscore Reliabilities and SEM for Grade Specific Tests by SPECIAL SERVICES/LANGUAGE FLUENCY													
	# of	No Spec. Ser		Spec. Ser.		Eng. only		Ini. Fluent		Learner		Red. Fluent	
Subscore Area	**items**	***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	1.73	0.75	1.86	0.78	1.70	0.77	1.67	0.69	1.88	0.73	1.74
2. Graphing and Systems of Linear Equations	14	0.74	1.67	0.63	1.70	0.74	1.67	0.77	1.64	0.60	1.71	0.72	1.68
3. Quadratics and Polynomials	21	0.77	2.00	0.70	2.04	0.77	2.00	0.80	1.97	0.68	2.05	0.76	2.01
4. Functions and Rational Expressions	13	0.64	1.59	0.49	1.60	0.64	1.60	0.68	1.58	0.46	1.59	0.61	1.58
Geometry – 9													
1. Logic and Geometric Proofs	23	0.83	1.95	0.86	2.07	0.82	1.90	0.83	1.91	0.83	2.10	0.81	2.04
2. Volume and Area Formulas	11	0.72	1.40	0.71	1.46	0.71	1.38	0.75	1.36	0.69	1.47	0.70	1.43
3. Angle Relationships, Constructions, and Lines	16	0.78	1.72	0.79	1.76	0.76	1.71	0.80	1.69	0.78	1.76	0.77	1.76
4. Trigonometry	15	0.75	1.64	0.77	1.72	0.73	1.63	0.76	1.61	0.77	1.71	0.75	1.68
Algebra II – 10													
1. Polynomials and Rational Expressions	19	0.80	1.78	0.83	1.85	0.79	1.78	0.81	1.73	0.84	1.83	0.81	1.80
2. Quadratics, Conics, and Complex Numbers	17	0.71	1.83	0.73	1.84	0.69	1.83	0.74	1.81	0.71	1.84	0.70	1.84
3. Exponents and Logarithms	15	0.70	1.73	0.74	1.74	0.69	1.73	0.72	1.70	0.75	1.73	0.70	1.74
4. Series, Combinatorics, and Probability and Statistics	14	0.62	1.65	0.65	1.64	0.60	1.65	0.65	1.65	0.63	1.63	0.60	1.66
Summative High School Math – 11													
1. Algebra I	18	0.79	1.68	0.84	1.75	0.78	1.68	0.80	1.60	0.82	1.76	0.79	1.72
2. Geometry	19	0.79	1.83	0.83	1.87	0.77	1.82	0.80	1.76	0.83	1.88	0.79	1.87
3. Algebra II	23	0.85	1.95	0.88	2.00	0.84	1.96	0.85	1.87	0.87	2.01	0.85	1.99
4. Probability and Statistics	5	0.52	0.94	0.56	0.95	0.51	0.93	0.52	0.93	0.49	0.97	0.50	0.96

Subscore Reliabilities and SEM for Grade Specific Tests by SPECIAL SERVICES/LANGUAGE FLUENCY

Subscore Area	# of items	No Spec. Ser		Spec. Ser.		Eng. only		Ini. Fluent		Learner		Red. Fluent	
		Rel.	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*
World History – 10													
1. Development of Modern Political Thought	13	0.63	1.68	0.51	1.66	0.65	1.67	0.64	1.66	0.41	1.69	0.55	1.70
2. Industrial Expansion and Imperialism	10	0.58	1.47	0.47	1.46	0.60	1.45	0.59	1.45	0.39	1.48	0.50	1.49
3. Causes and Effects of World War I	14	0.71	1.70	0.58	1.70	0.72	1.69	0.72	1.68	0.49	1.72	0.65	1.72
4. Causes and Effects of World War II	13	0.71	1.64	0.58	1.64	0.72	1.63	0.72	1.62	0.51	1.66	0.66	1.66
5. International Developments in the Post-World War II Era	10	0.65	1.42	0.48	1.40	0.66	1.42	0.68	1.40	0.40	1.41	0.62	1.43

Table 8.A.21 Subscore Reliabilities and SEM for English–Language Arts by PRIMARY ETHNICITY

Subscore Reliabilities and SEM for ELA by PRIMARY ETHNICITY															
Subscore Area	**# 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	22	0.84	1.94	0.83	1.67	0.82	1.87	0.80	1.72	0.83	1.98	0.85	1.93	0.82	1.79
2. Reading Comprehension	15	0.79	1.63	0.79	1.48	0.77	1.63	0.75	1.54	0.77	1.67	0.78	1.67	0.79	1.49
3. Literary Response and Analysis	6	0.60	1.03	0.62	0.91	0.58	1.01	0.56	0.95	0.58	1.06	0.59	1.04	0.63	0.92
4. Written and Oral Language Conventions	14	0.82	1.57	0.85	1.23	0.82	1.49	0.82	1.30	0.81	1.58	0.83	1.55	0.83	1.41
5. Writing Strategies	8	0.53	1.28	0.59	1.16	0.52	1.26	0.51	1.21	0.50	1.29	0.52	1.28	0.56	1.20
Grade 3															
1. Word Analysis and Vocabulary	20	0.79	1.79	0.78	1.61	0.75	1.73	0.71	1.64	0.77	1.84	0.79	1.80	0.76	1.64
2. Reading Comprehension	15	0.72	1.74	0.75	1.60	0.70	1.73	0.69	1.67	0.69	1.76	0.71	1.75	0.74	1.63
3. Literary Response and Analysis	8	0.65	1.20	0.69	1.05	0.63	1.18	0.64	1.11	0.63	1.22	0.66	1.20	0.67	1.07
4. Written and Oral Language Conventions	13	0.67	1.60	0.69	1.40	0.67	1.54	0.65	1.45	0.65	1.60	0.68	1.59	0.68	1.48
5. Writing Strategies	9	0.64	1.33	0.67	1.22	0.63	1.31	0.61	1.26	0.61	1.34	0.64	1.33	0.64	1.25
Grade 4															
1. Word Analysis and Vocabulary	18	0.80	1.67	0.81	1.45	0.78	1.64	0.75	1.50	0.79	1.75	0.80	1.72	0.79	1.49
2. Reading Comprehension	15	0.76	1.69	0.79	1.52	0.74	1.70	0.73	1.62	0.73	1.73	0.75	1.73	0.76	1.56
3. Literary Response and Analysis	9	0.68	1.29	0.70	1.13	0.65	1.30	0.64	1.22	0.65	1.33	0.66	1.33	0.68	1.18
4. Written and Oral Language Conventions	18	0.78	1.84	0.79	1.62	0.77	1.80	0.74	1.70	0.75	1.87	0.77	1.85	0.77	1.73
5. Writing Strategies	15	0.75	1.72	0.79	1.57	0.75	1.71	0.74	1.65	0.72	1.75	0.74	1.74	0.77	1.62
Grade 5															
1. Word Analysis and Vocabulary	14	0.75	1.54	0.78	1.36	0.72	1.52	0.70	1.42	0.73	1.58	0.75	1.57	0.74	1.40
2. Reading Comprehension	16	0.72	1.78	0.76	1.64	0.71	1.76	0.69	1.71	0.66	1.80	0.69	1.80	0.75	1.67
3. Literary Response and Analysis	12	0.74	1.44	0.75	1.26	0.72	1.44	0.70	1.34	0.73	1.48	0.74	1.48	0.73	1.31

Subscore Reliabilities and SEM for ELA by PRIMARY ETHNICITY

Subscore Area	# 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. Written and Oral Language Conventions	17	0.77	1.74	0.78	1.50	0.77	1.67	0.74	1.55	0.75	1.73	0.77	1.75	0.76	1.61
5. Writing Strategies	16	0.72	1.82	0.79	1.68	0.73	1.81	0.73	1.77	0.69	1.83	0.70	1.83	0.76	1.73
Grade 6															
1. Word Analysis and Vocabulary	13	0.73	1.56	0.76	1.39	0.71	1.55	0.70	1.46	0.69	1.61	0.73	1.58	0.73	1.44
2. Reading Comprehension	17	0.71	1.88	0.75	1.78	0.68	1.88	0.69	1.83	0.67	1.88	0.68	1.88	0.74	1.82
3. Literary Response and Analysis	12	0.66	1.55	0.68	1.47	0.62	1.58	0.62	1.53	0.63	1.57	0.65	1.57	0.65	1.48
4. Written and Oral Language Conventions	16	0.76	1.71	0.76	1.51	0.74	1.68	0.71	1.58	0.73	1.72	0.75	1.74	0.75	1.61
5. Writing Strategies	17	0.80	1.82	0.83	1.66	0.79	1.81	0.79	1.74	0.77	1.85	0.78	1.84	0.81	1.70
Grade 7															
1. Word Analysis and Vocabulary	11	0.65	1.42	0.66	1.30	0.63	1.44	0.57	1.33	0.63	1.48	0.65	1.47	0.63	1.30
2. Reading Comprehension	18	0.78	1.83	0.80	1.65	0.76	1.84	0.74	1.72	0.75	1.89	0.76	1.89	0.79	1.70
3. Literary Response and Analysis	13	0.69	1.62	0.72	1.52	0.67	1.63	0.64	1.57	0.66	1.64	0.67	1.64	0.69	1.55
4. Written and Oral Language Conventions	16	0.73	1.74	0.75	1.60	0.72	1.75	0.69	1.67	0.69	1.77	0.72	1.77	0.73	1.66
5. Writing Strategies	17	0.78	1.82	0.80	1.62	0.77	1.81	0.76	1.72	0.76	1.84	0.77	1.84	0.80	1.70
Grade 8															
1. Word Analysis and Vocabulary	9	0.59	1.30	0.63	1.17	0.55	1.30	0.50	1.23	0.57	1.32	0.57	1.33	0.55	1.21
2. Reading Comprehension	18	0.78	1.83	0.79	1.65	0.77	1.84	0.74	1.74	0.75	1.88	0.76	1.89	0.78	1.69
3. Literary Response and Analysis	15	0.73	1.73	0.75	1.60	0.71	1.74	0.69	1.68	0.68	1.77	0.70	1.76	0.74	1.62
4. Written and Oral Language Conventions	16	0.73	1.80	0.73	1.65	0.70	1.80	0.65	1.71	0.69	1.83	0.71	1.83	0.73	1.70
5. Writing Strategies	17	0.78	1.79	0.80	1.66	0.76	1.82	0.74	1.76	0.73	1.85	0.75	1.84	0.79	1.66

Subscore Reliabilities and SEM for ELA by PRIMARY ETHNICITY

Subscore Area	# 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 9															
1. Word Analysis and Vocabulary	8	0.61	1.27	0.60	1.19	0.58	1.28	0.53	1.24	0.59	1.29	0.60	1.29	0.57	1.21
2. Reading Comprehension	18	0.79	1.84	0.81	1.63	0.79	1.82	0.76	1.71	0.77	1.88	0.78	1.88	0.80	1.71
3. Literary Response and Analysis	16	0.79	1.71	0.80	1.55	0.77	1.73	0.75	1.64	0.77	1.78	0.78	1.77	0.79	1.56
4. Written and Oral Language Conventions	13	0.73	1.59	0.74	1.44	0.72	1.58	0.69	1.51	0.68	1.63	0.70	1.62	0.74	1.48
5. Writing Strategies	20	0.78	2.01	0.79	1.90	0.77	2.02	0.75	1.97	0.74	2.03	0.75	2.03	0.80	1.95
Grade 10															
1. Word Analysis and Vocabulary	8	0.63	1.22	0.63	1.13	0.60	1.23	0.55	1.16	0.60	1.24	0.61	1.25	0.62	1.14
2. Reading Comprehension	18	0.82	1.86	0.82	1.73	0.79	1.89	0.77	1.81	0.77	1.92	0.78	1.91	0.83	1.75
3. Literary Response and Analysis	16	0.77	1.77	0.80	1.64	0.74	1.78	0.73	1.72	0.72	1.81	0.73	1.80	0.78	1.68
4. Written and Oral Language Conventions	13	0.73	1.57	0.72	1.43	0.71	1.57	0.64	1.48	0.70	1.59	0.72	1.59	0.72	1.48
5. Writing Strategies	20	0.85	1.91	0.86	1.73	0.84	1.92	0.82	1.81	0.82	1.96	0.82	1.96	0.86	1.77
Grade 11															
1. Word Analysis and Vocabulary	8	0.65	1.23	0.70	1.10	0.63	1.25	0.62	1.16	0.63	1.26	0.63	1.26	0.68	1.14
2. Reading Comprehension	19	0.81	1.92	0.83	1.80	0.78	1.95	0.78	1.89	0.77	1.95	0.78	1.95	0.83	1.83
3. Literary Response and Analysis	17	0.73	1.83	0.78	1.74	0.71	1.85	0.71	1.79	0.67	1.86	0.69	1.86	0.77	1.78
4. Written and Oral Language Conventions	9	0.74	1.24	0.77	1.09	0.73	1.26	0.72	1.15	0.71	1.29	0.72	1.28	0.77	1.13
5. Writing Strategies	22	0.87	2.01	0.87	1.81	0.86	2.02	0.85	1.91	0.84	2.07	0.85	2.06	0.88	1.86

Table 8.A.22 Subscore Reliabilities and SEM for History–Social Science by PRIMARY ETHNICITY

Subscore Area	# 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	1.83	0.74	1.74	0.65	1.85	0.66	1.82	0.63	1.85	0.64	1.84	0.71	1.79
2. Late Antiquity and the Middle Ages	14	0.72	1.70	0.74	1.61	0.71	1.71	0.68	1.69	0.67	1.72	0.68	1.70	0.72	1.66
3. Renaissance/Reformation	10	0.60	1.45	0.69	1.37	0.59	1.46	0.61	1.44	0.54	1.46	0.53	1.46	0.66	1.41
4. U.S. Constitution and the Early Republic	22	0.77	2.14	0.82	2.01	0.77	2.14	0.78	2.10	0.75	2.15	0.76	2.15	0.80	2.08
5. Civil War and Its Aftermath	13	0.70	1.65	0.74	1.54	0.70	1.64	0.68	1.62	0.67	1.66	0.69	1.64	0.73	1.59
World History															
1. Development of Modern Political Thought	13	0.63	1.68	0.66	1.63	0.60	1.69	0.58	1.68	0.57	1.69	0.59	1.69	0.67	1.64
2. Industrial Expansion and Imperialism	10	0.59	1.47	0.61	1.41	0.57	1.47	0.52	1.47	0.52	1.49	0.52	1.48	0.62	1.43
3. Causes and Effects of World War I	14	0.69	1.71	0.74	1.63	0.66	1.72	0.68	1.70	0.63	1.72	0.61	1.72	0.74	1.66
4. Causes and Effects of World War II	13	0.70	1.64	0.73	1.58	0.68	1.65	0.68	1.64	0.65	1.66	0.63	1.66	0.73	1.60
5. International Developments in the Post-World War II Era	10	0.62	1.42	0.70	1.37	0.60	1.43	0.64	1.42	0.56	1.42	0.55	1.42	0.67	1.41
Grade 11 (U.S. History)															
1. Foundations of American Political and Social Thought	10	0.59	1.44	0.63	1.39	0.56	1.45	0.56	1.43	0.54	1.45	0.54	1.45	0.62	1.41
2. Industrialization and the U.S. role as a World Power	13	0.66	1.65	0.72	1.57	0.64	1.65	0.64	1.63	0.62	1.65	0.60	1.66	0.71	1.61
3. United States between the World Wars	12	0.65	1.59	0.66	1.55	0.63	1.59	0.59	1.60	0.60	1.59	0.61	1.59	0.68	1.56
4. World War II and Foreign Affairs	12	0.70	1.54	0.75	1.47	0.68	1.55	0.69	1.53	0.66	1.55	0.63	1.56	0.75	1.49
5. Post-World War II Domestic Affairs	13	0.69	1.65	0.69	1.61	0.68	1.65	0.65	1.65	0.67	1.65	0.67	1.65	0.72	1.61

Table 8.A.23 Subscore Reliabilities and SEM for Mathematics by PRIMARY ETHNICITY

Subscore Reliabilities and SEM for Mathematics by PRIMARY ETHNICITY															
Subscore Area	**# 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	1.51	0.79	1.20	0.79	1.47	0.77	1.31	0.80	1.54	0.81	1.55	0.78	1.33
2. Number Sense: Multiplication, Division, and Fractions	23	0.83	1.83	0.82	1.53	0.83	1.80	0.81	1.64	0.83	1.86	0.83	1.90	0.82	1.63
3. Algebra and Functions	6	0.58	0.97	0.63	0.75	0.60	0.94	0.59	0.83	0.59	0.99	0.60	1.00	0.60	0.85
4. Measurement and Geometry	14	0.67	1.47	0.68	1.23	0.68	1.44	0.65	1.32	0.69	1.51	0.71	1.54	0.65	1.30
5. Statistics, Data Analysis, and Probability	7	0.60	1.01	0.59	0.88	0.60	1.00	0.57	0.93	0.61	1.01	0.64	1.04	0.61	0.93
Grade 3															
1. Number Sense: Place Value, Fractions, and Decimals	16	0.80	1.51	0.78	1.22	0.79	1.46	0.76	1.32	0.80	1.54	0.81	1.57	0.79	1.34
2. Number Sense: Addition, Subtraction, Multiplication, and Division	16	0.82	1.65	0.82	1.25	0.82	1.56	0.81	1.40	0.81	1.63	0.83	1.66	0.83	1.48
3. Algebra and Functions	12	0.78	1.39	0.78	1.09	0.77	1.35	0.75	1.21	0.77	1.41	0.77	1.43	0.78	1.20
4. Measurement and Geometry	16	0.72	1.55	0.73	1.28	0.71	1.49	0.70	1.36	0.72	1.55	0.74	1.57	0.72	1.39
5. Statistics, Data Analysis, and Probability	5	0.66	0.76	0.64	0.55	0.66	0.70	0.62	0.60	0.67	0.76	0.70	0.79	0.65	0.61
Grade 4															
1. Number Sense: Decimals, Fractions, and Negative Numbers	17	0.79	1.61	0.77	1.30	0.77	1.56	0.74	1.41	0.78	1.64	0.79	1.66	0.77	1.43
2. Number Sense: Operations and Factoring	14	0.82	1.51	0.81	1.13	0.82	1.45	0.80	1.29	0.81	1.52	0.81	1.56	0.81	1.35
3. Algebra and Functions	18	0.85	1.63	0.84	1.18	0.85	1.55	0.82	1.34	0.84	1.65	0.85	1.69	0.85	1.42
4. Measurement and Geometry	12	0.75	1.45	0.77	1.18	0.74	1.41	0.73	1.29	0.74	1.45	0.75	1.48	0.76	1.31
5. Statistics, Data Analysis, and Probability	4	0.49	0.83	0.46	0.68	0.47	0.81	0.41	0.75	0.47	0.84	0.51	0.84	0.48	0.73

Subscore Reliabilities and SEM for Mathematics by PRIMARY ETHNICITY

Subscore Area	# 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	0.73	1.44	0.79	1.23	0.72	1.42	0.75	1.34	0.70	1.45	0.70	1.45	0.77	1.35
2. Number Sense: Operations with Fractions and Decimals	17	0.80	1.75	0.82	1.46	0.80	1.72	0.80	1.60	0.79	1.76	0.80	1.78	0.81	1.64
3. Algebra and Functions	17	0.80	1.77	0.82	1.46	0.80	1.72	0.79	1.59	0.79	1.78	0.79	1.80	0.81	1.60
4. Measurement and Geometry	15	0.74	1.71	0.80	1.46	0.75	1.68	0.75	1.58	0.72	1.72	0.73	1.74	0.78	1.59
5. Statistics, Data Analysis, and Probability	4	0.58	0.78	0.57	0.60	0.56	0.77	0.53	0.67	0.51	0.81	0.54	0.83	0.59	0.66
Grade 6															
1. Number Sense: Ratios, Proportions, Percentages, and Negative Fractions	15	0.72	1.72	0.81	1.48	0.74	1.70	0.76	1.62	0.71	1.73	0.70	1.74	0.77	1.63
2. Number Sense: Operations and Problem Solving with Fractions	10	0.63	1.39	0.69	1.16	0.63	1.38	0.62	1.30	0.60	1.42	0.61	1.42	0.68	1.27
3. Algebra and Functions	19	0.81	1.82	0.82	1.48	0.80	1.79	0.79	1.65	0.79	1.85	0.80	1.89	0.81	1.66
4. Measurement and Geometry	10	0.62	1.42	0.74	1.25	0.64	1.40	0.68	1.35	0.60	1.43	0.58	1.43	0.69	1.36
5. Statistics, Data Analysis, and Probability	11	0.68	1.43	0.74	1.30	0.67	1.43	0.69	1.37	0.63	1.45	0.64	1.45	0.72	1.35

Subscore Reliabilities and SEM for Mathematics by PRIMARY ETHNICITY

Subscore Area	# 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 7															
1. Number Sense: Rational Numbers	14	0.74	1.66	0.79	1.44	0.73	1.64	0.75	1.56	0.72	1.67	0.70	1.68	0.76	1.58
2. Number Sense: Exponent, Powers and Roots	8	0.57	1.28	0.67	1.18	0.60	1.27	0.61	1.25	0.54	1.29	0.54	1.28	0.62	1.25
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	10	0.67	1.32	0.66	1.16	0.65	1.30	0.61	1.21	0.65	1.34	0.67	1.35	0.67	1.24
4. Algebra and Functions: Multi-step Problems, Graphing, and Functions	15	0.71	1.71	0.78	1.55	0.71	1.69	0.72	1.64	0.69	1.72	0.67	1.72	0.75	1.64
5. Measurement and Geometry	13	0.69	1.63	0.75	1.46	0.69	1.62	0.69	1.56	0.66	1.65	0.64	1.65	0.72	1.54
6. Statistics, Data Analysis, and Probability	5	0.57	0.96	0.61	0.82	0.58	0.95	0.57	0.87	0.55	0.97	0.54	0.98	0.60	0.89
General Mathematics															
1. Number Sense: Rational Numbers	14	0.62	1.68	0.68	1.62	0.60	1.67	0.63	1.64	0.57	1.69	0.56	1.69	0.64	1.66
2. Number Sense: Exponent, Powers and Roots	10	0.55	1.43	0.68	1.40	0.59	1.43	0.62	1.43	0.50	1.44	0.51	1.42	0.62	1.44
3. Algebra and Functions: Quantitative Relationships and Evaluating Expressions	11	0.61	1.46	0.62	1.40	0.61	1.45	0.58	1.40	0.59	1.48	0.61	1.48	0.62	1.42
4. Algebra and Functions: Multi-step Problems, Graphing, and Functions	10	0.57	1.40	0.65	1.34	0.60	1.39	0.60	1.37	0.55	1.40	0.53	1.40	0.62	1.36
5. Measurement and Geometry	11	0.54	1.49	0.60	1.47	0.55	1.48	0.54	1.48	0.46	1.49	0.44	1.48	0.59	1.48
6. Statistics, Data Analysis, and Probability	9	0.59	1.33	0.57	1.26	0.59	1.31	0.56	1.26	0.55	1.34	0.55	1.36	0.61	1.27

Subscore Reliabilities and SEM for Mathematics by PRIMARY ETHNICITY

Subscore Area	# 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	0.75	1.84	0.79	1.63	0.74	1.83	0.75	1.76	0.72	1.86	0.71	1.87	0.77	1.75
2. Graphing and Systems of Linear Equations	14	0.63	1.72	0.78	1.60	0.65	1.72	0.70	1.70	0.59	1.72	0.55	1.72	0.71	1.69
3. Quadratics and Polynomials	21	0.66	2.06	0.82	1.92	0.69	2.05	0.73	2.01	0.64	2.06	0.62	2.06	0.74	2.03
4. Functions and Rational Expressions	13	0.46	1.61	0.72	1.55	0.50	1.61	0.58	1.60	0.37	1.61	0.36	1.60	0.59	1.61
Geometry															
1. Logic and Geometric Proofs	23	0.81	2.09	0.86	1.89	0.81	2.11	0.81	2.06	0.77	2.15	0.76	2.16	0.83	2.00
2. Volume and Area Formulas	11	0.65	1.48	0.77	1.34	0.65	1.48	0.68	1.45	0.56	1.50	0.52	1.50	0.70	1.44
3. Angle Relationships, Constructions, and Lines	16	0.71	1.79	0.83	1.65	0.72	1.78	0.75	1.77	0.66	1.79	0.62	1.78	0.76	1.76
4. Trigonometry	15	0.72	1.73	0.80	1.58	0.71	1.75	0.74	1.70	0.67	1.76	0.65	1.76	0.74	1.69
Algebra II															
1. Polynomials and Rational Expressions	19	0.77	1.86	0.82	1.66	0.78	1.85	0.78	1.82	0.77	1.88	0.76	1.89	0.79	1.81
2. Quadratics, Conics, and Complex Numbers	17	0.64	1.86	0.78	1.77	0.66	1.85	0.66	1.85	0.59	1.85	0.57	1.86	0.69	1.84
3. Exponents and Logarithms	15	0.67	1.77	0.75	1.66	0.69	1.76	0.66	1.76	0.64	1.77	0.64	1.76	0.69	1.75
4. Series, Combinatorics, and Probability and Statistics	14	0.55	1.65	0.70	1.65	0.55	1.65	0.55	1.67	0.50	1.64	0.46	1.62	0.60	1.65
Summative High School Math															
1. Algebra I	18	0.76	1.73	0.78	1.48	0.79	1.73	0.76	1.74	0.76	1.80	0.77	1.83	0.77	1.65
2. Geometry	19	0.75	1.88	0.78	1.66	0.75	1.88	0.75	1.88	0.75	1.94	0.77	1.96	0.76	1.79
3. Algebra II	23	0.83	2.01	0.84	1.73	0.83	2.01	0.82	2.00	0.82	2.08	0.83	2.10	0.83	1.92
4. Probability and Statistics	5	0.46	0.96	0.52	0.88	0.44	0.98	0.45	0.97	0.44	0.99	0.46	0.99	0.50	0.91

Subscore Reliabilities and SEM for Mathematics by PRIMARY ETHNICITY

Subscore Area	# 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 Math 1															
1. Algebra I: Number Properties, Operations and Linear Equations	15	0.70	1.73	0.76	1.67	0.77	1.71	0.74	1.71	0.71	1.75	0.73	1.72	0.73	1.70
2. Algebra I: Graphing	9	0.40	1.39	0.69	1.31	0.30	1.37	0.59	1.36	0.50	1.37	0.51	1.37	0.53	1.39
3. Algebra I: Quadratics and Polynomials	14	0.53	1.68	0.73	1.63	0.67	1.58	0.57	1.68	0.49	1.67	0.49	1.67	0.54	1.67
4. Algebra I: Functions and Relations Expressions	7	0.32	1.20	0.65	1.15	0.42	1.16	0.41	1.17	0.34	1.20	0.39	1.17	0.42	1.19
5. Geometry	20	0.57	1.97	0.78	1.96	0.41	2.00	0.60	2.02	0.39	2.00	0.44	1.98	0.56	2.01
Integrated Math 2															
1. Algebra I	20	0.71	1.96	0.83	1.91	0.55	1.95	0.80	1.93	0.60	1.99	0.61	1.96	0.71	1.99
2. Geometry: Logic and Geometric Proofs	22	0.80	2.05	0.86	2.00	0.72	2.10	0.83	2.04	0.69	2.10	0.65	2.10	0.79	2.07
3. Geometry: Angle Relationships, Construction and Lines	8	0.60	1.21	0.58	1.27	0.54	1.26	0.65	1.24	0.37	1.29	0.31	1.28	0.45	1.27
4. Trigonometry	10	0.44	1.44	0.70	1.38	0.56	1.43	0.75	1.32	0.46	1.44	0.44	1.45	0.57	1.42
5. Algebra II/Probability and Statistics	5	0.37	0.97	0.52	0.96	0.03	1.03	0.36	0.98	0.04	1.00	0.01	1.00	0.36	1.00
Integrated Math 3															
1. Geometry	5	0.87	0.67	0.57	0.92	0.16	0.85	0.52	0.95	0.42	1.00	0.32	0.99	0.46	0.96
2. Algebra II: Polynomials and Relations Expressions	19	0.62	1.80	0.82	1.85	0.63	1.77	0.83	1.83	0.77	1.90	0.69	1.89	0.62	1.93
3. Algebra II: Quadratics, Conics and Statistics	17	0.47	1.84	0.72	1.84	0.04	1.72	0.62	1.82	0.64	1.84	0.54	1.84	0.57	1.85
4. Algebra II: Exponents and Logarithms	15	0.64	1.67	0.73	1.73	0.63	1.66	0.73	1.73	0.74	1.72	0.68	1.73	0.65	1.78
5. Algebra II: Series, Combinatorics, Probability and Statistics	9	0.40	1.20	0.54	1.30	0.22	1.38	0.48	1.25	0.24	1.28	0.36	1.24	0.35	1.29

Table 8.A.24 Subscore Reliabilities and SEM for Science by PRIMARY ETHNICITY

Subscore Reliabilities and SEM for Science by PRIMARY ETHNICITY															
	# of	Am. Ind.		Asian		Pac. Island		Filipino		Hispanic		African Am.		White	
Subscore Area	items	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*	*Rel.*	*SEM*
Grade 5 Science															
1. Physical Science (Grade 5)	11	0.59	1.46	0.64	1.33	0.56	1.46	0.54	1.38	0.57	1.49	0.58	1.49	0.59	1.36
2. Physical Science (Grade 4)	8	0.55	1.26	0.60	1.12	0.56	1.25	0.52	1.19	0.51	1.28	0.55	1.28	0.57	1.15
3. Life Science (Grade 5)	13	0.65	1.59	0.69	1.47	0.63	1.60	0.61	1.52	0.60	1.62	0.61	1.62	0.65	1.50
4. Life Science (Grade 4)	9	0.65	1.26	0.69	1.13	0.64	1.27	0.61	1.18	0.63	1.31	0.64	1.31	0.65	1.14
5. Earth Science (Grade 5)	11	0.55	1.48	0.57	1.40	0.56	1.48	0.47	1.45	0.53	1.50	0.57	1.50	0.54	1.41
6. Earth Science (Grade 4)	8	0.53	1.28	0.62	1.20	0.53	1.26	0.53	1.23	0.44	1.28	0.47	1.28	0.59	1.22
Grade 8 Science															
1. Motion	8	0.52	1.30	0.60	1.15	0.52	1.29	0.51	1.24	0.48	1.31	0.49	1.31	0.56	1.21
2. Forces, Density, and Buoncy	13	0.65	1.62	0.65	1.48	0.64	1.62	0.57	1.56	0.60	1.66	0.60	1.66	0.66	1.53
3. Structure of Matter and Periodic Table	16	0.69	1.82	0.76	1.68	0.70	1.82	0.69	1.77	0.65	1.85	0.65	1.85	0.73	1.74
4. Earth in the Solar System	7	0.55	1.15	0.59	1.04	0.56	1.14	0.51	1.08	0.54	1.15	0.53	1.16	0.55	1.09
5. Reactions and the Chemistry of Living Systems	10	0.57	1.44	0.60	1.36	0.55	1.45	0.51	1.43	0.50	1.46	0.50	1.45	0.59	1.40
6. Investigation and Experimentation	6	0.50	1.11	0.52	1.00	0.49	1.11	0.45	1.07	0.44	1.12	0.45	1.13	0.53	1.06
Grade 10 Life Science															
1. Cell Biology	10	0.64	1.43	0.71	1.35	0.62	1.44	0.62	1.42	0.56	1.46	0.56	1.45	0.67	1.40
2. Genetics	12	0.66	1.56	0.72	1.44	0.64	1.56	0.65	1.52	0.59	1.58	0.59	1.58	0.68	1.50
3. Physiology	10	0.68	1.38	0.71	1.28	0.66	1.39	0.63	1.34	0.63	1.40	0.63	1.41	0.70	1.31
4. Ecology	11	0.73	1.44	0.71	1.35	0.71	1.46	0.66	1.41	0.68	1.49	0.68	1.48	0.73	1.37
5. Evolution	11	0.75	1.46	0.78	1.37	0.70	1.49	0.71	1.46	0.67	1.50	0.66	1.50	0.78	1.39
6. Investigation and Experimentation	6	0.52	1.10	0.52	1.00	0.49	1.11	0.43	1.07	0.44	1.13	0.44	1.14	0.53	1.04

Subscore Reliabilities and SEM for Science by PRIMARY ETHNICITY

Subscore Area	# 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*
Biology															
1. Cell Biology	9	0.56	1.39	0.66	1.29	0.53	1.40	0.55	1.39	0.49	1.40	0.48	1.40	0.61	1.36
2. Genetics	18	0.73	1.93	0.76	1.80	0.69	1.94	0.69	1.90	0.67	1.95	0.68	1.95	0.74	1.87
3. Ecology and Evolution	16	0.77	1.80	0.79	1.70	0.74	1.82	0.72	1.81	0.71	1.83	0.71	1.83	0.78	1.73
4. Physiology	11	0.69	1.44	0.69	1.36	0.66	1.47	0.62	1.42	0.64	1.49	0.65	1.48	0.70	1.36
5. Investigation and Experimentation	6	0.54	1.11	0.54	1.03	0.53	1.12	0.48	1.10	0.48	1.13	0.47	1.13	0.53	1.06
Chemistry															
1. Atomic and Molecular Structure	8	0.56	1.24	0.59	1.13	0.57	1.26	0.54	1.23	0.56	1.29	0.56	1.29	0.57	1.19
2. Chemical Bonds, Biochemistry	9	0.55	1.32	0.57	1.24	0.54	1.35	0.51	1.31	0.54	1.36	0.54	1.37	0.52	1.27
3. Kinetics, Thermodynamics	14	0.63	1.70	0.70	1.62	0.60	1.73	0.60	1.71	0.58	1.74	0.56	1.74	0.66	1.64
4. Chemical Reactions	13	0.65	1.62	0.71	1.56	0.64	1.64	0.61	1.63	0.59	1.64	0.57	1.64	0.66	1.60
5. Conservation of Matter and Stoichiometry	10	0.68	1.38	0.74	1.27	0.67	1.39	0.67	1.38	0.60	1.43	0.58	1.43	0.69	1.34
6. Investigation and Experimentation	6	0.58	1.04	0.57	0.97	0.56	1.08	0.54	1.04	0.58	1.09	0.56	1.11	0.59	0.97
Earth Science															
1. Astronomy and Cosmology	12	0.61	1.57	0.65	1.55	0.60	1.58	0.58	1.55	0.59	1.59	0.58	1.59	0.63	1.53
2. Solid Earth	14	0.66	1.71	0.66	1.69	0.65	1.72	0.62	1.69	0.61	1.73	0.62	1.73	0.68	1.65
3. The Earth's Energy	28	0.80	2.43	0.83	2.39	0.79	2.45	0.80	2.42	0.77	2.44	0.76	2.44	0.84	2.37
4. Investigation and Experimentation	6	0.49	1.11	0.50	1.07	0.46	1.12	0.44	1.08	0.42	1.13	0.40	1.13	0.52	1.07
Physics															
1. Motion and Forces	12	0.67	1.51	0.67	1.44	0.57	1.57	0.59	1.53	0.57	1.58	0.55	1.57	0.65	1.47
2. Conservation of Energy and Momentum	12	0.69	1.54	0.71	1.44	0.66	1.55	0.61	1.55	0.59	1.58	0.54	1.58	0.68	1.52
3. Heat and Thermodynamics	9	0.69	1.26	0.64	1.22	0.67	1.32	0.59	1.31	0.62	1.34	0.61	1.34	0.66	1.24
4. Waves	10	0.64	1.40	0.60	1.35	0.61	1.43	0.54	1.41	0.53	1.45	0.52	1.45	0.62	1.37
5. Electric and Magnetic Phenomena	11	0.66	1.49	0.66	1.44	0.63	1.50	0.57	1.52	0.54	1.52	0.51	1.52	0.65	1.48
6. Investigation and Experimentation	6	0.53	1.07	0.42	1.06	0.47	1.09	0.37	1.10	0.39	1.12	0.38	1.12	0.44	1.04

Subscore Reliabilities and SEM for Science by PRIMARY ETHNICITY

Subscore Area	# 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 Science 1															
1. Biology/Life Sciences	10	0.56	1.46	0.57	1.45	0.49	1.48	0.52	1.47	0.47	1.48	0.47	1.47	0.58	1.44
2. Chemistry	15	0.54	1.77	0.62	1.77	0.52	1.79	0.52	1.80	0.48	1.79	0.46	1.78	0.58	1.79
3. Earth Sciences	17	0.70	1.90	0.73	1.83	0.69	1.91	0.68	1.88	0.66	1.92	0.66	1.92	0.75	1.82
4. Physics	12	0.39	1.57	0.50	1.58	0.42	1.55	0.42	1.58	0.29	1.55	0.29	1.54	0.52	1.59
5. Investigation and Experimentation	6	0.52	1.10	0.56	1.07	0.49	1.11	0.48	1.10	0.47	1.11	0.45	1.11	0.56	1.06
Integrated Science 2															
1. Biology/Life Sciences	15	0.52	1.82	0.72	1.72	0.62	1.77	0.59	1.79	0.57	1.80	0.58	1.79	0.66	1.77
2. Chemistry	6	0.04	1.18	0.43	1.14	0.23	1.15	0.26	1.16	0.21	1.14	0.20	1.15	0.33	1.16
3. Earth Sciences	15	0.66	1.75	0.71	1.72	0.70	1.76	0.68	1.77	0.62	1.79	0.58	1.80	0.72	1.74
4. Physics	18	0.39	1.90	0.62	1.94	0.44	1.90	0.42	1.93	0.40	1.92	0.31	1.92	0.52	1.94
5. Investigation and Experimentation	6	0.31	1.14	0.39	1.14	0.28	1.16	0.35	1.15	0.23	1.14	0.27	1.13	0.41	1.14
Integrated Science 3															
1. Biology/Life Sciences	16	0.62	1.84	0.64	1.83	0.39	1.80	0.65	1.84	0.57	1.85	0.57	1.84	0.65	1.85
2. Chemistry	23	0.78	2.12	0.62	2.20	0.75	1.79	0.58	2.19	0.46	2.18	0.51	2.19	0.69	2.17
3. Earth Sciences	7	0.64	1.14	0.53	1.21	0.76	1.01	0.50	1.20	0.46	1.23	0.45	1.23	0.52	1.21
4. Physics	8	0.34	1.30	0.16	1.24	4.86	1.21	0.09	1.31	0.18	1.26	0.22	1.28	0.29	1.30
5. Investigation and Experimentation	6	0.42	1.10	0.39	1.12	0.53	0.97	0.62	1.06	0.43	1.12	0.51	1.10	0.56	1.08
Integrated Science 4															
1. Biology/Life Sciences	13	0.38	1.65	0.60	1.63	0.37	1.57	0.54	1.62	0.56	1.65	0.56	1.62	0.69	1.61
2. Chemistry	10	0.17	1.40	0.34	1.44	0.60	1.03	0.33	1.42	0.23	1.46	0.35	1.41	0.55	1.44
3. Earth Sciences	15	0.69	1.71	0.50	1.81	0.81	1.59	0.43	1.80	0.59	1.79	0.60	1.73	0.78	1.73
4. Physics	16	0.18	1.76	0.58	1.81	0.67	1.48	0.58	1.83	0.47	1.84	0.38	1.80	0.66	1.82
5. Investigation and Experimentation	6	0.10	1.08	0.17	1.13	0.66	1.03	0.27	1.11	0.21	1.13	0.11	1.12	0.44	1.11

Table 8.A.25 Subscore Reliabilities and SEM for Grade Specific Tests by PRIMARY ETHNICITY

Subscore Reliabilities and SEM for Mathematics by PRIMARY ETHNICITY															
Subscore Area	**# 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	1.78	0.75	1.53	0.76	1.76	0.73	1.68	0.74	1.82	0.74	1.84	0.75	1.64
2. Graphing and Systems of Linear Equations	14	0.70	1.70	0.76	1.55	0.70	1.70	0.72	1.66	0.67	1.71	0.64	1.71	0.73	1.65
3. Quadratics and Polynomials	21	0.73	2.04	0.80	1.87	0.74	2.03	0.75	1.98	0.71	2.04	0.69	2.05	0.76	1.98
4. Functions and Rational Expressions	13	0.57	1.61	0.72	1.52	0.61	1.60	0.63	1.58	0.50	1.60	0.49	1.60	0.64	1.59
Geometry – 9															
1. Logic and Geometric Proofs	23	0.82	1.97	0.82	1.81	0.81	2.00	0.79	1.97	0.80	2.09	0.81	2.10	0.79	1.85
2. Volume and Area Formulas	11	0.69	1.41	0.74	1.29	0.71	1.42	0.69	1.39	0.66	1.47	0.63	1.48	0.68	1.36
3. Angle Relationships, Constructions, and Lines	16	0.72	1.76	0.79	1.62	0.75	1.75	0.74	1.73	0.73	1.79	0.71	1.79	0.74	1.70
4. Trigonometry	15	0.72	1.66	0.75	1.53	0.71	1.69	0.72	1.63	0.72	1.72	0.72	1.74	0.70	1.60
Algebra II – 10															
1. Polynomials and Rational Expressions	19	0.77	1.82	0.79	1.64	0.78	1.81	0.77	1.78	0.79	1.85	0.78	1.87	0.77	1.76
2. Quadratics, Conics, and Complex Numbers	17	0.69	1.83	0.74	1.78	0.67	1.84	0.66	1.84	0.63	1.85	0.61	1.86	0.68	1.82
3. Exponents and Logarithms	15	0.66	1.75	0.70	1.66	0.66	1.75	0.65	1.75	0.66	1.77	0.66	1.76	0.67	1.73
4. Series, Combinatorics, and Probability and Statistics	14	0.58	1.66	0.65	1.66	0.56	1.66	0.56	1.67	0.54	1.65	0.50	1.62	0.59	1.65

Subscore Reliabilities and SEM for Mathematics by PRIMARY ETHNICITY

Subscore Area	# 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 Math – 11															
1. Algebra I	18	0.76	1.75	0.78	1.51	0.79	1.75	0.75	1.75	0.75	1.81	0.76	1.85	0.77	1.67
2. Geometry	19	0.74	1.89	0.78	1.68	0.74	1.90	0.74	1.89	0.74	1.95	0.76	1.96	0.76	1.81
3. Algebra II	23	0.83	2.03	0.84	1.78	0.82	2.04	0.82	2.02	0.82	2.09	0.82	2.11	0.83	1.94
4. Probability and Statistics	5	0.43	0.97	0.52	0.89	0.41	1.00	0.44	0.98	0.44	0.99	0.46	0.99	0.49	0.92
World History – 10															
1. Development of Modern Political Thought	13	0.62	1.69	0.65	1.64	0.58	1.70	0.56	1.69	0.57	1.70	0.58	1.69	0.66	1.65
2. Industrial Expansion and Imperialism	10	0.58	1.47	0.60	1.41	0.55	1.48	0.51	1.48	0.51	1.49	0.50	1.49	0.60	1.44
3. Causes and Effects of World War I	14	0.69	1.71	0.73	1.64	0.65	1.72	0.67	1.70	0.63	1.73	0.61	1.73	0.73	1.66
4. Causes and Effects of World War II	13	0.69	1.65	0.73	1.58	0.67	1.66	0.67	1.64	0.64	1.66	0.62	1.66	0.73	1.61
5. International Developments in the Post-World War II Era	10	0.61	1.43	0.70	1.37	0.59	1.43	0.63	1.43	0.56	1.43	0.54	1.43	0.67	1.42

Table 8.A.26 Overall Subgroup Reliabilities

Overall Subgroup Reliabilities for the CSTs (table 1 of 2)											
		Gender		NSLP		Special Service		Language Fluency			
Subject Area	CST	Male	Female	No	Yes	No	Yes	Eng. only	Ini. Fluent	Learner	Red. Fluent
English–Language Arts	2	0.94	0.94	0.94	0.93	0.94	0.94	0.94	0.93	0.93	0.91
	3	0.93	0.92	0.92	0.91	0.92	0.93	0.92	0.91	0.90	0.85
	4 *	0.94	0.94	0.94	0.93	0.94	0.94	0.94	0.93	0.91	0.89
	5	0.94	0.93	0.93	0.92	0.93	0.92	0.94	0.93	0.89	0.88
	6	0.94	0.93	0.93	0.92	0.93	0.91	0.94	0.93	0.87	0.89
	7 *	0.94	0.93	0.93	0.92	0.93	0.90	0.94	0.93	0.87	0.89
	8	0.93	0.93	0.93	0.91	0.93	0.90	0.93	0.92	0.85	0.89
	9	0.94	0.94	0.94	0.92	0.94	0.89	0.94	0.94	0.87	0.91
	10	0.95	0.94	0.95	0.93	0.94	0.89	0.95	0.94	0.86	0.92
	11	0.95	0.95	0.95	0.93	0.95	0.89	0.95	0.95	0.86	0.92
**MC Only*											
History–Social Science	8	0.93	0.92	0.93	0.90	0.93	0.88	0.93	0.93	0.83	0.90
	World History	0.92	0.89	0.91	0.87	0.91	0.85	0.91	0.91	0.79	0.88
	11	0.92	0.90	0.92	0.89	0.91	0.85	0.92	0.91	0.79	0.89
Math	2	0.94	0.93	0.92	0.93	0.93	0.95	0.93	0.91	0.93	0.90
	3	0.94	0.94	0.94	0.94	0.94	0.95	0.94	0.93	0.93	0.90
	4	0.95	0.94	0.94	0.94	0.94	0.95	0.94	0.93	0.93	0.90
	5	0.94	0.93	0.94	0.93	0.94	0.92	0.94	0.94	0.91	0.92
	6	0.94	0.93	0.93	0.91	0.93	0.90	0.93	0.93	0.88	0.91
	7	0.93	0.92	0.93	0.91	0.92	0.88	0.93	0.93	0.88	0.91
	General Math	0.89	0.87	0.89	0.86	0.88	0.82	0.89	0.89	0.83	0.86
	Algebra I	0.90	0.89	0.91	0.86	0.90	0.79	0.90	0.92	0.81	0.89
	Geometry	0.93	0.92	0.93	0.90	0.93	0.88	0.93	0.94	0.88	0.92
	Algebra II	0.91	0.90	0.91	0.89	0.91	0.89	0.90	0.92	0.90	0.90
	High School Math	0.93	0.93	0.93	0.92	0.93	0.95	0.93	0.93	0.94	0.93

Overall Subgroup Reliabilities for the CSTs (table 1 of 2)

Subject Area	CST	Gender		NSLP		Special Service		Language Fluency			
		Male	Female	No	Yes	No	Yes	Eng. only	Ini. Fluent	Learner	Red. Fluent
	Integrated Math 1	0.85	0.84	0.85	0.84	0.85	0.71	0.85	0.87	0.73	0.85
	Integrated Math 2	0.90	0.89	0.91	0.86	0.90	0.74	0.89	0.94	0.79	0.91
	Integrated Math 3	0.90	0.88	0.88	0.91	0.89	0.80	0.88	0.93	0.91	0.87
Science	Grade 5 Science	0.91	0.89	0.90	0.87	0.89	0.90	0.90	0.89	0.84	0.83
	Grade 8 Science	0.91	0.89	0.90	0.87	0.90	0.86	0.90	0.90	0.81	0.86
	Grade 10 Life Science	0.93	0.91	0.93	0.90	0.92	0.86	0.93	0.92	0.81	0.90
	Biology	0.93	0.91	0.92	0.89	0.91	0.87	0.92	0.92	0.81	0.89
	Chemistry	0.92	0.89	0.91	0.89	0.91	0.90	0.90	0.91	0.86	0.89
	Earth Science	0.91	0.88	0.91	0.87	0.90	0.86	0.91	0.89	0.81	0.87
	Physics	0.92	0.89	0.91	0.88	0.91	0.89	0.91	0.91	0.84	0.89
	Integrated Science 1	0.87	0.84	0.87	0.82	0.86	0.79	0.87	0.86	0.73	0.82
	Integrated Science 2	0.85	0.81	0.85	0.78	0.83	0.75	0.84	0.86	0.70	0.79
	Integrated Science 3	0.85	0.77	0.84	0.77	0.83	0.64	0.84	0.82	0.52	0.78
	Integrated Science 4	0.84	0.82	0.86	0.77	0.84	0.70	0.87	0.85	0.65	0.76
Grade-Specific	Algebra I – 8	0.92	0.91	0.92	0.89	0.91	0.88	0.91	0.92	0.86	0.90
	Geometry – 9	0.93	0.93	0.92	0.92	0.93	0.94	0.92	0.93	0.93	0.92
	Algebra II – 10	0.91	0.90	0.90	0.89	0.90	0.92	0.89	0.91	0.92	0.90
	High School Math – 11	0.93	0.92	0.93	0.92	0.93	0.95	0.92	0.93	0.94	0.93
	World History – 10	0.92	0.88	0.91	0.87	0.90	0.84	0.91	0.91	0.79	0.88

Table 8.A.27 Overall Subgroup Reliabilities (continued)

Overall Subgroup Reliabilities for the CSTs (table 2 of 2)								
Subject Area	**CST**	**Primary Ethnicity**						
		Am. Ind.	**Asian**	**Pac. Island**	**Filipino**	**Hispanic**	**African Am.**	**White**
English–Language Arts	**2**	0.94	0.94	0.93	0.92	0.93	0.94	0.94
	3	0.92	0.92	0.91	0.90	0.91	0.92	0.92
	4 *	0.94	0.94	0.93	0.93	0.93	0.93	0.94
	5	0.93	0.94	0.93	0.92	0.92	0.93	0.93
	6	0.93	0.94	0.92	0.92	0.92	0.93	0.93
	7 *	0.93	0.94	0.92	0.91	0.92	0.92	0.93
	8	0.93	0.94	0.92	0.91	0.91	0.92	0.93
	9	0.93	0.94	0.93	0.92	0.92	0.93	0.94
	10	0.94	0.95	0.94	0.93	0.93	0.93	0.94
	11	0.94	0.95	0.94	0.94	0.93	0.94	0.95
**MC Only*								
History–Social Science	**8**	0.92	0.94	0.91	0.91	0.90	0.90	0.93
	World History	0.90	0.92	0.89	0.89	0.87	0.87	0.91
	11	0.90	0.92	0.89	0.89	0.89	0.88	0.92
Math	**2**	0.92	0.92	0.93	0.92	0.93	0.93	0.92
	3	0.93	0.93	0.93	0.93	0.93	0.94	0.93
	4	0.94	0.94	0.94	0.93	0.94	0.94	0.94
	5	0.93	0.94	0.93	0.93	0.92	0.93	0.94
	6	0.92	0.94	0.92	0.92	0.91	0.91	0.93
	7	0.92	0.94	0.92	0.92	0.91	0.91	0.93
	General Math	0.88	0.90	0.88	0.88	0.86	0.86	0.89
	Algebra I	0.87	0.93	0.88	0.90	0.85	0.84	0.90
	Geometry	0.91	0.95	0.91	0.92	0.89	0.88	0.92
	Algebra II	0.88	0.92	0.89	0.88	0.87	0.86	0.90
	High School Math	0.92	0.92	0.92	0.91	0.91	0.92	0.92
	Integrated Math 1	0.85	0.92	0.86	0.86	0.80	0.82	0.85

Overall Subgroup Reliabilities for the CSTs (table 2 of 2)

Subject Area	CST	Primary Ethnicity						
		Am. Ind.	Asian	Pac. Island	Filipino	Hispanic	African Am.	White
	Integrated Math 2	0.89	0.94	0.87	0.93	0.83	0.82	0.89
	Integrated Math 3	0.87	0.92	0.52	0.91	0.89	0.87	0.85
Science	Grade 5 Science	0.89	0.91	0.89	0.87	0.87	0.88	0.89
	Grade 8 Science	0.89	0.91	0.89	0.87	0.87	0.87	0.90
	Life Science	0.92	0.93	0.91	0.90	0.89	0.89	0.93
	Biology	0.91	0.92	0.90	0.89	0.89	0.89	0.91
	Chemistry	0.89	0.91	0.89	0.88	0.88	0.87	0.90
	Earth Science	0.89	0.90	0.89	0.88	0.87	0.87	0.91
	Physics	0.91	0.90	0.89	0.87	0.87	0.86	0.90
	Integrated Science 1	0.85	0.88	0.84	0.84	0.82	0.82	0.88
	Integrated Science 2	0.80	0.88	0.82	0.82	0.78	0.76	0.85
	Integrated Science 3	0.88	0.82	0.86	0.82	0.77	0.78	0.86
	Integrated Science 4	0.68	0.76	0.85	0.80	0.78	0.77	0.90
Grade-Specific	Algebra I – 8	0.90	0.92	0.90	0.90	0.88	0.88	0.91
	Geometry – 9	0.92	0.93	0.92	0.91	0.91	0.91	0.91
	Algebra II – 10	0.88	0.91	0.88	0.88	0.88	0.87	0.89
	High School Math – 11	0.92	0.93	0.92	0.91	0.91	0.91	0.92
	World History – 10	0.89	0.91	0.88	0.88	0.87	0.86	0.91

Appendix 8.B—Reliability of Classification Tables

Table 8.B.1 Reliability of Classification for English–Language Arts Grade 2

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–20	0.07	0.02	0.00	0.01	0.00	0.10
	21–31	0.01	0.12	0.03	0.00	0.00	0.16
	32–44	0.00	0.02	0.22	0.02	0.00	0.26
	45–55	0.00	0.01	0.04	0.23	0.02	0.30
	56–65	0.00	0.00	0.00	0.03	0.15	0.18
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–20	0.07	0.03	0.01	0.01	0.00	0.10
	21–31	0.02	0.10	0.04	0.00	0.00	0.16
	32–44	0.00	0.03	0.19	0.04	0.00	0.26
	45–55	0.00	0.01	0.06	0.20	0.04	0.30
	56–65	0.00	0.00	0.00	0.04	0.14	0.18
	Estimated Proportion Consistently Classified: Total = 0.69, Proficient & Above = 0.89						

Table 8.B.2 Reliability of Classification for English–Language Arts Grade 3

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–23	0.08	0.03	0.00	0.00	0.00	0.11
	24–34	0.01	0.15	0.03	0.00	0.00	0.20
	35–46	0.00	0.03	0.25	0.04	0.00	0.32
	47–56	0.00	0.00	0.04	0.21	0.02	0.27
	57–65	0.00	0.00	0.00	0.03	0.08	0.10
	Estimated Proportion Correctly Classified: Total = 0.77, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–23	0.08	0.03	0.00	0.00	0.00	0.11
	24–34	0.03	0.13	0.04	0.00	0.00	0.20
	35–46	0.00	0.05	0.21	0.05	0.00	0.32
	47–56	0.00	0.00	0.05	0.18	0.03	0.27
	57–65	0.00	0.00	0.00	0.03	0.07	0.10
	Estimated Proportion Consistently Classified: Total = 0.68, Proficient & Above = 0.89						

Table 8.B.3 Reliability of Classification for English–Language Arts Grade 4 (Reading only)

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–21	0.04	0.02	0.00	0.00	0.00	0.07
	22–31	0.01	0.10	0.03	0.00	0.00	0.14
	32–47	0.00	0.02	0.23	0.03	0.00	0.29
	48-59	0.00	0.00	0.04	0.20	0.03	0.27
	60–75	0.00	0.00	0.00	0.03	0.21	0.24
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–21	0.04	0.02	0.00	0.00	0.00	0.07
	22–31	0.02	0.08	0.04	0.00	0.00	0.14
	32–47	0.00	0.03	0.21	0.04	0.00	0.29
	48–59	0.00	0.00	0.05	0.17	0.05	0.27
	60–75	0.00	0.00	0.00	0.04	0.20	0.24
	Estimated Proportion Consistently Classified: Total = 0.70, Proficient & Above = 0.90						

Table 8.B.4 Reliability of Classification for English–Language Arts Grade 4 (Reading & Writing)

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–25	0.06	0.02	0.00	0.00	0.00	0.08
	26–34	0.01	0.08	0.03	0.00	0.00	0.12
	35–51	0.00	0.02	0.24	0.03	0.00	0.29
	52–63	0.00	0.00	0.04	0.19	0.03	0.26
	64–83	0.00	0.00	0.00	0.03	0.22	0.25
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–25	0.05	0.02	0.00	0.00	0.00	0.08
	26–34	0.02	0.06	0.03	0.00	0.00	0.12
	35–51	0.00	0.03	0.22	0.04	0.00	0.29
	52–63	0.00	0.00	0.05	0.16	0.05	0.26
	64–83	0.00	0.00	0.00	0.04	0.21	0.25
	Estimated Proportion Consistently Classified: Total = 0.70, Proficient & Above = 0.90						

Table 8.B.5 Reliability of Classification for English–Language Arts Grade 5

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–23	0.06	0.02	0.00	0.00	0.00	0.09
	24–32	0.02	0.10	0.03	0.00	0.00	0.14
	33–48	0.00	0.02	0.26	0.03	0.00	0.32
	49–60	0.00	0.00	0.04	0.21	0.03	0.27
	61–75	0.00	0.00	0.00	0.03	0.15	0.17
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–23	0.06	0.03	0.00	0.00	0.00	0.09
	24–32	0.03	0.08	0.04	0.00	0.00	0.14
	33–48	0.00	0.04	0.24	0.05	0.00	0.32
	49–60	0.00	0.00	0.05	0.18	0.04	0.27
	61–75	0.00	0.00	0.00	0.04	0.14	0.17
	Estimated Proportion Consistently Classified: Total = 0.70, Proficient & Above = 0.90						

Table 8.B.6 Reliability of Classification for English–Language Arts Grade 6

	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	0.09
	22–31	0.02	0.12	0.03	0.00	0.00	0.17
	32–47	0.00	0.03	0.26	0.03	0.00	0.31
	48-59	0.00	0.00	0.04	0.19	0.03	0.26
	60–75	0.00	0.00	0.00	0.03	0.14	0.17
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–21	0.06	0.03	0.00	0.00	0.00	0.09
	22–31	0.03	0.10	0.04	0.00	0.00	0.17
	32–47	0.00	0.04	0.23	0.04	0.00	0.31
	48–59	0.00	0.00	0.05	0.17	0.04	0.26
	60–75	0.00	0.00	0.00	0.03	0.14	0.17
	Estimated Proportion Consistently Classified: Total = 0.69, Proficient & Above = 0.90						

Table 8.B.7 Reliability of Classification for English–Language Arts Grade 7 (Reading only)

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–22	0.06	0.02	0.00	0.00	0.00	0.09
	23–33	0.02	0.13	0.03	0.00	0.00	0.18
	34–48	0.00	0.03	0.24	0.03	0.00	0.29
	49–60	0.00	0.00	0.04	0.21	0.03	0.27
	61–75	0.00	0.00	0.00	0.03	0.13	0.16
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–22	0.06	0.03	0.00	0.00	0.00	0.09
	23–33	0.03	0.11	0.04	0.00	0.00	0.18
	34–48	0.00	0.04	0.21	0.04	0.00	0.29
	49–60	0.00	0.00	0.05	0.18	0.04	0.27
	61–75	0.00	0.00	0.00	0.03	0.13	0.16
	Estimated Proportion Consistently Classified: Total = 0.69, Proficient & Above = 0.90						

Table 8.B.8 Reliability of Classification for English–Language Arts Grade 7 (Reading & Writing)

	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	0.09
	27–37	0.02	0.12	0.03	0.00	0.00	0.17
	38–52	0.00	0.02	0.22	0.03	0.00	0.28
	53–66	0.00	0.00	0.04	0.23	0.03	0.30
	67–83	0.00	0.00	0.00	0.03	0.14	0.16
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–26	0.06	0.03	0.00	0.00	0.00	0.09
	27–37	0.03	0.10	0.04	0.00	0.00	0.17
	38–52	0.00	0.04	0.19	0.04	0.00	0.28
	53–66	0.00	0.00	0.05	0.21	0.04	0.30
	67–83	0.00	0.00	0.00	0.03	0.13	0.16
	Estimated Proportion Consistently Classified: Total = 0.69, Proficient & Above = 0.90						

Table 8.B.9 Reliability of Classification for English–Language Arts Grade 8

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–25	0.08	0.03	0.00	0.00	0.00	0.11
	26–35	0.02	0.11	0.03	0.00	0.00	0.16
	36–50	0.00	0.03	0.25	0.03	0.00	0.31
	51–61	0.00	0.00	0.04	0.18	0.03	0.25
	62–75	0.00	0.00	0.00	0.03	0.13	0.16
	Estimated Proportion Correctly Classified: Total = 0.76, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–25	0.07	0.03	0.00	0.00	0.00	0.11
	26–35	0.03	0.09	0.04	0.00	0.00	0.16
	36–50	0.00	0.04	0.22	0.05	0.00	0.31
	51–61	0.00	0.00	0.05	0.16	0.04	0.25
	62–75	0.00	0.00	0.00	0.04	0.13	0.16
	Estimated Proportion Consistently Classified: Total = 0.67, Proficient & Above = 0.90						

Table 8.B.10 Reliability of Classification for English–Language Arts Grade 9

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–21	0.06	0.02	0.00	0.00	0.00	0.09
	22–31	0.02	0.11	0.04	0.01	0.00	0.17
	32–46	0.00	0.01	0.23	0.02	0.00	0.27
	47–58	0.00	0.00	0.04	0.20	0.02	0.26
	59–75	0.00	0.00	0.01	0.04	0.18	0.22
	Estimated Proportion Correctly Classified: Total = 0.77, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–21	0.06	0.02	0.00	0.00	0.00	0.09
	22–31	0.03	0.09	0.05	0.01	0.00	0.17
	32–46	0.00	0.03	0.20	0.04	0.00	0.27
	47–58	0.00	0.00	0.05	0.17	0.03	0.26
	59–75	0.00	0.00	0.01	0.04	0.17	0.22
	Estimated Proportion Consistently Classified: Total = 0.69, Proficient & Above = 0.89						

Table 8.B.11 Reliability of Classification for English–Language Arts Grade 10

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–24	0.10	0.03	0.01	0.01	0.00	0.14
	25–36	0.02	0.15	0.04	0.00	0.00	0.20
	37–52	0.00	0.02	0.25	0.02	0.00	0.29
	53–62	0.00	0.01	0.04	0.15	0.02	0.21
	63–75	0.00	0.00	0.00	0.03	0.13	0.16
	Estimated Proportion Correctly Classified: Total = 0.77, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–24	0.09	0.04	0.01	0.00	0.00	0.14
	25–36	0.03	0.12	0.05	0.00	0.00	0.20
	37–52	0.00	0.03	0.22	0.03	0.00	0.29
	53–62	0.00	0.01	0.05	0.12	0.03	0.21
	63–75	0.00	0.00	0.00	0.03	0.12	0.16
	Estimated Proportion Consistently Classified: Total = 0.68, Proficient & Above = 0.90						

Table 8.B.12 Reliability of Classification for English–Language Arts Grade 11

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–26	0.16	0.04	0.01	0.01	0.00	0.21
	27–37	0.02	0.14	0.03	0.00	0.00	0.18
	38–51	0.00	0.02	0.21	0.02	0.00	0.24
	52–61	0.00	0.01	0.04	0.14	0.02	0.20
	62–75	0.00	0.00	0.00	0.03	0.14	0.17
	Estimated Proportion Correctly Classified: Total = 0.78, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–26	0.15	0.04	0.01	0.01	0.00	0.21
	27–37	0.03	0.11	0.04	0.00	0.00	0.18
	38–51	0.00	0.03	0.18	0.03	0.00	0.24
	52–61	0.00	0.01	0.05	0.12	0.03	0.20
	62–75	0.00	0.00	0.00	0.03	0.14	0.17
	Estimated Proportion Consistently Classified: Total = 0.70, Proficient & Above = 0.91						

Table 8.B.13 Reliability of Classification for History–Social Science Grade 8

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–22	0.13	0.04	0.00	0.00	0.00	0.17
	23–30	0.04	0.12	0.04	0.00	0.00	0.20
	31–44	0.00	0.04	0.22	0.03	0.00	0.28
	45–56	0.00	0.00	0.04	0.15	0.02	0.21
	57–75	0.00	0.00	0.00	0.02	0.12	0.14
	Estimated Proportion Correctly Classified: Total = 0.74, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–22	0.11	0.05	0.01	0.00	0.00	0.17
	23–30	0.05	0.10	0.05	0.00	0.00	0.20
	31–44	0.00	0.05	0.19	0.04	0.00	0.28
	45–56	0.00	0.00	0.04	0.13	0.03	0.21
	57–75	0.00	0.00	0.00	0.03	0.11	0.14
	Estimated Proportion Consistently Classified: Total = 0.64, Proficient & Above = 0.91						

Table 8.B.14 Reliability of Classification for World History

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.18	0.05	0.00	0.00	0.00	0.24
	20–25	0.04	0.10	0.04	0.00	0.00	0.19
	26–36	0.00	0.04	0.22	0.03	0.00	0.29
	37–45	0.00	0.00	0.04	0.12	0.02	0.18
	46–60	0.00	0.00	0.00	0.02	0.09	0.11
	Estimated Proportion Correctly Classified: Total = 0.71, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–19	0.17	0.05	0.01	0.00	0.00	0.24
	20–25	0.05	0.08	0.05	0.00	0.00	0.19
	26–36	0.01	0.05	0.18	0.04	0.00	0.29
	37–45	0.00	0.00	0.05	0.10	0.03	0.18
	46–60	0.00	0.00	0.00	0.03	0.09	0.11
	Estimated Proportion Consistently Classified: Total = 0.62, Proficient & Above = 0.90						

Table 8.B.15 Reliability of Classification for History–Social Science Grade 11

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–17	0.11	0.05	0.00	0.00	0.00	0.16
	18–24	0.04	0.13	0.04	0.00	0.00	0.21
	25–35	0.00	0.04	0.21	0.03	0.00	0.28
	36–45	0.00	0.00	0.04	0.16	0.02	0.22
	46–60	0.00	0.00	0.00	0.03	0.10	0.13
	Estimated Proportion Correctly Classified: Total = 0.71, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–17	0.10	0.06	0.01	0.00	0.00	0.16
	18–24	0.06	0.10	0.05	0.00	0.00	0.21
	25–35	0.00	0.05	0.17	0.05	0.00	0.28
	36–45	0.00	0.00	0.05	0.13	0.04	0.22
	46–60	0.00	0.00	0.00	0.03	0.10	0.13
	Estimated Proportion Consistently Classified: Total = 0.60, Proficient & Above = 0.90						

Table 8.B.16 Reliability of Classification for Mathematics Grade 2

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–24	0.03	0.03	0.00	0.00	0.00	0.06
	25–37	0.01	0.46	0.04	0.00	0.00	0.51
	38–47	0.00	0.04	0.28	0.02	0.00	0.35
	48–56	0.00	0.00	0.00	0.06	0.00	0.06
	57–65	0.00	0.00	0.01	0.01	0.01	0.03
	Estimated Proportion Correctly Classified: Total = 0.84, Proficient & Above = 0.97						
Decision Consistency Alternate Form	0–24	0.03	0.03	0.00	0.00	0.00	0.06
	25–37	0.02	0.43	0.05	0.00	0.00	0.51
	38–47	0.00	0.06	0.26	0.03	0.00	0.35
	48–56	0.00	0.00	0.00	0.06	0.00	0.06
	57–65	0.00	0.00	0.01	0.01	0.01	0.03
	Estimated Proportion Consistently Classified: Total = 0.78, Proficient & Above = 0.96						

Table 8.B.17 Reliability of Classification for Mathematics Grade 3

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–22	0.01	0.02	0.00	0.00	0.00	0.04
	23–37	0.00	0.49	0.03	0.00	0.00	0.52
	38–47	0.00	0.04	0.27	0.01	0.00	0.33
	48–56	0.00	0.00	0.02	0.08	0.00	0.10
	57–65	0.00	0.00	0.00	0.00	0.01	0.02
	Estimated Proportion Correctly Classified: Total = 0.87, Proficient & Above = 0.97						
Decision Consistency Alternate Form	0–22	0.01	0.02	0.00	0.00	0.00	0.04
	23–37	0.01	0.47	0.04	0.00	0.00	0.52
	38–47	0.00	0.05	0.25	0.02	0.00	0.33
	48–56	0.00	0.00	0.02	0.08	0.00	0.10
	57–65	0.00	0.00	0.00	0.00	0.01	0.02
	Estimated Proportion Consistently Classified: Total = 0.81, Proficient & Above = 0.95						

Table 8.B.18 Reliability of Classification for Mathematics Grade 4

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.00	0.03	0.01	0.00	0.00	0.04
	20–34	0.00	0.37	0.02	0.00	0.00	0.39
	35–47	0.00	0.05	0.42	0.01	0.00	0.49
	48–56	0.00	0.00	0.01	0.06	0.00	0.06
	57–65	0.00	0.00	0.01	0.00	0.00	0.02
	Estimated Proportion Correctly Classified: Total = 0.86, Proficient & Above = 0.97						
Decision Consistency Alternate Form	0–19	0.01	0.02	0.01	0.00	0.00	0.04
	20–34	0.01	0.35	0.04	0.00	0.00	0.39
	35–47	0.01	0.06	0.40	0.02	0.00	0.49
	48–56	0.00	0.00	0.01	0.05	0.00	0.06
	57–65	0.00	0.00	0.01	0.00	0.00	0.02
	Estimated Proportion Consistently Classified: Total = 0.82, Proficient & Above = 0.96						

Table 8.B.19 Reliability of Classification for Mathematics Grade 5

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–20	0.02	0.04	0.00	0.00	0.00	0.06
	21–31	0.00	0.29	0.03	0.00	0.00	0.32
	32–41	0.00	0.05	0.31	0.03	0.00	0.40
	42–54	0.00	0.00	0.02	0.17	0.00	0.19
	55–65	0.00	0.00	0.00	0.01	0.02	0.03
	Estimated Proportion Correctly Classified: Total = 0.81, Proficient & Above = 0.95						
Decision Consistency Alternate Form	0–20	0.02	0.04	0.00	0.00	0.00	0.06
	21–31	0.03	0.25	0.05	0.00	0.00	0.32
	32–41	0.01	0.06	0.28	0.04	0.00	0.40
	42–54	0.00	0.00	0.02	0.16	0.00	0.19
	55–65	0.00	0.00	0.00	0.01	0.02	0.03
	Estimated Proportion Consistently Classified: Total = 0.74, Proficient & Above = 0.93						

Table 8.B.20 Reliability of Classification for Mathematics Grade 6

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–18	0.01	0.04	0.01	0.00	0.00	0.06
	19–29	0.00	0.20	0.03	0.00	0.00	0.23
	30–41	0.00	0.05	0.49	0.02	0.00	0.57
	42–54	0.00	0.00	0.02	0.11	0.00	0.13
	55–65	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Correctly Classified: Total = 0.82, Proficient & Above = 0.96						
Decision Consistency Alternate Form	0–18	0.02	0.03	0.01	0.00	0.00	0.06
	19–29	0.02	0.16	0.05	0.00	0.00	0.23
	30–41	0.01	0.07	0.46	0.03	0.00	0.57
	42–54	0.00	0.00	0.02	0.11	0.00	0.13
	55–65	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Consistently Classified: Total = 0.75, Proficient & Above = 0.94						

Table 8.B.21 Reliability of Classification for Mathematics Grade 7

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–18	0.00	0.02	0.00	0.00	0.00	0.02
	19–28	0.00	0.20	0.05	0.00	0.00	0.26
	29–40	0.00	0.04	0.54	0.02	0.00	0.59
	41–52	0.00	0.00	0.01	0.11	0.00	0.12
	53–65	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Correctly Classified: Total = 0.85, Proficient & Above = 0.96						
Decision Consistency Alternate Form	0–18	0.01	0.01	0.00	0.00	0.00	0.02
	19–28	0.02	0.17	0.06	0.00	0.00	0.26
	29–40	0.00	0.06	0.51	0.03	0.00	0.59
	41–52	0.00	0.00	0.02	0.10	0.00	0.12
	53–65	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Consistently Classified: Total = 0.80, Proficient & Above = 0.95						

Table 8.B.22 Reliability of Classification for General Mathematics

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.00	0.00	0.00	0.00	0.00	0.00
	20-28	0.00	0.30	0.06	0.00	0.00	0.37
	29-40	0.00	0.05	0.54	0.00	0.00	0.59
	41-52	0.00	0.00	0.01	0.02	0.00	0.03
	53-65	0.00	0.00	0.00	0.00	0.00	0.00
	Estimated Proportion Correctly Classified: Total = 0.87, Proficient & Above = 0.98						
Decision Consistency Alternate Form	0–19	0.00	0.00	0.00	0.00	0.00	0.00
	20–28	0.00	0.28	0.08	0.00	0.00	0.37
	29–40	0.00	0.07	0.51	0.01	0.00	0.59
	41–52	0.00	0.00	0.01	0.02	0.00	0.03
	53–65	0.00	0.00	0.00	0.00	0.00	0.00
	Estimated Proportion Consistently Classified: Total = 0.82, Proficient & Above = 0.98						

Table 8.B.23 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	0.05	0.07	0.00	0.00	0.00	0.12
	19–27	0.04	0.14	0.06	0.00	0.00	0.24
	28–37	0.01	0.07	0.41	0.02	0.00	0.51
	38–51	0.00	0.00	0.02	0.11	0.00	0.12
	52–65	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Correctly Classified: Total = 0.72, Proficient & Above = 0.96						
Decision Consistency Alternate Form	0–18	0.06	0.05	0.01	0.00	0.00	0.12
	19–27	0.06	0.10	0.08	0.00	0.00	0.24
	28–37	0.02	0.08	0.38	0.03	0.00	0.51
	38–51	0.00	0.00	0.02	0.10	0.00	0.12
	52–65	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Consistently Classified: Total = 0.64, Proficient & Above = 0.94						

Table 8.B.24 Reliability of Classification for Geometry

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.05	0.07	0.00	0.00	0.00	0.12
	20–31	0.03	0.44	0.02	0.00	0.00	0.50
	32–43	0.00	0.04	0.27	0.01	0.00	0.33
	44–55	0.00	0.00	0.01	0.04	0.00	0.05
	56–65	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Correctly Classified: Total = 0.81, Proficient & Above = 0.98						
Decision Consistency Alternate Form	0–19	0.05	0.07	0.00	0.00	0.00	0.12
	20–31	0.06	0.40	0.04	0.00	0.00	0.50
	32–43	0.00	0.05	0.26	0.01	0.00	0.33
	44–55	0.00	0.00	0.01	0.04	0.00	0.05
	56–65	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Consistently Classified: Total = 0.75, Proficient & Above = 0.98						

Table 8.B.25 Reliability of Classification for Algebra II

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy	0–21	0.02	0.05	0.01	0.00	0.00	0.07
	22–30	0.00	0.41	0.03	0.00	0.00	0.44
	31–40	0.00	0.06	0.33	0.02	0.00	0.41
	41–52	0.00	0.00	0.01	0.06	0.00	0.07
All-forms Average	53–65	0.00	0.00	0.00	0.00	0.00	0.00
	Estimated Proportion Correctly Classified: Total = 0.82, Proficient & Above = 0.97						
Decision Consistency	0–21	0.02	0.04	0.01	0.00	0.00	0.07
	22–30	0.03	0.36	0.05	0.00	0.00	0.44
	31–40	0.01	0.07	0.30	0.03	0.00	0.41
	41–52	0.00	0.00	0.01	0.06	0.00	0.07
Alternate Form	53–65	0.00	0.00	0.00	0.00	0.00	0.00
	Estimated Proportion Consistently Classified: Total = 0.75, Proficient & Above = 0.96						

Table 8.B.26 Reliability of Classification for Summative High School Mathematics

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy	0–22	0.02	0.02	0.00	0.00	0.00	0.05
	23–37	0.00	0.60	0.03	0.00	0.00	0.63
	38–47	0.00	0.04	0.23	0.01	0.00	0.29
	48–57	0.00	0.00	0.00	0.03	0.00	0.03
All-forms Average	58–65	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Correctly Classified: Total = 0.88, Proficient & Above = 0.98						
Decision Consistency	0–22	0.02	0.02	0.00	0.00	0.00	0.05
	23–37	0.01	0.57	0.04	0.00	0.00	0.63
	38–47	0.00	0.05	0.22	0.02	0.00	0.29
	48–57	0.00	0.00	0.00	0.03	0.00	0.03
Alternate Form	58–65	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Consistently Classified: Total = 0.83, Proficient & Above = 0.98						

Table 8.B.27 Reliability of Classification for Integrated Mathematics 1

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy	0–19	0.02	0.11	0.01	0.00	0.00	0.14
	20–29	0.01	0.53	0.03	0.00	0.00	0.56
	30–39	0.00	0.06	0.21	0.01	0.00	0.28
	40–52	0.00	0.00	0.00	0.02	0.00	0.02
All-forms Average	53–65	0.00	0.00	0.00	0.00	0.00	0.00
	Estimated Proportion Correctly Classified: Total = 0.77, Proficient & Above = 0.99						
Decision Consistency	0–19	0.05	0.08	0.01	0.00	0.00	0.14
	20–29	0.07	0.44	0.06	0.00	0.00	0.56
	30–39	0.00	0.07	0.19	0.01	0.00	0.28
	40–52	0.00	0.00	0.01	0.02	0.00	0.02
Alternate Form	53–65	0.00	0.00	0.00	0.00	0.00	0.00
	Estimated Proportion Consistently Classified: Total = 0.69, Proficient & Above = 0.98						

Table 8.B.28 Reliability of Classification for Integrated Mathematics 2

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–16	0.02	0.08	0.01	0.00	0.00	0.11
	17–24	0.01	0.16	0.05	0.00	0.00	0.22
	25–35	0.00	0.07	0.39	0.02	0.00	0.49
	36–49	0.00	0.00	0.03	0.15	0.00	0.18
	50–65	0.00	0.00	0.00	0.00	0.00	0.00
	Estimated Proportion Correctly Classified: Total = 0.73, Proficient & Above = 0.95						
Decision Consistency Alternate Form	0–16	0.04	0.05	0.02	0.00	0.00	0.11
	17–24	0.04	0.11	0.07	0.00	0.00	0.22
	25–35	0.02	0.08	0.36	0.04	0.00	0.49
	36–49	0.00	0.00	0.03	0.14	0.00	0.18
	50–65	0.00	0.00	0.00	0.00	0.00	0.00
	Estimated Proportion Consistently Classified: Total = 0.65, Proficient & Above = 0.93						

Table 8.B.29 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	0.01	0.05	0.01	0.00	0.00	0.08
	19–26	0.00	0.20	0.04	0.00	0.00	0.25
	27–36	0.00	0.06	0.43	0.02	0.00	0.53
	37–49	0.00	0.00	0.02	0.12	0.00	0.14
	50–65	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Correctly Classified: Total = 0.77, Proficient & Above = 0.95						
Decision Consistency Alternate Form	0–18	0.02	0.04	0.01	0.00	0.00	0.08
	19–26	0.03	0.16	0.07	0.00	0.00	0.25
	27–36	0.01	0.08	0.39	0.04	0.00	0.53
	37–49	0.00	0.00	0.03	0.11	0.00	0.14
	50–65	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Consistently Classified: Total = 0.69, Proficient & Above = 0.93						

Table 8.B.30 Reliability of Classification for Science Grade 5

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–21	0.08	0.03	0.00	0.00	0.00	0.11
	22–28	0.02	0.09	0.04	0.00	0.00	0.15
	29–40	0.00	0.04	0.29	0.04	0.00	0.37
	41–50	0.00	0.00	0.05	0.22	0.02	0.28
	51–60	0.00	0.00	0.00	0.03	0.06	0.09
	Estimated Proportion Correctly Classified: Total = 0.73, Proficient & Above = 0.91						
Decision Consistency Alternate Form	0–21	0.07	0.03	0.01	0.00	0.00	0.11
	22–28	0.03	0.07	0.05	0.00	0.00	0.15
	29–40	0.01	0.05	0.25	0.06	0.00	0.37
	41–50	0.00	0.00	0.06	0.19	0.03	0.28
	51–60	0.00	0.00	0.00	0.03	0.06	0.09
	Estimated Proportion Consistently Classified: Total = 0.64, Proficient & Above = 0.87						

Table 8.B.31 Reliability of Classification for Science Grade 8

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.08	0.04	0.00	0.00	0.00	0.12
	20–27	0.02	0.14	0.05	0.00	0.00	0.21
	28–35	0.00	0.04	0.16	0.04	0.00	0.24
	36–43	0.00	0.00	0.05	0.15	0.03	0.22
	44–60	0.00	0.00	0.00	0.04	0.16	0.20
	Estimated Proportion Correctly Classified: Total = 0.69, Proficient & Above = 0.91						
Decision Consistency Alternate Form	0–19	0.07	0.04	0.00	0.00	0.00	0.12
	20–27	0.04	0.11	0.05	0.00	0.00	0.21
	28–35	0.00	0.05	0.13	0.06	0.00	0.24
	36–43	0.00	0.01	0.06	0.12	0.04	0.22
	44–60	0.00	0.00	0.00	0.04	0.16	0.20
	Estimated Proportion Consistently Classified: Total = 0.59, Proficient & Above = 0.87						

Table 8.B.32 Reliability of Classification for Grade 10 Life Science

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.13	0.04	0.00	0.00	0.00	0.18
	20–26	0.04	0.11	0.04	0.00	0.00	0.19
	27–38	0.00	0.04	0.22	0.03	0.00	0.28
	39–48	0.00	0.00	0.04	0.16	0.02	0.22
	49–60	0.00	0.00	0.00	0.03	0.10	0.13
	Estimated Proportion Correctly Classified: Total = 0.73, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–19	0.12	0.05	0.01	0.00	0.00	0.18
	20–26	0.05	0.09	0.05	0.00	0.00	0.19
	27–38	0.00	0.05	0.19	0.04	0.00	0.28
	39–48	0.00	0.00	0.05	0.14	0.04	0.22
	49–60	0.00	0.00	0.00	0.03	0.10	0.13
	Estimated Proportion Consistently Classified: Total = 0.63, Proficient & Above = 0.90						

Table 8.B.33 Reliability of Classification for Biology

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–17	0.08	0.04	0.00	0.00	0.00	0.12
	18–23	0.03	0.09	0.04	0.00	0.00	0.16
	24–37	0.00	0.03	0.29	0.03	0.00	0.35
	38–47	0.00	0.00	0.04	0.17	0.02	0.24
	48–60	0.00	0.00	0.00	0.03	0.11	0.13
	Estimated Proportion Correctly Classified: Total = 0.74, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–17	0.07	0.04	0.01	0.00	0.00	0.12
	18–23	0.04	0.07	0.05	0.00	0.00	0.16
	24–37	0.01	0.04	0.26	0.05	0.00	0.35
	38–47	0.00	0.00	0.05	0.15	0.04	0.24
	48–60	0.00	0.00	0.00	0.03	0.10	0.13
	Estimated Proportion Consistently Classified: Total = 0.64, Proficient & Above = 0.90						

Table 8.B.34 Reliability of Classification for Chemistry

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–20	0.10	0.04	0.00	0.00	0.00	0.14
	21–26	0.02	0.08	0.04	0.00	0.00	0.14
	27–40	0.00	0.04	0.34	0.03	0.00	0.41
	41–49	0.00	0.00	0.04	0.15	0.02	0.21
	50–60	0.00	0.00	0.00	0.03	0.07	0.10
	Estimated Proportion Correctly Classified: Total = 0.74, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–20	0.09	0.04	0.01	0.00	0.00	0.14
	21–26	0.03	0.06	0.05	0.00	0.00	0.14
	27–40	0.01	0.05	0.30	0.05	0.00	0.41
	41–49	0.00	0.00	0.05	0.13	0.03	0.21
	50–60	0.00	0.00	0.00	0.03	0.07	0.10
	Estimated Proportion Consistently Classified: Total = 0.65, Proficient & Above = 0.89						

Table 8.B.35 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	0.13	0.04	0.00	0.00	0.00	0.17
	20–25	0.04	0.10	0.04	0.00	0.00	0.19
	26–39	0.00	0.04	0.31	0.03	0.00	0.38
	40–49	0.00	0.00	0.04	0.15	0.01	0.20
	50–60	0.00	0.00	0.00	0.02	0.04	0.06
	Estimated Proportion Correctly Classified: Total = 0.72, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–19	0.11	0.05	0.01	0.00	0.00	0.17
	20–25	0.05	0.08	0.06	0.00	0.00	0.19
	26–39	0.01	0.05	0.27	0.05	0.00	0.38
	40–49	0.00	0.00	0.05	0.13	0.02	0.20
	50–60	0.00	0.00	0.00	0.02	0.03	0.06
	Estimated Proportion Consistently Classified: Total = 0.63, Proficient & Above = 0.90						

Table 8.B.36 Reliability of Classification for Physics

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–18	0.07	0.03	0.00	0.00	0.00	0.11
	19–24	0.02	0.08	0.04	0.00	0.00	0.15
	25–38	0.00	0.03	0.32	0.03	0.00	0.38
	39–47	0.00	0.00	0.04	0.16	0.02	0.22
	48–60	0.00	0.00	0.00	0.03	0.10	0.13
	Estimated Proportion Correctly Classified: Total = 0.73, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–18	0.07	0.04	0.01	0.00	0.00	0.11
	19–24	0.04	0.06	0.05	0.00	0.00	0.15
	25–38	0.01	0.05	0.28	0.05	0.00	0.38
	39–47	0.00	0.00	0.05	0.13	0.04	0.22
	48–60	0.00	0.00	0.00	0.03	0.10	0.13
	Estimated Proportion Consistently Classified: Total = 0.64, Proficient & Above = 0.89						

Table 8.B.37 Reliability of Classification for Integrated Science 1

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.21	0.06	0.00	0.00	0.00	0.28
	20–25	0.05	0.13	0.05	0.00	0.00	0.23
	26–39	0.00	0.06	0.30	0.02	0.00	0.38
	40–48	0.00	0.00	0.03	0.06	0.00	0.09
	49–60	0.00	0.00	0.00	0.01	0.00	0.01
	Estimated Proportion Correctly Classified: Total = 0.72, Proficient & Above = 0.95						
Decision Consistency Alternate Form	0–19	0.19	0.07	0.01	0.00	0.00	0.28
	20–25	0.07	0.10	0.06	0.00	0.00	0.23
	26–39	0.01	0.06	0.27	0.03	0.00	0.38
	40–48	0.00	0.00	0.03	0.05	0.01	0.09
	49–60	0.00	0.00	0.00	0.01	0.00	0.01
	Estimated Proportion Consistently Classified: Total = 0.62, Proficient & Above = 0.93						

Table 8.B.38 Reliability of Classification for Integrated Science 2

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.20	0.07	0.01	0.00	0.00	0.27
	20–25	0.05	0.15	0.05	0.00	0.00	0.26
	26–39	0.00	0.07	0.31	0.01	0.00	0.39
	40–48	0.00	0.00	0.02	0.04	0.00	0.06
	49–60	0.00	0.00	0.00	0.01	0.00	0.01
	Estimated Proportion Correctly Classified: Total = 0.70, Proficient & Above = 0.96						
Decision Consistency Alternate Form	0–19	0.18	0.08	0.02	0.00	0.00	0.27
	20–25	0.07	0.11	0.07	0.00	0.00	0.26
	26–39	0.02	0.08	0.27	0.03	0.00	0.39
	40–48	0.00	0.00	0.03	0.03	0.00	0.06
	49–60	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Consistently Classified: Total = 0.60, Proficient & Above = 0.94						

Table 8.B.39 Reliability of Classification for Integrated Science 3

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–15	0.08	0.09	0.00	0.00	0.00	0.17
	16–21	0.05	0.20	0.06	0.00	0.00	0.31
	22–35	0.00	0.08	0.32	0.01	0.00	0.41
	36–46	0.00	0.00	0.03	0.06	0.00	0.09
	47–60	0.00	0.00	0.00	0.00	0.01	0.01
	Estimated Proportion Correctly Classified: Total = 0.67, Proficient & Above = 0.95						
Decision Consistency Alternate Form	0–15	0.08	0.08	0.02	0.00	0.00	0.17
	16–21	0.08	0.15	0.09	0.00	0.00	0.31
	22–35	0.02	0.08	0.28	0.03	0.00	0.41
	36–46	0.00	0.00	0.03	0.05	0.01	0.09
	47–60	0.00	0.00	0.00	0.00	0.01	0.01
	Estimated Proportion Consistently Classified: Total = 0.57, Proficient & Above = 0.94						

Table 8.B.40 Reliability of Classification for Integrated Science 4

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.27	0.07	0.00	0.00	0.00	0.34
	20–25	0.07	0.15	0.04	0.00	0.00	0.26
	26–39	0.01	0.07	0.25	0.01	0.00	0.33
	40–48	0.00	0.00	0.02	0.03	0.00	0.05
	49–60	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Correctly Classified: Total = 0.70, Proficient & Above = 0.97						
Decision Consistency Alternate Form	0–19	0.24	0.09	0.01	0.00	0.00	0.34
	20–25	0.09	0.11	0.06	0.00	0.00	0.26
	26–39	0.02	0.07	0.22	0.02	0.00	0.33
	40–48	0.00	0.00	0.02	0.03	0.00	0.05
	49–60	0.00	0.00	0.00	0.00	0.00	0.01
	Estimated Proportion Consistently Classified: Total = 0.61, Proficient & Above = 0.96						

Table 8.B.41 Reliability of Classification for Algebra I – 8

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–18	0.05	0.04	0.00	0.00	0.00	0.09
	19–27	0.02	0.18	0.05	0.00	0.00	0.25
	28–37	0.00	0.04	0.19	0.03	0.00	0.27
	38–51	0.00	0.00	0.04	0.23	0.02	0.29
	52–65	0.00	0.00	0.00	0.02	0.07	0.09
	Estimated Proportion Correctly Classified: Total = 0.73, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–18	0.04	0.04	0.00	0.00	0.00	0.09
	19–27	0.04	0.15	0.06	0.00	0.00	0.25
	28–37	0.00	0.06	0.16	0.05	0.00	0.27
	38–51	0.00	0.00	0.05	0.21	0.03	0.29
	52–65	0.00	0.00	0.00	0.02	0.07	0.09
	Estimated Proportion Consistently Classified: Total = 0.63, Proficient & Above = 0.89						

Table 8.B.42 Reliability of Classification for Geometry – 9

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.03	0.02	0.00	0.00	0.00	0.06
	20-31	0.01	0.16	0.04	0.00	0.00	0.21
	32-43	0.00	0.03	0.22	0.03	0.00	0.28
	44-55	0.00	0.00	0.04	0.24	0.02	0.30
	56-65	0.00	0.00	0.00	0.03	0.12	0.14
	Estimated Proportion Correctly Classified: Total = 0.77, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–19	0.03	0.02	0.00	0.00	0.00	0.06
	20–31	0.02	0.14	0.05	0.00	0.00	0.21
	32–43	0.00	0.05	0.19	0.05	0.00	0.28
	44–55	0.00	0.00	0.05	0.21	0.04	0.30
	56–65	0.00	0.00	0.00	0.03	0.11	0.14
	Estimated Proportion Consistently Classified: Total = 0.68, Proficient & Above = 0.89						

Table 8.B.43 Reliability of Classification for Algebra II –10

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–21	0.07	0.04	0.00	0.00	0.00	0.11
	22–30	0.02	0.16	0.05	0.00	0.00	0.23
	31–40	0.00	0.04	0.22	0.04	0.00	0.31
	41–52	0.00	0.00	0.05	0.21	0.01	0.27
	53–65	0.00	0.00	0.00	0.02	0.06	0.08
	Estimated Proportion Correctly Classified: Total = 0.73, Proficient & Above = 0.91						
Decision Consistency Alternate Form	0–21	0.07	0.04	0.00	0.00	0.00	0.11
	22–30	0.04	0.13	0.06	0.00	0.00	0.23
	31–40	0.00	0.06	0.18	0.06	0.00	0.31
	41–52	0.00	0.00	0.06	0.19	0.03	0.27
	53–65	0.00	0.00	0.00	0.03	0.06	0.08
	Estimated Proportion Consistently Classified: Total = 0.63, Proficient & Above = 0.88						

Table 8.B.44 Reliability of Classification for High School Math – 11

	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
	23–37	0.01	0.20	0.03	0.00	0.00	0.25
	38–47	0.00	0.03	0.18	0.04	0.00	0.25
	48–57	0.00	0.00	0.04	0.23	0.02	0.29
	58–65	0.00	0.00	0.00	0.03	0.12	0.15
	Estimated Proportion Correctly Classified: Total = 0.77, Proficient & Above = 0.92						
Decision Consistency Alternate Form	0–22	0.04	0.02	0.00	0.00	0.00	0.06
	23–37	0.02	0.18	0.05	0.00	0.00	0.25
	38–47	0.00	0.05	0.15	0.05	0.00	0.25
	48–57	0.00	0.00	0.05	0.20	0.04	0.29
	58–65	0.00	0.00	0.00	0.04	0.11	0.15
	Estimated Proportion Consistently Classified: Total = 0.68, Proficient & Above = 0.89						

Table 8.B.45 Reliability of Classification for World History – 10

	Placement Score	Far Below Basic	Below Basic	Basic	Proficient	Advanced	Category Total
Decision Accuracy All-forms Average	0–19	0.16	0.05	0.00	0.00	0.00	0.22
	20–25	0.04	0.10	0.04	0.00	0.00	0.19
	26–36	0.00	0.04	0.22	0.03	0.00	0.30
	37–45	0.00	0.00	0.04	0.12	0.02	0.18
	46–60	0.00	0.00	0.00	0.02	0.09	0.11
	Estimated Proportion Correctly Classified: Total = 0.70, Proficient & Above = 0.93						
Decision Consistency Alternate Form	0–19	0.15	0.06	0.01	0.00	0.00	0.22
	20–25	0.05	0.08	0.05	0.00	0.00	0.19
	26–36	0.01	0.05	0.19	0.05	0.00	0.30
	37–45	0.00	0.00	0.05	0.10	0.03	0.18
	46–60	0.00	0.00	0.00	0.03	0.09	0.11
	Estimated Proportion Consistently Classified: Total = 0.60, Proficient & Above = 0.90						

Chapter 9: Constructed Response Items

This chapter presents the characteristics of the California Writing Standards Tests administered at grades 4 and 7 during the spring 2007 administration. The details of the scoring rubrics, scoring process, recruiting and training of raters (or scorers), quality control of the writing tasks and the accuracy of scoring are described in the first section of the chapter. The second section summarizes the test-level statistics obtained for the current administration of the writing tests. The analyses included inter-rater and generalizability studies associated with the scores, raters, and writing prompts. The descriptive statistics on the writing scores are also presented for the overall examinee population and various subgroups based on the P1 sample (as described in Chapter 5, page 108).

Grade 4 and 7 Writing Test Composition

The CSTs for ELA at grades 4 and 7 contain a single essay. In grade four, the standards require students to produce four types of writing: narratives, summaries, information reports, and responses to literature. In grade seven, they require students to produce five types of writing: fictional narratives, persuasive essays, summaries, responses to literature, and research reports.

The CSTs for Grade 4 and Grade 7 ELA do not assess "information reports" in grade four nor "research reports" in grade seven because these writing tasks would require extended time for students to gather information and/or research topics before writing could begin. In addition, the narrative writing tested in grades four and seven does not include personal or autobiographical narrative. Writing that would invite personal disclosure is not tested in any genre on the CSTs for writing.

Two different essay prompts from the same genre are used in a given year. One prompt is taken by the majority of test takers, the other is administered in programs not in session during the first administration. Before the 2006 administration, numerous writing prompts with modified formats and directions were field-tested with thousands of California students. Two grade four and two grade seven prompts were selected for the spring 2007 administration following the results of the field tests. All the writing genres eligible for testing in grades four and seven in previous years continued to be eligible for the 2007 administration as well.

All multiple-choice questions and writing tasks for the CSTs administered in 2007 were aligned to the California content standards and had been tried out on students throughout the state. The CST blueprints identify the specific standards tested. These blueprints are available at http://www.cde.ca.gov/ta/tg/sr/blueprints.asp.

Scoring Rubric

Student responses to the writing tasks were scored using a four-point holistic rubric, with four being the highest score. Beginning in 2006, one reader rather than two read each student response and assigned a score ranging from one to four[17]. The score a student received from the one reader was doubled to produce the student's overall score on the writing test. The possible writing scores were, therefore, 0, 2, 4, 6, 8.

In order to assess the accuracy and reliability of the scores, ten percent of the responses were read by a second reader. The score from the second reader, however, did not count toward the student's writing test score. If a response was difficult to score, the scorer elevated the response to the scoring

[17] In previous administrations, the responses received either identical or adjacent scores from the two readers over 99 percent of the time. Such high percentage of inter-rater agreement essentially amounts to a score produced by a single scorer. CDE recommended that to expedite scoring, each student response would be read by only one scorer.

supervisor to be scored. In these cases, the scoring supervisor's score was doubled to produce the final essay score.

Each student's result on the grade four or grade seven writing task was reported as a separate writing applications score that could range from 0 to 8 with 2-point intervals. This raw score was combined with the student's multiple-choice score on the CST for English–Language Arts, resulting in a possible total of 83 points. The combined score was scaled to determine the student's overall English–language arts performance level.

It is important to note that the four score points on the scoring rubric are not intended to map to the performance levels used to show overall student performance on the CST for ELA. A score of four given to a student response by one reader, for example, does not equate to the advanced level on the CST performance-level scale, a three does not equate to the proficient level, and so on. Nor does a student's overall essay score map to a CST performance level. An overall writing test score of 8, for example, does not indicate a performance level of advanced, a score of 6 does not indicate a performance level of proficient, and so on. A student can be said to have achieved at a particular performance level only when that student's performance-level result is based on results of the full CST for English–Language Arts (including the essay component[18]).

The rubrics used to score the 2007 Writing CSTs had been reviewed by the English–Language Arts Assessment Review Panel for accuracy. A detailed description of the scoring rubrics for both grades 4 and 7 are presented in Appendix 9.A, which starts on page 532.

Development of Writing Tasks

ETS field tested new writing prompts in 2005 for the first time in three years. 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.

ETS pilot tested 20 prompts for each of the two grades 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 CDE, ETS, and the English–Language Arts Assessment Review Panel, two grade-four and two grade-seven prompts were selected for the spring 2007 administration. Since the writing genres eligible for testing were the same as in previous years, the new writing tasks were very similar to those administered previously.

Rater Characteristics

The people who scored the student responses were college graduates who possessed at least a Bachelor of Arts degree. California teachers participated in rangefinding, the process used to select sample student responses used for training scorers. Each prospective scorer was required to participate in extensive computer-based training. The training consisted of the following:

- General information about the Electronic Performance Evaluation Network (ePEN™).
- Background information about the STAR Program.
- Information on the STAR writing tasks.
- Explanations of STAR scoring rubrics and scoring principles.
- Sets of prescored annotated training papers. The training papers included anchor and practice papers. Anchor papers were solid samples of student writing for each score point (1–4). Practice papers included samples of student writing that demonstrated the "high" and "low" end of each score point.

[18] Parents may choose not to let their child write the essay. In these cases the 75-item multiple-choice score counts as the ELA score in grades 4 and 7.

After completing the training, participants completed the Qualification Sets (three sets of papers consisting of ten papers per set) before being eligible to score. To become a scorer, participants must score with exact accuracy on at least 70 percent of the papers, achieve agreement with the predetermined score on two of the sets or as an average across two of the three sets, and have no nonadjacent scores (more than one point apart from the predetermined score). Scorers continue to qualify throughout the scoring process. Before each scoring session, each scorer scored a Calibration Set of three to four papers. The scores on these sets had been previously agreed upon by scoring directors, in conjunction with other personnel. The sets were given to scorers to ensure that the accuracy of their scoring did not drift. These sets "calibrated" the scorers.

Scoring Supervisors and Directors

Scoring supervisors monitored and mentored scorers during operational scoring. Scorers with a history of achieving the highest accuracy on the Qualification Sets and the highest level of scoring consistency and validity statistics during project scoring were selected as scoring supervisors. Approximately ten scorers were assigned to one scoring supervisor; this ratio allowed scoring supervisors to work closely with each scorer. The ePEN™ system also allowed scoring supervisors to continuously monitor each response scored and the score point assigned to ensure accuracy. All scoring supervisors participated in a two-day training session that provided the same training that qualified scorers. If a scoring supervisor did not achieve the accuracy required on the Qualification Sets, he or she was not allowed to be a supervisor. In addition, all supervisors received extensive training on how the ePEN™ system works, how to best manage scorers, and how to maintain accuracy as scoring continues.

Scoring directors were responsible for overseeing the scoring of the grade level to which they are assigned. They provided leadership for the scoring supervisors, helped manage the scorers, and were ultimately responsible for maintaining the highest accuracy possible during STAR scoring. Scoring directors represented the best of the scoring supervisors. They typically had two to three years experience as scoring supervisors, and demonstrated strong leadership qualities as well as a thorough understanding of STAR scoring.

All student responses were scanned into the ePEN™ system. Scorers viewed assigned responses on a computer at one of Pearson Educational Measurement's regional scoring centers. The screen did *not* display the student's name or background information; the scorer saw only the student response. Scoring supervisors and scoring directors were on site to monitor the scoring.

Accuracy and Bias Monitoring

The accuracy of all scoring was monitored on a regular basis.

First, in those instances in which a scorer and second reader both read a student response, consistency of scoring is calculated based on whether the two scores assigned are identical, adjacent, or nonadjacent. This consistency measure is called inter-rater reliability. Scoring supervisors and scoring directors constantly monitored agreement percentages. If a scorer's rate of agreement began to decline, the scorer was retrained by a scoring supervisor or scoring director and closely monitored thereafter. If the scorer's performance did not improve, the scorer was released.

Second, one in every 40 papers read by each scorer had been previously scored by scoring directors and scoring supervisors. These previously scored papers are referred to as validity papers. The consistency of the scorer's ratings with the scores on the validity papers was checked throughout the day to ensure that each scorer applied the criteria in the scoring guides accurately. The validity papers were introduced throughout the scoring process. If a scorer's validity fell below required levels, the scorer was retrained by a scoring supervisor or scoring director. If a scorer continued to show poor validity, the scorer was released.

Third, scoring supervisors "back-read" a certain percentage of the student responses that had been scored by the scorers. The scorer and supervisor scores were then compared to check the scorer's consistency and reliability and to ensure that the scorer was maintaining scoring standards. In addition, ePEN™ allowed scoring directors to view the back-reading completed by scoring supervisors to ensure that scoring supervisors were maintaining accuracy. Scoring directors would also back-read scorers.

Fourth, to help prevent drifting, scorers were required to score a Calibration Set before each scoring session. If a scorer was deficient on any of the accuracy indices, he or she was immediately retrained or released from the scoring process.

All writing tasks were reviewed to ensure that they were free of bias and controversial content and that they exhibited sensitivity to all students. Any tasks that did not meet these criteria were either modified and resubmitted for field-testing or removed from the pool of useable tasks.

Distributions and Means of Writing Scores—Overall and by Subgroup

As described earlier, for each grade level, there were two different writing prompts administered at two different times in the STAR testing cycle. Students were given one of the two writing prompts depending upon which writing test administration they sat for. In 2007, 434,995 students wrote the essay (and had valid ratings of 0, 1, 2, 3, or 4) in grade 4 and 457,555 wrote the essay in grade 7.

The distributions of examinees across score points for the overall population and for the subgroups are presented in Tables 9.B.1 and 9.B.2. These analyses were performed on subgroups based on gender, ethnicity, enrollment in NSLP, provision of special services, and language proficiency.

The mean scores obtained on the writing tests for the overall population and for various subgroups are presented in Tables 9.B.3 and 9.B.4. 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 the appropriate effect size measure to use in the context of a t-test on means. It is defined as the difference between two means divided by the pooled standard deviation adjusted for sample size. The most accepted opinion is that of Cohen (1992) which suggests 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 9.B.5.

Composite Reliability for Grades 4 and 7

The reliability of the total scores on ELA at grades 4 and 7 (for the students who took the writing prompt) were computed by using the composite reliability formula (Feldt and Brennan, 1989):

$$\alpha_c = 1 - \frac{\sum_{j=1}^{k} \left(w_j \sigma_{e_j}\right)^2}{\sigma_c^2} \tag{9.1}$$

where

k is the number of part scores in the composite,

w_j is the weight associated with the j-th part score,

σ_{e_j} is the SEM of the j-th part score, and

σ_c^2 is the variance of the composite score.

The reliability of the essays can be found indirectly by examining the correlation between the multiple choice (MC) and essay components in relation to the MC reliability. The lower bound reliability for a constructed response (CR) item in a test with multiple-choice items and only one CR item can be found using the squared correlation between the MC and essay (CR) portions of the test and dividing by the reliability of the MC portion of the test (($Corr_{Essay\text{-}MC}$)2/Rel_{MC}).

The SEM for the essay (i.e., the CR portion of the test) can then be found using:

$$\sigma_{e_{CR}} = \sigma_{CR} * \sqrt{1 - reliability_{CR}} \quad (9.2)$$

where,

σ_{CR} is the standard deviation of the essay scores

The reliabilities for the multiple choice scores were 0.941 for grade 4 and 0.935 for grade 7. The composite reliabilities for the combined MC and essay scores were 0.91 and 0.88 for the two tests. The approximate lower bound reliabilities for essays were found to be 0.25 and 0.29 for grades 4 and 7 respectively. The essay reliabilities were lower compared to the previous years.

Essay and Rater Agreement Summary

As described earlier, in order to monitor the accuracy of ratings, two raters scored approximately ten percent of the examinee essays. Since two raters independently scored responses on the essay prompt, it is important for reliable scoring that the two raters agreed in the scoring of the essay prompt as much as possible. It is also important to look at the effect of the assigned writing prompt on the scores. For this purpose, two sets of analyses were performed: (1) Inter-rater agreement analyses, and (2) Generalizability analyses.

The inter-rater reliability or consistency is defined as the degree to which the measure assessed by two or more raters is in agreement when the same instrument is administered to the same person. It is an indicator of homogeneity and is most frequently measured using intraclass correlation which looks at the exact agreement beyond chance. The index is defined as,

$$ICC = r_I = (ms_{between} - ms_{within})/(ms_{between} + [k - 1]ms_{within}) \quad (9.3)$$

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 inter-rater reliability. Cohen's Kappa was therefore used as a primary indicator of the inter-rater reliability of the essay scoring. In addition, the percentages of ratings where the raters were in exact agreement or within a 1-point difference were also computed.

The reliability analyses were performed on 44,680 cases for grade 4 and on 47,050 cases for grade 7 which constituted approximately ten percent of those tested. These samples were selected from all double-scored essays that had valid ratings (0, 1, 2, 3, or 4) for both raters. The results of these analyses are presented in Appendix 9.B. As shown in Tables 9.B.6 and 9.B.7, the percentage of students for whom the raters were in exact agreement was 75% for grade 4 and 70% for grade 7. Approximately 100% of the tests for grade 4 and 99% for grade 7 exhibited exact or adjacent (within 1-point) agreement between the two sets of ratings. The Kappa statistics showed moderate levels of agreement[19] beyond chance for both grades 4 and 7. The overall mean scores given by the two raters were very similar for both grades 4 and 7 as presented in Table 9.B.8 on page 540.

Generalizability analyses were performed 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 each source of variation also known as "facet." A decision study (d-study) was performed to

[19] Research has shown the value of Kappa statistics between 0.41 and 0.60 as exhibiting moderate levels of agreement between the two ratings. (Reference: http://www.niwascience.co.nz/services/free/statistical/kappa)

estimate the generalizability coefficient. The well-known computer program, GENOVA, as well as its extension, urGENOVA, was used to carry out these analyses (Brennan, 2001; Crick and Brennan, 1983). Since two raters scored each student's response but each student did not receive the same prompt, a nested unbalanced design was studied as described below:

Design = (Person : Essay) x Rater

The reported model makes the following assumptions; (1) the raters are selected from an infinite pool of raters and all the raters are randomly equivalent (supported by the high degree of inter-rater agreement as shown in Tables 9.B.6 and 9.B.7); (2) the essay prompts are randomly selected from a universe of prompts; (3) students' essay responses are randomly assigned to the raters. This model is being implemented in another large scale testing program at ETS that uses a similar scoring design (Lee & Kantor, 2007; Wang et al., 2007).

As shown in Tables 9.B.9 and 9.B.10, no significant variation was attributed to rater or writing prompt differences. Note that performance on the writing prompt was confounded with the sample of students who were administered the prompt; therefore, it is difficult to interpret this source of variation. The Generalizability coefficient was found to be 0.75 for grade 4 and 0.81 for grade 7 using this model. These values are comparable to the values of generalizability indices observed in the previous administrations.

In addition to the reported model, a fully nested design was also explored. The fully nested design yielded the same generalizability coefficient as the reported design.

References

Brennan, R. L. *Generalizability Theory*. New York: Springer Verlag, 2001.

Brennan, R. L. *Manual for GENOVA*. Iowa City, IA: Iowa Testing Programs, University of Iowa, 2001.

Cohen, J. A power primer. *Psychological Bulletin, Vol. 112,* pp. 55–159, 1992.

Crick, J. E. and Brennan, R. L. *Manual for GENOVA: A generalized analysis of variance system* (American College Testing Technical Bulletin No. 43). Iowa City, IA: ACT, Inc., 1983.

Cronbach, L. J. "Coefficient Alpha and the Internal Structure of Tests," *Psychometrika*, Vol. 16, pp. 292–334, 1951.

Lee, Y., & Kantor, R. (2005). *Dependability of New ESL Writing Test Scores: Evaluating Prototype Tasks and Alternative Rating Schemes.* TOEFL Monograph Series-31.

Shrout, P. E. and Fleiss, J. L. "Intraclass Correlations: Uses in Assessing Rater Reliability," *Psychological Bulletin*, Vol. 86, pp. 420–428, 1979.

Wang, L., Zhang, Y., & Li, S. (2007). *Evaluating the effects of excluding the rater facet in a special generalizability application*. Paper presented at the annual meeting of AERA and NCME, Chicago, IL.

Appendix 9.A—Writing Scoring Rubrics

Grade Four Scoring Rubric

The scoring rubric shown below was 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 the English–language arts content standards for Writing Strategies and Written Conventions of English. These criteria are used to evaluate written responses in all genres for their clarity of purpose, central idea, and organization and for their use of supporting evidence, sentence variety, and writing 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 visualize the events or experiences.

Summary writing:

- Summarizes text with *clear* identification of the main idea(s) and the most significant details, in 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 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 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, the 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 was 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 the English–Language Arts California content standards for Writing Strategies and Written Conventions of English. These criteria are used to evaluate written responses in all genres for their clarity of purpose, central idea, and organization; their coherence; and their use of supporting evidence, sentence variety, and writing conventions. The criteria under "Fictional or autobiographical narrative writing," "Response to literature writing," "Persuasive writing," and "Summary writing," adapted from the grade seven content standards for Writing Applications 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 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 *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 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 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 9.B— Essay Results Tables

Table 9.B.1 Distribution of Essay Scores for ELA Grade 4—Overall and by Subgroup

Score	Total	Females	Males	Eng-best	Initially Fluent	Lrnr	Redesig. Fluent	Not in NSLP	NSLP
0	0.32	0.11	0.22	0.17	0.01	0.14	0.00	0.12	0.20
2	7.77	2.64	5.13	3.28	0.23	4.14	0.12	1.86	5.91
4	71.22	33.87	37.35	37.39	4.85	24.24	4.73	28.91	42.31
6	19.04	11.52	7.52	12.43	2.01	2.65	1.95	12.33	6.71
8	1.64	1.12	0.53	1.17	0.22	0.09	0.16	1.35	0.30
Total	100.00	49.26	50.74	54.44	7.32	31.26	6.97	44.58	55.42

Score	No Spec. Ser.	Spec. Ser.	Am. Ind.	Asian	Pac. Isl	Filipino	Hisp.	Af. Am.	White
0	0.25	0.08	0.00	0.03	0.00	0.01	0.16	0.04	0.08
2	5.38	2.39	0.08	0.39	0.03	0.11	5.06	0.73	1.31
4	65.15	6.06	0.57	4.98	0.47	1.85	38.7	5.28	18.75
6	18.31	0.73	0.12	2.73	0.14	0.82	6.35	1.07	7.6
8	1.59	0.05	0.01	0.39	0.01	0.07	0.27	0.05	0.81
Total	90.68	9.32	0.79	8.52	0.66	2.86	50.55	7.17	28.54

Table 9.B.2 Distribution of Essay Scores for ELA Grade 7—Overall and by Subgroup

Score	Total	Females	Males	Eng-best	Initially Fluent	Lrnr	Redesig. Fluent	Not in NSLP	NSLP
0	0.28	0.10	0.19	0.15	0.01	0.11	0.02	0.11	0.18
2	4.22	1.16	3.05	1.80	0.13	2.10	0.19	1.18	3.03
4	35.54	14.52	21.02	16.87	2.29	11.14	5.24	13.22	22.31
6	48.97	26.43	22.54	28.33	4.51	6.74	9.40	26.63	22.34
8	10.99	7.02	3.97	7.59	1.25	0.45	1.69	8.16	2.84
Total	100.00	49.23	50.77	54.74	8.20	20.53	16.63	49.30	50.70

Score	No Spec. Ser.	Spec. Ser.	Am. Ind.	Asian	Pac. Isl	Filipino	Hisp.	Af. Am.	White
0	0.22	0.07	0.01	0	0	0	0.15	0.03	0.07
2	2.64	1.57	0.05	0.18	0.02	0.04	2.69	0.47	0.74
4	30.93	4.62	0.30	1.88	0.2	0.65	21.33	3.17	7.79
6	46.78	2.19	0.38	5.11	0.35	1.58	21.94	3.45	16.17
8	10.77	0.22	0.07	1.88	0.07	0.46	2.76	0.51	5.1
Total	91.33	8.67	0.81	8.70	0.67	2.74	48.86	7.65	29.86

Table 9.B.3 Mean Scores for ELA Grade 4 Essay—Overall and by Subgroup

Overall		Females		Males		English–best		Initially Fluent		Learner		Redesig. Fluent		Not in NSLP		NSLP	
N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
434995	4.28	214265	4.44	220695	4.12	236673	4.41	31842	4.60	135931	3.90	30284	4.61	193632	4.58	240755	4.04

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
394442	4.34	40520	3.63	3426	4.12	37070	4.72	2864	4.32	12418	4.58	219865	4.06	31186	4.10	124123	4.54

Table 9.B.4 Mean Scores for ELA Grade 7 Essay—Overall and by Subgroup

Overall		Females		Males		English–best		Initially Fluent		Learner		Redesig. Fluent		Not in NSLP		NSLP	
N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
457555	5.32	225215	5.59	232274	5.07	250242	5.51	37484	5.67	93861	4.52	75577	5.52	225247	5.69	231646	4.97

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
417876	5.43	39660	4.21	3697	5.15	39778	5.91	3013	5.45	12537	5.79	223504	5.00	34968	5.03	136583	5.71

Table 9.B.5. Effect Sizes for ELA Grades 4 and 7 Essay—by Subgroup

	Gender (M-F)	NSLP (No-Yes)	Special Serv. (No-Yes)	English Fluency					
				Eng-Ini. Des.	Eng-Lrnr	Eng-Redes.	Ini. Des.-Lrnr	Ini. Des.-Redes.	Lrnr-Redes.
4	-0.3	+0.5	+0.6	-0.2	+0.5	-0.2	+0.7	0.0	-0.7
7	-0.4	+0.5	+0.8	-0.1	+0.7	0.0	+0.8	+0.1	-0.7

	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.
4	+0.4	-0.1	+0.2	0.0	+0.4	+0.4	-0.5	-0.2	-0.4	+0.1	0.0
7	+0.4	-0.1	+0.2	-0.1	+0.5	+0.5	-0.5	-0.2	-0.5	+0.1	+0.1

	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.
4	+0.3	+0.1	+0.6	+0.5	-0.2	+0.3	+0.2	+0.5	+0.4	0.0
7	+0.3	+0.1	+0.6	+0.6	-0.3	+0.3	+0.3	+0.6	+0.5	0.0

Table 9.B.6 Inter-Rater Analyses for ELA Grade 4

		Rater 1								
		1	**%**	**2**	**%**	**3**	**%**	**4**	**%**	**Total**
Rater 2	**1**	2118	4.74	1616	3.62	0	0.00	0	0.00	3734
	2	1518	3.40	26795	59.97	3562	7.97	1	0.00	31876
	3	1	0.00	3615	8.09	4395	9.84	405	0.91	8416
	4	0	0.00	1	0.00	397	0.89	256	0.57	654
	Total	3637		32027		8354		662		44680

Percent Exact= 75.12%
Percent Adjacent= 24.87%
Percent Exact+Adjacent=99.99%
Kappa= 0.44
Weighted Kappa= 0.51

Table 9.B.7 Inter-Rater Analyses for ELA Grade 7

		Rater 1								
		1	**%**	**2**	**%**	**3**	**%**	**4**	**%**	**Total**
Rater 2	**1**	1332	2.83	722	1.53	50	0.11	5	0.01	2109
	2	673	1.43	12170	25.87	3974	8.45	173	0.37	16990
	3	68	0.14	3889	8.27	16897	35.91	2131	4.53	22985
	4	5	0.01	164	0.35	2221	4.72	2576	5.48	4966
	Total	2078		16945		23142		4885		47050

Percent Exact= 70.09%
Percent Adjacent= 28.93%
Percent Exact+Adjacent=99.02%
Kappa= 0.52
Weighted Kappa= 0.59

Table 9.B.8 Descriptive Statistics for the Ratings by the Two Raters

Grades	N*	Rater 1		Rater 2		
		Mean	**Std**	**Mean**	**Std**	***Pearson Correlation***
4	44680	2.13	0.56	2.14	0.56	0.60
7	47050	2.65	0.73	2.66	0.72	0.69

* Number of students who received valid ratings of 1–4

Table 9.B.9 Generalizability Analyses for Grade 4 Essay—[(Person: Essay) x Rater]

Effect	Degrees of Freedom	Sum of Squares	Mean Squares	Estimated Variance Components	Percentage of Total Variance
E	1	2.6560	2.6560	0.00031	0.10
P:E	44678	22220.0481	0.4973	0.18642	59.89
R	1	0.0291	0.0291	0.00002	0.01
ER	1	0.0482	0.0482	0.00000	0.00
PR:E	44678	5562.4227	0.1245	0.12450	40.00
Note: E=Essay Prompt, P=Person and R=Rater				**G-Coefficient=0.75**	

Table 9.B.10 Generalizability Analyses for Grade 7 Essay—[(Person: Essay) x Rater]

Effect	Degrees of Freedom	Sum of Squares	Mean Squares	Estimated Variance Components	Percentage of Total Variance
E	1	5.1508	5.1508	0.00077	0.15
P:E	47048	41573.0813	0.8836	0.35935	68.43
R	1	0.0072	0.0072	0.00000	0.00
ER	1	0.3207	0.3207	0.00006	0.01
PR:E	47048	7759.6721	0.1649	0.16493	31.41
Note: E=Essay Prompt, P=Person and R=Rating				**G-Coefficient=0.81**	

Chapter 10: Historical Comparisons

This chapter presents historical comparisons of various statistical indicators depicting the examinee and test characteristics of CSTs over a period of three years (2005, 2006, and 2007). The comparisons of examinee performance include mean and standard deviation of scale scores, observed score ranges, and the percentage of examinees classified into proficient and advanced categories.[20] Test characteristics were compared by looking at the mean proportion correct, overall reliability and SEM, as well as mean IRT b-value for each CST.

Examinee Performance

The number of examinees taking various CSTs across three years is presented in Table 10.A.1 on page 545. The table also presents mean scale scores and the standard deviation of scale scores for each CST for the same period of time. The examinee population taking CSTs has increased substantially for most of the higher-level CSTs in all subject areas with the exception of the integrated tests and the General Mathematics test, whose volumes have decreased. Algebra I, consistent with previous years, had the largest population of test takers; increases of 3.7% in the number of examinees taking this test between 2005 and 2006, and increases of 5.4% in 2007 were observed. In contrast, the CST for General Math has exhibited a consistent shrinkage in the number of test takers; the numbers were reduced from 368,957 in 2005 to 335,393 in 2006 and 303,461 in 2007. A majority of CSTs for integrated math and science also have exhibited a substantial reduction in volume over the past three years.

Students attain one of five levels of performance on the CSTs for each subject tested: advanced, proficient, basic, below basic, and far below basic. The percentages of students qualifying for the proficient and advanced categories are presented in Table 10.A.2. The State Board of Education has established the proficient level as the desired achievement goal for all students. This goal for all students is consistent with school growth targets for state accountability and the new federal requirements under the *No Child Left Behind Act* of 2001. Table 10.A.3 through Table 10.A.10 show the score distributions for each test across time. On all CSTs, an examinee is required to obtain a score of 300 to reach the basic level and 350 or higher to be classified as proficient.

Test Characteristics

The results of CSTs over past several years indicate that the CSTs meet the technical criteria established in professional standards for high-stakes tests. However, efforts are constantly being made to improve the technical quality of the test every year that it is administered. For example, over the past few years, differences between the difficulty levels of the field-test items and the operational items for some tests remained a focus of attention. Efforts have been made to increase the development of less difficult items to compensate for the relatively large numbers of field-test items at the high end of the difficulty scale. The benefits of this initiative were observed in the results obtained on CSTs during years 2004 to 2006 and continued in the current administration.

Table 10.B.1 and Table 10.B.4 respectively present the average proportion correct and the means of equated IRT b-values[21] for each CST across three years. The mean proportion correct reflects both item difficulty and student ability, while the mean equated IRT b-values reflect average item difficulty. Referring to Table 10.B.2, it is seen that most ELA, history–social science, and math tests

[20] This information may differ slightly from information found on the CDE Web site due to differing dates at which data were accessed.

[21] Comparisons of mean b-values should only be made within a given test. These statistics are based on the equating samples.

tended to be slightly more difficult in 2007 than 2006, while the science tests generally showed an opposite trend.

The mean biserial correlation for the 38 CSTs are presented in Table 10.B.3, and the reliabilities appear in Table 10.B.4. Like the average proportion correct, biserials and reliabilities are affected by both item characteristics and student characteristics. The average biserial correlations and the reliabilities for most of the CSTs in all subject areas were very similar for 2006 and 2007. It should be noted that the integrated tests are generally administered to a smaller group of students, giving their item statistics higher standard errors.

References

Educational Testing Service. *STAR Technical Report, Spring 2005 Administration*. Princeton, NJ: Educational Testing Service, 2005.

Educational Testing Service. *STAR Technical Report, Spring 2006 Administration*. Princeton, NJ: Educational Testing Service, 2006.

Appendix 10.A—Historical Comparisons Tables

Table 10.A.1 Number of Examinees Tested, Scale Score Means and Standard Deviations of CSTs Across 2005, 2006, and 2007

		Number of Examinees (valid scores)			Scale Score Mean and Standard Deviation					
					2005		2006		2007	
Subject	CST	2005	2006	2007	Mean	St. dev.	Mean	St. dev.	Mean	St. dev.
English–Language Arts	2	466,054	459,854	452,972	336	61	344	63	345	62
	3	473,158	462,531	455,219	324	61	331	62	330	59
	4	479,413	465,716	457,829	346	54	351	59	353	58
	5	485,359	478,401	466,854	340	56	342	57	343	54
	6	483,008	480,993	474,863	335	54	337	55	340	54
	7	481,346	478,358	479,840	337	55	341	58	343	58
	8	489,007	480,292	479,717	334	55	339	56	339	58
	9	512,712	512,474	505,104	340	60	339	63	345	60
	10	458,455	478,880	478,921	328	58	328	61	331	59
	11	407,408	414,220	437,551	323	64	324	70	328	71
History–Social Science	8	487,088	480,191	478,975	324	55	328	58	330	60
	10	451,731	473,855	491,079	321	61	321	64	321	61
	11	400,563	408,928	427,071	329	64	329	64	330	61
Math	2	466,147	461,251	453,919	366	83	372	86	369	82
	3	472,847	464,175	456,269	362	78	369	84	371	85
	4	480,644	471,209	459,557	354	70	361	74	366	73
	5	485,291	480,071	468,049	350	89	356	90	357	87
	6	482,447	481,778	475,529	340	70	341	68	343	69
	7	481,761	481,565	458,543	334	66	338	68	336	65
	General Math	368,957	335,393	303,461	310	52	310	51	311	49
	Algebra I	675,464	700,598	738,231	308	55	309	63	311	61
	Geometry	331,509	357,980	369,311	315	66	313	66	310	68
	Algebra II	195,481	213,087	230,757	314	63	313	64	314	64
	High School Math	90,632	99,098	108,750	346	71	347	71	347	75
	Integrated Math 1	8,503	6,630	6,901	276	50	275	55	282	51
	Integrated Math 2	6,653	4,219	3,615	325	54	325	58	312	57
	Integrated Math 3	3,551	2,209	1,657	328	67	327	71	304	64
Science	Grade 5 Science	484,500	479,577	467,541	325	48	329	51	334	55
	Grade 8 Science	N/A	478,667	477,974	N/A	N/A	331	71	340	78
	Grade 10 Life Science	N/A	461,634	463,572	N/A	N/A	327	58	328	59
	Biology	451,532	496,140	505,229	331	46	333	50	336	51
	Chemistry	196,248	212,905	227,375	327	45	327	45	330	49
	Earth Science	172,443	194,254	206,118	319	43	318	43	320	44
	Physics	59,149	60,953	63,321	326	48	328	47	335	49
	Integrated Science 1	110,724	106,376	96,209	300	32	301	32	300	36
	Integrated Science 2	20,563	17,321	13,785	298	29	296	30	298	34
	Integrated Science 3	3,398	2,526	1,973	300	30	302	33	304	33
	Integrated Science 4	1,031	803	951	316	44	300	39	292	34

Table 10.A.2 Percentage of Proficient and Above and Percentage of Advanced Across 2005, 2006, and 2007

Subject	CST	% Proficient and Above			% Advanced		
		2005	2006	2007	2005	2006	2007
English–Language Arts	2	42%	47%	48%	14%	19%	18%
	3	32%	37%	37%	10%	13%	10%
	4	48%	50%	51%	20%	24%	25%
	5	43%	43%	44%	17%	18%	17%
	6	38%	41%	43%	14%	16%	17%
	7	43%	44%	46%	13%	16%	16%
	8	39%	41%	41%	15%	18%	16%
	9	43%	44%	48%	20%	21%	22%
	10	36%	37%	37%	14%	16%	16%
	11	36%	36%	37%	13%	17%	17%
History–Social Science	8	31%	34%	35%	11%	14%	14%
	10	31%	30%	29%	12%	12%	11%
	11	36%	35%	35%	14%	13%	13%
Math	2	56%	59%	59%	28%	29%	28%
	3	55%	58%	58%	24%	30%	31%
	4	50%	55%	56%	26%	29%	30%
	5	45%	48%	49%	19%	22%	20%
	6	40%	41%	42%	14%	13%	14%
	7	37%	42%	39%	13%	14%	13%
	General Math	22%	22%	21%	3%	3%	3%
	Algebra I	19%	23%	24%	3%	5%	5%
	Geometry	26%	26%	24%	8%	7%	7%
	Algebra II	26%	25%	27%	6%	7%	7%
	High School Math	46%	46%	47%	13%	15%	17%
	Integrated Math 1	8%	10%	9%	1%	2%	1%
	Integrated Math 2	29%	31%	21%	6%	6%	5%
	Integrated Math 3	32%	34%	21%	7%	8%	4%
Science	Grade 5 Science	29%	32%	37%	5%	6%	9%
	Grade 8 Science	N/A	38%	42%	N/A	17%	20%
	Grade 10 Life Science	N/A	35%	35%	N/A	13%	13%
	Biology	32%	27%	37%	9%	7%	13%
	Chemistry	27%	27%	31%	7%	7%	10%
	Earth Science	23%	23%	26%	6%	7%	6%
	Physics	31%	32%	35%	9%	10%	13%
	Integrated Science 1	7%	9%	10%	1%	1%	1%
	Integrated Science 2	5%	5%	7%	1%	0%	1%
	Integrated Science 3	8%	10%	10%	1%	1%	1%
	Integrated Science 4	25%	13%	6%	5%	2%	1%

Table 10.A.3 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for English–Language Arts (Grades 2 through 6)

Observed Score	ELA Grade 2			ELA Grade 3			ELA Grade 4			ELA Grade 5			ELA Grade 6		
Distributions	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007
570 – 600	743	0	569	451	0	384	76	532	245	165	0	33	77	0	93
540 – 569	0	0	0	0	0	0	198	8	480	712	900	311	366	418	372
510 – 539	2,235	3,278	2,308	1,547	2,061	1,294	454	2,854	2,513	0	0	722	0	0	878
480 – 509	4,224	5,794	4,531	3,006	3,788	2,560	2,307	2,931	5,745	4,203	5,081	1,582	2,639	2,997	1,627
450 – 479	6,105	17,376	15,998	10,057	5,415	9,368	9,042	14,840	15,888	9,047	10,207	11,099	6,525	7,452	9,887
420 – 449	27,237	21,682	34,174	14,883	25,030	14,687	31,161	41,625	32,182	28,915	31,454	28,934	24,432	19,490	24,686
390 – 419	47,297	61,266	51,657	39,173	43,996	40,086	64,700	61,589	69,105	47,682	50,199	49,116	45,011	58,134	52,607
360 – 389	72,987	71,657	75,603	57,171	61,502	73,898	91,621	80,983	80,416	84,812	76,822	85,462	83,780	78,108	80,971
330 – 359	85,816	81,760	85,716	83,246	86,581	77,966	84,773	86,660	88,960	93,026	94,534	92,324	93,375	95,433	89,318
300 – 329	77,478	74,338	65,133	88,861	88,159	93,739	90,860	71,726	73,126	95,381	90,044	89,180	93,405	89,231	89,548
270 – 299	62,192	59,012	58,424	77,256	68,665	70,127	67,195	62,768	55,216	73,303	66,299	66,699	75,789	66,697	74,205
240 – 269	65,215	49,457	44,013	59,590	47,311	44,019	34,104	34,410	30,432	41,372	42,957	34,896	49,444	53,596	45,709
210 – 239	13,483	12,606	14,267	34,681	25,308	23,057	2,755	4,377	3,402	6,238	9,395	6,263	7,875	8,990	4,742
180 – 209	986	462	536	3,012	3,862	3,863	115	109	87	448	228	199	245	318	197
150 – 179	56	25	43	224	121	171	52	45	32	55	46	34	45	29	23

Table 10.A.4 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for English–Language Arts (Grades 7 through 11)

Observed Score	ELA Grade 7			ELA Grade 8			ELA Grade 9			ELA Grade 10			ELA Grade 11		
Distributions	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007
570 – 600	20	81	164	22	0	114	257	322	260	101	0	206	83	698	1,172
540 – 569	82	192	0	134	168	492	0	0	0	0	0	0	0	0	0
510 – 539	185	1,365	1,153	401	513	1,164	656	1,059	683	534	902	756	292	1,641	1,951
480 – 509	1,410	3,512	3,606	2,495	3,192	2,163	3,661	5,414	4,088	1,340	1,899	1,661	2,116	6,312	7,346
450 – 479	7,116	11,226	11,482	5,596	7,249	13,377	13,757	18,140	15,393	6,324	7,438	7,065	5,510	10,140	11,144
420 – 449	22,191	26,022	26,637	21,349	26,858	22,905	31,833	27,256	35,763	18,956	28,822	28,231	15,567	19,544	29,061
390 – 419	61,840	63,141	65,165	51,400	59,723	49,035	61,729	64,391	67,277	47,242	38,612	49,885	39,163	38,867	33,604
360 – 389	83,931	72,608	84,057	74,287	78,532	77,168	75,413	75,763	87,474	71,927	70,639	72,839	64,927	56,390	62,141
330 – 359	93,564	91,756	87,301	99,057	88,125	96,687	91,011	88,107	86,069	75,217	80,745	73,977	61,136	53,212	57,447
300 – 329	82,554	79,433	75,671	95,149	90,119	85,729	85,017	77,380	77,986	80,602	79,797	82,241	66,682	61,192	65,519
270 – 299	68,819	67,243	68,256	82,581	75,176	71,023	76,573	68,415	68,987	71,449	70,459	78,046	50,654	52,419	54,639
240 – 269	46,684	48,620	46,196	45,431	40,150	47,985	62,502	69,240	50,185	61,442	77,369	64,005	56,849	63,326	65,278
210 – 239	12,089	12,232	9,541	10,566	9,951	11,238	9,467	15,953	10,494	22,252	20,656	19,381	36,653	44,737	39,900
180 – 209	826	885	575	488	459	585	727	883	395	999	1,203	559	7,268	4,999	7,764
150 – 179	35	36	36	51	47	52	109	91	50	70	78	69	508	566	585

Table 10.A.5 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for History–Social Science (Grades 8, 10, and 11)

Observed Score Distributions	History-Social Science Grade 8			World History			History–Social Science Grade 11		
	2005	2006	2007	2005	2006	2007	2005	2006	2007
570 – 600	301	0	249	446	620	781	716	556	333
540 – 569	396	343	453	724	1,097	1,023	839	1,014	527
510 – 539	535	1,407	1,869	1,162	1,619	1,490	1,312	1,493	912
480 – 509	3,194	2,744	3,546	3,714	4,884	1,993	3,917	4,360	3,581
450 – 479	5,932	7,553	9,105	6,023	7,041	9,660	9,249	10,355	10,605
420 – 449	17,109	22,066	24,762	19,190	21,066	20,044	19,297	14,676	16,673
390 – 419	32,581	40,929	41,977	28,938	29,564	28,504	36,124	35,309	38,716
360 – 389	61,892	58,971	58,620	57,816	56,384	57,164	55,174	55,637	56,947
330 – 359	78,294	86,081	82,049	67,504	77,363	82,563	58,562	62,092	72,994
300 – 329	96,114	85,515	79,991	85,737	74,443	80,074	60,881	73,445	65,225
270 – 299	103,888	87,588	95,463	83,464	86,052	109,073	73,020	72,894	90,819
240 – 269	77,194	73,349	68,966	67,306	75,321	73,536	59,422	57,964	55,451
210 – 239	9,251	12,611	11,281	25,131	35,102	20,643	19,387	16,955	13,022
180 – 209	354	785	556	4,316	2,794	2,353	2,400	1,774	1,123
150 – 179	53	52	88	260	291	2,178	263	206	143

Table 10.A.6 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for Mathematics (Grades 2 through 6)

Obs. Score Distributions	Math Grade 2			Math Grade 3			Math Grade 4			Math Grade 5			Math Grade 6		
	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007
570 – 600	4,760	0	12,172	3,871	0	7,091	4,163	0	7,405	9,326	0	8,776	1,947	0	1,538
540 – 569	9,788	10,714	0	8,184	10,073	12,459	0	0	0	7,219	7,099	7,395	3,757	3,131	3,128
510 – 539	13,188	13,910	11,881	11,439	13,028	15,918	9,091	11,684	12,623	8,196	17,713	8,613	5,313	4,530	4,357
480 – 509	15,809	15,882	14,406	13,394	14,978	17,620	12,988	15,009	15,675	17,933	19,699	18,913	6,345	5,836	11,509
450 – 479	34,476	34,131	33,975	30,223	31,881	17,970	15,061	16,732	17,081	29,136	20,631	29,811	15,435	22,231	14,254
420 – 449	35,602	52,728	36,544	32,361	47,430	53,340	33,645	52,560	52,645	30,237	42,117	30,566	26,757	26,787	32,141
390 – 419	66,089	50,165	70,272	63,632	57,677	63,011	68,200	64,216	65,634	41,181	42,289	51,376	49,326	39,390	36,646
360 – 389	57,610	73,322	61,213	71,004	63,072	53,385	74,104	66,501	67,359	51,877	52,435	51,632	63,280	64,270	72,719
330 – 359	71,457	59,089	72,791	72,477	64,666	65,704	78,939	72,915	71,284	62,676	62,356	61,729	76,493	89,598	80,923
300 – 329	56,205	53,688	52,582	57,840	54,595	51,583	68,209	62,138	58,916	72,551	60,521	61,645	75,976	76,327	81,080
270 – 299	42,899	38,102	37,036	52,422	43,241	44,165	61,015	48,809	50,260	60,896	58,324	59,309	81,807	71,757	73,807
240 – 269	33,749	29,445	28,604	35,306	35,043	29,826	36,905	39,004	31,491	55,311	51,471	49,344	57,761	59,740	46,900
210 – 239	16,577	15,568	15,069	16,349	15,529	16,820	16,011	13,742	8,549	29,943	28,382	23,215	16,410	15,235	14,909
180 – 209	6,506	6,856	6,179	3,959	6,549	6,429	2,192	1,443	576	7,780	7,903	5,115	1,719	1,416	1,537
150 – 179	1,432	1,591	1,195	386	832	948	121	59	59	1,029	1112	610	121	78	81

Table 10.A.7 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for Math (Gr. 7, Gen. Math, Algebra I, Geometry, & Algebra II)

Observed Score Distributions	Math Grade 7			General Math			Algebra I			Geometry			Algebra II		
	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007
570 – 600	2,104	2,128	1,459	26	27	15	665	954	1,473	647	0	613	339	0	477
540 – 569	0	0	0	48	44	48	1,095	1,277	1,053	1,328	1,165	1,387	390	442	473
510 – 539	5,033	3,032	4,431	94	112	81	814	3,289	3,101	1,875	1,615	2,087	539	601	646
480 – 509	3,536	8,547	3,378	502	518	443	3,592	4,586	4,457	2,364	4,582	5,511	1,618	1,709	1,677
450 – 479	14,837	11,622	14,640	1,266	1,211	981	6,067	9,667	9,515	5,703	5,994	6,607	2,311	3,767	4,082
420 – 449	27,175	30,040	28,236	6,570	6,267	4,751	13,195	18,979	19,832	10,632	10,739	11,465	6,843	5,534	8,029
390 – 419	43,909	46,902	43,637	18,750	17,220	13,474	34,489	34,662	37,089	22,889	18,296	22,900	10,051	13,041	11,525
360 – 389	60,329	62,416	60,581	38,224	34,442	29,510	46,069	61,337	67,854	28,855	35,180	27,664	20,954	18,901	24,781
330 – 359	76,078	74,806	76,655	61,448	54,560	53,156	97,925	84,644	95,550	48,144	51,419	47,176	28,307	30,448	33,713
300 – 329	77,418	85,030	77,462	71,450	63,781	67,004	127,984	112,460	125,425	54,686	59,233	56,689	33,985	36,876	40,936
270 – 299	84,272	76,606	74,252	78,177	72,097	70,766	187,177	155,357	164,941	62,196	67,624	70,881	41,367	46,184	43,420
240 – 269	66,331	59,339	53,709	68,239	62,522	48,530	124,262	141,231	140,828	57,540	63,308	71,401	27,237	30,255	39,108
210 – 239	19,133	18,312	18,091	22,436	20,789	13,586	28,843	64,389	61,072	30,860	32,197	37,568	17,337	19,663	18,296
180 – 209	1,438	1,586	1,820	1,558	1,731	1,011	2,944	5,968	5,360	3,544	5,910	7,110	3,786	4,686	2,987
150 – 179	168	78	192	169	66	105	343	744	681	246	209	252	417	588	607

Table 10.A.8 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for Mathematics (High School Math, Integrated Math 1, 2, & 3)

Observed Score Distributions	Summative H. S. Math			Integrated Math 1			Integrated Math 2			Integrated Math 3		
	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007
570 – 600	324	0	549	9	4	2	9	1	2	16	6	2
540 – 569	763	840	1,245	8	7	4	5	10	3	5	10	2
510 – 539	1,214	1,365	0	6	12	6	19	18	12	37	13	7
480 – 509	1,541	1,911	1,906	19	18	19	33	23	20	35	22	11
450 – 479	3,805	2,230	5,330	28	32	21	72	78	71	105	56	18
420 – 449	4,507	8,281	9,636	49	63	43	196	126	89	104	97	40
390 – 419	10,163	12,466	10,287	125	100	136	481	259	156	265	159	78
360 – 389	13,714	12,338	16,606	264	253	227	798	550	312	392	274	152
330 – 359	16,110	17,190	15,032	558	474	608	1,118	717	516	615	408	185
300 – 329	13,980	16,728	17,681	1,026	734	997	1,616	832	644	724	312	334
270 – 299	12,337	11,156	13,698	1,862	1,266	1,531	1,423	866	931	600	372	287
240 – 269	6,969	8,715	9,810	2,809	2,016	2,035	740	544	699	420	266	316
210 – 239	3,833	4,171	4,999	1,368	1,175	982	115	163	146	167	155	167
180 – 209	1,163	1,192	1,676	316	397	268	24	23	14	51	45	48
150 – 179	209	182	295	56	74	22	4	6	0	15	7	10

Table 10.A.9 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for Science (Biology, Chemistry, and Earth Science)

Ob. Score Distributions	Grade 5 Science			Grade 8 Science		Grade 10 Life Sc.		Biology			Chemistry			Earth Science		
	2005	2006	2007	2006	2007	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007
570 – 600	26	0	113	661	3,503	0	340	279	0	324	109	0	215	11	0	5
540 – 569	118	150	483	2,429	2,443	648	947	0	0	0	0	0	0	0	0	0
510 – 539	341	329	1,106	4,190	7,572	1,121	1,820	656	889	952	293	347	555	34	51	44
480 – 509	1,595	1,880	2,035	5,863	10,812	4,068	2,719	1,167	1,660	1,758	479	519	1,004	96	129	128
450 – 479	3,509	4,125	7,499	13,160	21,991	6,808	8,373	6,153	5,546	6,365	1,563	1,659	1,392	527	639	273
420 – 449	10,172	16,852	20,625	26,047	28,316	15,540	19,566	10,417	19,813	22,842	3,838	4,234	6,122	1,890	2,554	2,537
390 – 419	30,072	37,860	42,665	36,389	46,205	38,323	44,770	28,091	41,704	46,229	11,156	11,961	17,601	7,570	9,379	12,001
360 – 389	68,308	66,322	68,474	61,392	53,872	59,085	61,888	63,540	79,213	70,473	26,410	28,033	31,766	19,315	20,637	24,238
330 – 359	94,980	97,275	105,846	76,067	72,942	74,451	74,850	96,664	96,458	114,588	43,400	47,708	46,564	35,887	33,326	39,650
300 – 329	112,295	106,645	94,915	85,106	72,452	91,629	77,633	120,932	100,267	101,770	49,351	54,905	58,830	39,673	54,375	53,386
270 – 299	109,297	86,025	62,660	67,991	65,833	85,472	88,448	91,951	111,495	104,354	43,618	47,452	41,684	48,939	50,373	50,000
240 – 269	45,044	53,910	43,573	57,597	44,443	71,350	65,904	30,159	36,709	31,899	14,764	14,887	18,613	17,298	21,131	21,302
210 – 239	8,468	7,608	15,623	32,609	32,032	11,828	15,424	1,454	2,013	3,515	1,217	1,026	2,921	1,146	1,581	2,484
180 – 209	217	519	1,817	7,222	13,405	942	742	44	80	132	43	47	94	46	64	51
150 – 179	58	47	107	1,177	2153	131	148	25	29	28	7	7	14	11	9	19

Table 10.A.10 Observed Score Distributions of CSTs Across 2005, 2006, and 2007 for Science (Physics, Integrated Science 1, 2, 3, and 4)

Observed Scores	Physics			Integrated Science 1			Integrated Science 2			Integrated Science 3			Integrated Science 4		
	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007	2005	2006	2007
570 – 600	6	0	27	0	0	0	0	0	0	0	0	0	0	0	0
540 – 569	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
510 – 539	27	58	84	2	1	4	0	1	0	0	0	0	0	0	0
480 – 509	74	129	203	3	4	13	0	0	2	2	0	0	0	1	0
450 – 479	410	480	702	22	15	13	5	1	2	0	0	2	1	1	0
420 – 449	1,473	1,392	1,926	97	75	121	20	14	14	1	0	4	9	4	2
390 – 419	4,446	4,228	5,366	665	611	1,024	91	48	125	20	6	14	51	13	11
360 – 389	8,778	8,837	10,740	3,762	4,510	4,664	491	414	424	125	22	108	117	39	23
330 – 359	11,267	12,074	14,133	13,916	14,395	14,913	2,094	1,716	1,734	398	135	259	215	98	86
300 – 329	11,993	15,007	13,647	33,923	31,963	26,242	6,651	5,162	4,111	984	314	624	252	202	252
270 – 299	14,471	13,294	12,089	40,540	38,630	30,398	7,795	6,482	4,829	1,435	773	693	216	266	288
240 – 269	5,768	5,098	4,096	15,164	15,369	16,599	3,173	3,306	2,242	410	906	247	160	159	261
210 – 239	415	318	300	2,493	771	2,168	232	167	291	22	350	22	9	18	27
180 – 209	20	13	6	127	22	44	7	5	10	1	19	0	1	1	0
150 – 179	1	3	2	10	10	6	4	5	1	0	1	0	0	1	1

Appendix 10.B—Historical Comparisons Tables

Table 10.B.1 Average Proportion Correct of CSTs Across 2005, 2006, and 2007

Subject	CST	Average p-value		
		2005	2006	2007
English–Language Arts	2	0.62	0.63	0.64
	3	0.61	0.63	0.63
	4	0.59	0.62	0.62
	5	0.60	0.62	0.60
	6	0.59	0.60	0.58
	7	0.59	0.60	0.59
	8	0.57	0.60	0.61
	9	0.58	0.59	0.59
	10	0.60	0.59	0.60
	11	0.58	0.57	0.58
History–Social Science	8	0.48	0.51	0.51
	10	0.50	0.50	0.49
	11	0.50	0.51	0.50
Math	2	0.73	0.74	0.74
	3	0.71	0.71	0.73
	4	0.70	0.71	0.72
	5	0.61	0.62	0.63
	6	0.60	0.60	0.59
	7	0.55	0.57	0.56
	General Math	0.47	0.47	0.48
	Algebra I	0.49	0.45	0.45
	Geometry	0.65	0.52	0.51
	Algebra II	0.56	0.51	0.51
	High School Math	0.66	0.69	0.69
	Integrated Math 1	0.39	0.38	0.40
	Integrated Math 2	0.46	0.47	0.42
	Integrated Math 3	0.51	0.51	0.43
Science	Grade 5 Science	0.50	0.52	0.60
	Grade 8 Science	N/A	0.50	0.55
	Grade 10 Life Science	N/A	0.51	0.54
	Biology	0.52	0.53	0.54
	Chemistry	0.52	0.52	0.57
	Earth Science	0.48	0.48	0.52
	Physics	0.52	0.52	0.56
	Integrated Science 1	0.40	0.40	0.44
	Integrated Science 2	0.40	0.40	0.43
	Integrated Science 3	0.37	0.40	0.39
	Integrated Science 4	0.49	0.40	0.40

Table 10.B.2 Overall IRT b-values for Operational Test Items Across 2005, 2006, and 2007

Subject	CST	Mean IRT b-value		
		2005	2006	2007
English–Language Arts	2	-0.20	-0.15	-0.16
	3	-0.35	-0.36	-0.34
	4	0.04	-0.07	-0.01
	5	-0.20	-0.23	-0.12
	6	-0.13	-0.17	0.03
	7	0.19	0.18	0.25
	8	-0.10	-0.14	-0.19
	9	-0.04	-0.11	0.01
	10	-0.33	-0.30	-0.25
	11	-0.22	-0.22	-0.22
History–Social Science	8	0.23	0.17	0.17
	10	0.09	0.13	0.14
	11	0.08	0.04	0.07
Math	2	-0.89	-0.86	-0.87
	3	-0.66	-0.65	-0.70
	4	-0.68	-0.62	-0.62
	5	-0.25	-0.20	-0.22
	6	-0.34	-0.30	-0.24
	7	-0.03	-0.06	-0.05
	General Math*	0.22	0.24	0.23
	Algebra I*	0.06	-0.08	-0.03
	Geometry*	-0.80	-0.77	-0.77
	Algebra II*	-0.45	-0.49	-0.45
	High School Math	-0.74	-0.77	-0.79
	Integrated Math 1	0.00	0.02	0.04
	Integrated Math 2	-0.17	-0.22	-0.15
	Integrated Math 3	-0.21	-0.09	-0.08
Science	Grade 5 Science	-0.24	-0.25	-0.55
	Grade 8 Science	N/A	0.10	-0.05
	Grade 10 Life Science	N/A	-0.04	-0.18
	Biology	-0.16	-0.21	-0.22
	Chemistry	-0.14	-0.16	-0.30
	Earth Science	0.19	0.18	0.02
	Physics	-0.20	-0.13	-0.18
	Integrated Science 1	N/A	N/A	N/A
	Integrated Science 2	N/A	N/A	N/A
	Integrated Science 3	N/A	N/A	N/A
	Integrated Science 4	N/A	N/A	N/A

* Grade-Specific

Table 10.B.3 Average Point Biserial Correlation of CSTs Across 2005, 2006, and 2007

Subject	CST	Average Point Biserial Correlation		
		2005	2006	2007
English–Language Arts	2	0.46	0.46	0.46
	3	0.43	0.43	0.42
	4	0.43	0.45	0.44
	5	0.43	0.43	0.42
	6	0.42	0.43	0.42
	7	0.41	0.41	0.42
	8	0.40	0.40	0.41
	9	0.43	0.44	0.43
	10	0.44	0.45	0.45
	11	0.43	0.46	0.46
History–Social Science	8	0.37	0.39	0.40
	10	0.39	0.41	0.39
	11	0.41	0.40	0.40
Math	2	0.44	0.45	0.44
	3	0.44	0.46	0.46
	4	0.47	0.48	0.47
	5	0.46	0.47	0.45
	6	0.44	0.44	0.43
	7	0.42	0.43	0.42
	General Math	0.36	0.36	0.34
	Algebra I	0.38	0.36	0.36
	Geometry	0.41	0.41	0.42
	Algebra II	0.37	0.38	0.38
	High School Math	0.41	0.41	0.43
	Integrated Math 1	0.30	0.32	0.30
	Integrated Math 2	0.34	0.36	0.36
	Integrated Math 3	0.36	0.38	0.35
Science	Grade 5 Science	0.36	0.37	0.38
	Grade 8 Science	N/A	0.35	0.38
	Grade 10 Life Science	N/A	0.41	0.42
	Biology	0.38	0.41	0.41
	Chemistry	0.38	0.37	0.40
	Earth Science	0.37	0.37	0.38
	Physics	0.40	0.39	0.40
	Integrated Science 1	0.29	0.29	0.32
	Integrated Science 2	0.26	0.27	0.30
	Integrated Science 3	0.27	0.29	0.29
	Integrated Science 4	0.38	0.33	0.30

Table 10.B.4 Reliabilities and Standard Error of Measurement (SEM) of CSTs Across 2005, 2006, and 2007

Subject	CST	Reliability			SEM		
		2005	2006	2007	2005	2006	2007
English–Language Arts	2	0.94	0.94	0.94	3.4	3.4	3.4
	3	0.93	0.93	0.93	3.5	3.4	3.3
	4	0.94	0.94	0.94	3.7	3.8	3.7
	5	0.94	0.94	0.94	3.6	3.7	3.6
	6	0.94	0.94	0.94	3.6	3.7	3.7
	7	0.93	0.93	0.94	3.9	3.9	3.6
	8	0.93	0.93	0.93	3.7	3.7	3.9
	9	0.94	0.94	0.94	3.7	3.9	3.8
	10	0.94	0.95	0.94	3.9	3.6	3.9
	11	0.94	0.95	0.95	3.8	3.7	3.7
History–Social Science	8	0.91	0.92	0.93	4.0	4.0	3.9
	10	0.91	0.91	0.91	3.4	3.6	3.5
	11	0.91	0.91	0.91	3.6	3.5	3.5
Math	2	0.93	0.94	0.93	3.2	2.9	3.1
	3	0.93	0.94	0.94	3.2	3.1	3.1
	4	0.94	0.95	0.94	3.3	3.0	3.2
	5	0.94	0.94	0.94	3.4	3.4	3.4
	6	0.94	0.93	0.93	3.3	3.6	3.5
	7	0.93	0.93	0.93	3.5	3.6	3.5
	General Math	0.90	0.90	0.88	3.6	3.6	3.7
	Algebra I	0.87	0.90	0.89	3.7	3.6	3.7
	Geometry	0.92	0.92	0.93	3.7	3.7	3.5
	Algebra II	0.91	0.91	0.91	3.5	3.5	3.5
	High School Math	0.92	0.92	0.93	3.3	3.4	3.3
	Integrated Math 1	0.84	0.87	0.85	3.6	3.6	3.6
	Integrated Math 2	0.88	0.89	0.90	3.7	3.7	3.5
	Integrated Math 3	0.89	0.91	0.89	3.7	3.5	3.6
Science	Grade 5 Science	0.88	0.89	0.90	3.6	3.5	3.4
	Grade 8 Science	N/A	0.88	0.90	N/A	3.5	3.5
	Grade 10 Life Science	N/A	0.92	0.92	N/A	3.4	3.5
	Biology	0.90	0.92	0.92	3.6	3.4	3.4
	Chemistry	0.90	0.90	0.91	3.5	3.4	3.4
	Earth Science	0.90	0.89	0.90	3.5	3.6	3.5
	Physics	0.91	0.91	0.91	3.6	3.5	3.5
	Integrated Science 1	0.82	0.82	0.86	3.6	3.5	3.6
	Integrated Science 2	0.78	0.78	0.83	3.6	3.7	3.6
	Integrated Science 3	0.79	0.83	0.82	3.6	3.5	3.6
	Integrated Science 4	0.90	0.86	0.83	3.5	3.6	3.6

Addendum 1—Two-Core ELA

To expedite future CST score reporting, there has been interest in exploring the accuracy of pre-equating based on item field testing embedded within the operational tests. The accuracy of pre-equating can be affected by item position: when items appear later in a test or section they can tend to be more difficult than when they appear at the beginning of a test or section. Prior to 2007, all field-test items appeared in a fixed block at the end of the first test section. In 2007, in order to field-test items in a variety of positions, field-test items were placed in fixed locations across the operational test form.

For the Science, History–Social Science, and Math tests, which are composed of discrete items, fixed single item locations were defined at the boundaries where content strands changed. Field-test items were administered at these locations. For a given subject area, these locations and numbers of field-test items were constant across all tests administered.

In contrast, the ELA test is composed of item sets (Reading Comprehension and Language Arts), as well as a grouped set of discrete items. Additionally, there are assembly rules that constrain where the types of sets can be placed relative to one another. Also, sets are not of fixed length. This makes it difficult to have fixed locations for field test items across forms if more than one field test slot is used per administration.

In ELA, two "Cores" were identified for each grade where the location of field test items differed by Core for the 2007 administration. This permitted the field testing of ELA items in two fixed locations across the two Cores. As described in Table A1.1 there were versions, or "books," for each Core that contained different field-test items in the field-test positions. (Book 99 is the braille form.) Cores were assigned to districts following the procedure in the Appendix on page 561.

Table A1.1 Distribution of Books by Core for Each Grade

	BOOK 01	BOOK 02	BOOK 03	BOOK 04	BOOK 05	BOOK 06	BOOK 07	BOOK 08	BOOK 09	BOOK 10	BOOK 11	BOOK 12	BOOK 13	BOOK 14	BOOK 15	BOOK 16	BOOK 17	BOOK 18	BOOK 19	BOOK 20	BOOK 99
GRADE 02	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 2	Core 2	Core 2	Core 2	Core 2	Core 2							Core 1
GRADE 03	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 2	Core 2	Core 2	Core 2	Core 2	Core 2							Core 1
GRADE 04	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 2	Core 2	Core 2	Core 2							Core 1
GRADE 05	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 2	Core 2	Core 2	Core 2	***Core 2***	***Core 2***	***Core 2***	Core 2	Core 2	Core 2	Core 1
GRADE 06	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 2	Core 2	Core 2	Core 2	Core 2	Core 2							Core 1
GRADE 07	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 2	Core 2	Core 2	Core 2	Core 2							Core 1
GRADE 08	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 2	Core 2	Core 2	Core 2	Core 2	Core 2	***Core 2***	***Core 2***	***Core 2***	Core 2	Core 2	Core 2	Core 1
GRADE 09	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 2	Core 2	Core 2	Core 2	Core 2							Core 1
GRADE 10	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 2	Core 2	Core 2	Core 2	***Core 2***	***Core 2***	***Core 2***	Core 2	Core 2	Core 2	Core 1
GRADE 11	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 1	Core 2	Core 2	Core 2							Core 1

Positional Shift and Test Difficulty Study

The location of field test items was different in the two Cores in ELA, which shifted the position of the operational items, including the 2006–2007 equating/anchor items, forward or backward within the test. A study was conducted to explore whether the shifts in the positions of the operational items systematically affected the difficulty of the two Core tests.

Examples of the structure of the ELA Core tests are presented in Table A1.2. For grade 3, operational items 19–39 might be more difficult in Core 1 than Core 2 because of intervening field-test items in Core 1; on the other hand, items 50–64 might be less difficult in Core 1 than Core 2 because of the intervening field-test items in Core 2. For grade 4, items 16–34 might be more

difficult in Core 1 because of the intervening field-test items in Core 1; on the other hand, items 35–42 might be less difficult in Core 1 because they appear at the beginning of a section for Core 1 and at the end of a section for Core 2.[22]

Thus, the issue confronted during the study was whether these differences in position of the operational items systematically affected the equated difficulty of the Core tests. More precisely, would the operational scoring tables that convert number-correct scores to scale scores (which translate to proficiency levels) differ across the Cores due to the differences in item position?

Table A1.2 Examples of the Structure of the Core Tests

Grade 3				
	Core 1		**Core 2**	
Section 1	Op items	1–18	Op Items	1–18
	FT items	1–5		
Section 2	Op items	19–39	Op Items	19–39
Section 3	Op items	40–64	Op items	40–49
	FT items	6	FT items	1–5
	Op items	65	Op items	50–64
			FT items	6
			Op item	65

Grade 4				
	Core 1		**Core 2**	
Section 1	Op items	1–15	Op items	1–42
	FT items	1–5		
	Op items	16–34		
Section 2	Op items	35–39	Op items	43–60
	FT items	1–5	FT items	1–5
	Op items	16–34	Op items	61–71
			FT items	6
			Op items	72–75

Note. "Op" are operational items. "FT" are field-test items.

Analyses Conducted

In considering this issue, it is important to note two facts:

1. In calculating the scoring table, differences in item difficulty in different directions (i.e., some items becoming easier and some becoming harder) can cancel themselves out.
2. For equivalence of scoring tables to occur, it is not necessary that every item have the same difficulty, only that when the items are considered as a set, the complete scoring tables are equivalent.

Any time tests are equated with different samples of students, variations in the results due to sampling occur. Differences due to sampling variations are not a basis for using two scoring tables.

[22]The Core configurations vary somewhat over grades. Grades 2 and 3 have three sessions and the other grades have two sessions. In terms of the major factors affecting item positions just discussed, grades 2, 6, 7, 8, and 9 are similar to grade 3, and grades 5, 10, and 11 are similar to grade 4.

Thus, any differences that might occur in the scoring tables for the two Cores need to be evaluated for differences likely due to sampling variation versus differences likely due to the changes in item positions across the Cores.

Estimating Sampling Variation: The Jackknife Procedure

Sampling variation was estimated via the well-known jackknife procedure (Efron, 1982). When this procedure is applied at the student level, one student is removed from the data file and the scoring table is calculated.[23] That student is replaced, the next student is removed, and a second version of the scoring table is produced. This resampling procedure is replicated over all the students. The variation in the scoring tables produced by this resampling procedure provides the basis for the estimation of the sampling variation, after applying the formula available from the jackknife procedure (Equation 3.2, Efron, 1982). In the present application, the sampling variation is examined at each row of the scoring table to see if any differences that might be obtained are within the variation expected by sampling.

Resampling

In this application, Cores were administered at the district level. Therefore, rather than resampling at the student level, resampling was conducted at the district level. Resampling at the district level captured any additional variation due to district effects.

Screening of Districts for the Jackknife Procedure

Los Angeles Unified School District (LAUSD) is the biggest school district in California. Given the Core assignment procedure used in the operational testing and described in the Appendix on page 561, Wave 1 testing in Los Angeles was assigned Core 1 and Wave 2 was assigned Core 2. Because of the schedule established for the equating, and the later receipt of Wave 2 data, the equating—and this study—were based on Wave 1 LAUSD data. Thus, LAUSD was available in the equating sample for Core 1 but not for Core 2.

For the jackknife procedure to work accurately, the sizes of the sampling units should not vary greatly. Therefore, districts whose sample sizes were less than 0.1% of the total sample for that Core or greater than 20% of the total sample were not included in the jackknife analyses. Thus, LAUSD and some very small districts were removed from the jackknife analyses for Core 1; a few other large and small districts were removed from the analyses for Core 2. As described in Table A1.3, this screening of the districts varied by grade and Core: from 74% to 91% of the total number of districts available, and from 43% to 99% of the examinees available, were used in the jackknife procedure for this study.

It should be noted that screening districts out of the jackknife analyses was conservative, in that estimates of sampling variation were expected to be smaller for the screened samples than for the complete samples.

Table A1.3 Jackknife Data

		Complete Sample		Sample Used for Jackknife			
		Examinees	Districts	Examinees		Districts	
Core	Grade	N	N	N	%	N	%
1	2	11,108	69	5,576	50%	54	78%
1	3	9,818	79	4,173	43%	61	77%

[23] The scoring table is calculated using the well-documented procedures long used for the STAR program (for example, see *California Standards Tests Technical Report: Spring 2006 Administration*). The items are calibrated with the Rasch model, and by applying the Stocking and Lord (1982) procedure to the anchor items, all the new operational items are placed on the reference scale. True score equating via the reference test form is then applied to produce the number correct-to-scale score table.

		Complete Sample		Sample Used for Jackknife			
		Examinees	Districts	Examinees		Districts	
Core	Grade	N	N	N	%	N	%
1	4	12,735	81	6,950	55%	60	74%
1	5	12,607	81	7,330	58%	62	77%
1	6	9,812	78	5,088	52%	61	78%
1	7	8,771	70	4,142	47%	54	77%
1	8	8,594	70	4,059	47%	53	76%
1	9	16,579	53	10,501	63%	43	81%
1	10	15,829	51	10,748	68%	44	86%
1	11	14,333	48	10,374	72%	42	88%
2	2	2,564	27	2,557	>99%	23	85%
2	3	5,839	56	5,826	>99%	51	91%
2	4	13,332	61	13,279	>99%	49	80%
2	5	13,371	62	13,303	99%	48	77%
2	6	10,696	55	10,647	>99%	44	80%
2	7	6,821	51	5,155	76%	42	82%
2	8	6,517	50	4,967	76%	41	82%
2	9	16,186	35	11,753	73%	29	83%
2	10	15,394	34	11,303	73%	29	85%
2	11	13,892	33	10,801	78%	28	85%

Criterion for Evaluating Differences in Scoring Tables

The sampling variance estimates were obtained for each Core separately, and the results combined in evaluating the differences between the Cores. The critical value for the significance tests was selected to be $\alpha = .05$. For a normal distribution this converts to $Z = 1.95$. Given that comparisons were to be made at many scores in each scoring table, and these comparisons were correlated, a Bonferroni correction to the critical value was made, resulting in a $Z = 2.33$. This Z produces an α of approximately .05 for the multiple comparisons, assuming a correlation of .78 between the comparisons.

The criterion for evaluating the difference between the scale score entries in the operational scoring tables was taken to be

$$C = 2.33\sqrt{\hat{\sigma}_1^2 + \hat{\sigma}_2^2}\ , \qquad \text{(A1.1)}$$

where $\hat{\sigma}_i^2$ is the estimate of the sampling variance from the jackknife for Core *i*. In the operational scoring tables, any differences greater than or equal to the critical value were flagged.

Results

The operational scoring tables from the Core 1 and Core 2 analyses were compared.[24] Comparisons of the scale scores were made at each number-correct score point. Flags were generated for those table entries (reported scale scores) with a difference that exceeded the criterion value.

The differences between the scale scores were small and there were very few flags. Significant differences occurred for the following tests:

[24] Grade 4 and 7 contain writing prompts. The writing data, which were not subject to position effects across the Core tests, were not included in these analyses.

- Grade 3 in the range of far below basic
- Grade 6 in the range above advanced
- Grade 8 in the range of far below basic

Most of the significant differences were in the range of 1 or 2 scale score points, with a couple differences of 3 scale score points. There were no significant differences for Grades 2, 5, 7, 9, 10, or 11.

As described earlier, districts were screened as part of the jackknife analyses. To examine the effect of the restriction of the jackknife to a subset of districts, the jackknife analyses were replicated without deletion of any districts. For Core 1, the jackknife estimated sampling variances based on the complete sample of districts were substantially larger than the variances based on the screened districts. If the estimated sampling variances based on the complete set of districts were used, even fewer differences in the scoring tables would be flagged.

Conclusion

Differences between the scoring tables were small—on the order of 1 or 2 scale score points—and few of these differences were flagged as being significant. Differences that were flagged were for very low scale scores (below the below basic cut point for grade 3 or grade 8) or very high scale scores (above the advanced cut point for grade 6). Flagged differences would not affect any proficiency level designations. One scoring table, based on the combined Core 1 and Core 2 samples, should be used for the ELA tests.

Reference

Efron, B. "The jackknife, the bootstrap, and other resampling plans." In the *Society of Industrial and Applied Mathematics Monographs CBMS-NSF* (1982), 38.

Appendix to Addendum 1

Assignment Procedure for the Two Cores

The assignment of ELA Core 1 and Core 2 on the district level took three steps:

Step 1.

All districts that had a first test date before April 21, 2006, were selected. Core 1 and Core 2 were randomly assigned to these districts so that by April 21, 2007, approximately the same number of examinees would be expected to have taken Core 1 and Core 2. Based on the Core assignment in this step, and based on the 2006 data, 632,445 examinees would have taken Core 1 and 604,027 examinees would have taken Core 2 by April 21, 2007.

Step 2.

All districts that had a first test date after April 21 and before April 26, 2006, were selected. Core 1 and Core 2 were randomly assigned to these districts so that by April 26, approximately 4/7 of the examinees would have taken Core 1 and 3/7 of the examinees would have taken Core 2. (The proportions were selected to allow for the fact that there were more test versions for Core 1 than Core 2.)

Based on the core assignment in this step, and based on the 2006 data, 1,584,327 examinees would be expected to have taken Core 1, and 1,238,727 examinees would be expected to have taken Core 2 by April 26, 2007.

Step 3.

Core 1 and Core 2 were randomly assigned to the rest of the districts so that approximately 4/7 of the examinees would have taken Core 1 and 3/7 of the examinees would have taken Core 2. Based on the core assignment in this step, and based on the 2006 data, overall, 2,860,807 examinees would be expected to have taken Core 1 and 2,144,853 examinees would be expected to have taken Core 2.

Note: LAUSD Wave 1 was assigned Core 1 and Wave 2 was assigned Core 2.

Addendum 2: Grade 3 Spiraling

During the 2007 administration, two operational test versions (Cores) of the ELA tests were administered at each grade (see Addendum 1). The lengths of the test sections were different for each version, thus, the time allotted for Section 1 was also different for each version of the test, because the numbers of questions in the section were different. In grades other than grade 3, the different versions were assigned at the district level. However, in grade 3, each version was distributed such that in some classes both versions were assigned. This resulted in teachers who had to test the groups receiving the different versions separately or, in some cases, teachers who swapped books so that they had a single version within a class.

Table A2.1 shows the mean ELA scale scores and average change in scale scores for each grade and for each year since 2005. Similarly, Table A2.2 shows the percent proficient and above for this same period. There is no evidence to suggest that the administrative complexity introduced by spiraling versions between Cores had an impact on the growth in scores in grade 3; that is, year-to-year growth for grade 3 was very similar to that seen in grades 2 and 4. Analyses were also conducted for districts that requested district-level analyses comparing performance in grades 2–4. No evidence was found to support their concerns.

Table A2.1 ELA Mean Scale Score

	2005	2006	2007	2005–2006 Change	2006–2007 Change	2005–2007 Change
Grade 2	337	344	345	+7	+1	+8
Grade 3	324	331	330	+7	-1	+6
Grade 4	346	351	353	+5	+2	+7
Grade 5	341	342	343	+1	+1	+2
Grade 6	335	337	340	+2	+3	+5
Grade 7	337	341	343	+4	+2	+6
Grade 8	334	339	339	+5	+0	+5
Grade 9	340	339	345	-1	+6	+5
Grade 10	328	329	331	+1	+2	+3
Grade 11	323	324	328	+1	+4	+5

Table A2.2 ELA Percent Proficient or Above

	2005	2006	2007	2005–2006 Change	2006–2007 Change	2005–2007 Change
Grade 2	42	47	48	+5	+1	+6
Grade 3	31	36	37	+5	+1	+6
Grade 4	47	49	51	+2	+2	+4
Grade 5	43	43	44	0	+1	+1
Grade 6	38	41	42	+3	+1	+4
Grade 7	43	43	46	0	+3	+3
Grade 8	39	41	41	+2	0	+2
Grade 9	43	44	47	+1	+3	+4
Grade 10	36	37	37	+1	0	+1
Grade 11	36	36	37	0	+1	+1

Addendum 3: Writing Prompt Directions

The *Directions for Administration* (*DFA*) for the writing prompts in Grades 4 and 7 read to these students by test examiners asked students to write an "essay"; however, the prompt in the students' Writing Prompt and Response Booklets called for a "narrative" rather than an essay. There was concern held by some that students might be confused and produce a result that was structured like an essay versus a narrative and potentially, students might lose points.

An errata sheet for the *DFA* was produced and sent to districts via overnight delivery, via e-mail, and posted to the Web site for district STAR coordinators that clarified the directions prior to the test administration window. However, a few districts had already tested before the errata sheet was received and/or disseminated. In an effort to neutralize any impact from the directions, the range finding papers used as exemplars for scoring included cases that were structured in an essay format to sensitize the readers.

The only data available for analysis were the results from two districts, one known to have used the corrected directions and one known to have tested prior to their dissemination. In order to control for differences that may exist between the two districts, the essay results were examined conditional on the multiple-choice score—that is, essay scores for students with the same multiple-choice score were compared. Still, these comparisons are not strictly equated so caution should be used in interpreting the results. Plots of the results are presented on the next page for both Grade 4 and Grade 7 for these two districts (see Figure A3.1 for the Grade 4 comparison and Figure A3.2 for the Grade 7 comparison).

The Grade 4 plot suggests that, with the exception of some instability at the extremes of the distribution (which is not unexpected), very minor differences are observed. The Grade 7 plot shows similar instability at the extremes of the distribution. It also shows some differences at the low end of the scale; however, it appears that, on average, the students in the district receiving the corrected directions scored slightly lower than those in the district receiving the incorrect direction. While caution must be observed when interpreting these results, there does not appear to be evidence from these plots that the incorrect directions negatively affected student's essay scores.

Figure A3.1 Comparison of Grade 4 Writing Scores for Two Districts Conditional on Their Multiple-Choice Scores.

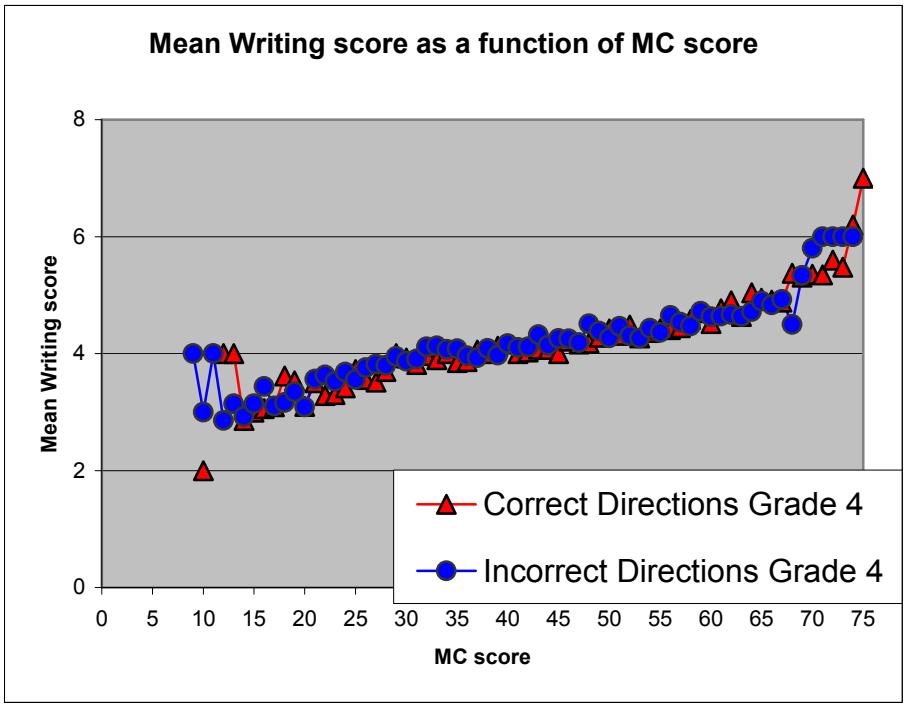
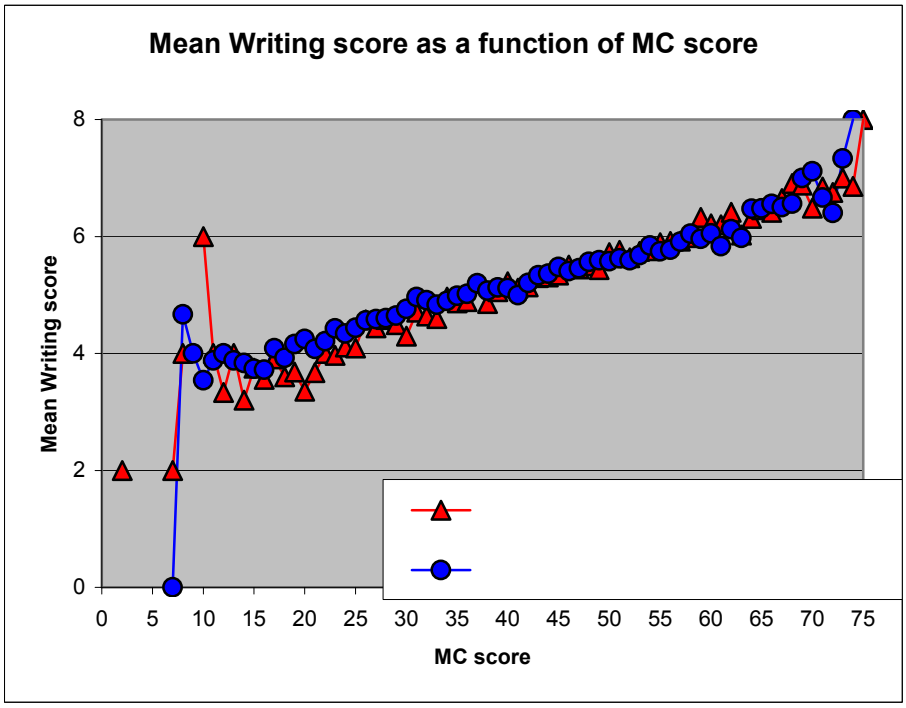



Figure A3.2 Comparison of Grade 7 Writing Scores for Two Districts Conditional on Their Multiple-Choice Scores