California High School Exit Examination (CAHSEE)

Technical Report

September 2005 - May 2006 Administrations

Prepared by

Educational Testing Service

for

The California Department of Education

May 2007

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Table of Contents

EXECUTIVE SUMMARY **1**

Table E.1: Summary of Examinees Tested for Each Administration by Content *1*
Table E.2: Summary of Passing Rates by Content Area and Test Administration *2*
Table E.3.1: CAHSEE Summary Statistics—English-Language Arts (September and November 2005) *3*
Table E.3.2: CAHSEE Summary Statistics—English-Language Arts (February, March and May 2006) *4*
Table E.4.1: CAHSEE Summary Statistics—Mathematics (September and November 2005) *5*
Table E.4.2: CAHSEE Summary Statistics—Mathematics (February, March and May 2006) *6*

CHAPTER 1: BACKGROUND **8**

TARGET POPULATION 8
TEST DESCRIPTION 8
Table 1.1: Items Included in the 2005-2006 Administrations *9*
SCORES FOR ANALYSIS AND REPORTING 9
WEIGHTING SCHEME FOR REPORTED SCORES 10
SUBSCORES 10
Table 1.2: Mathematics and ELA Subscores *10*
CAHSEE PASSING SCORES 11
RAW SCORE TO SCALE SCORE CONVERSION 11

CHAPTER 2: CAHSEE TEST DEVELOPMENT PROCEDURES **12**

Figure 2.1: Example of Test Characteristic Curves *13*
Table 2.1: Difficulty (B) and Discrimination (Rbis) Specifications for ELA *14*
Table 2.2: Number of Items and Mean B-Values by Content Strand for ELA *14*
Table 2.3: Difficulty (B) and Discrimination (Rbis) Specifications for Mathematics *15*
Table 2.4: Number of Items and Mean B-Values by Content Strand for Mathematics *15*

CHAPTER 3: EQUATING PROCEDURES **16**

ITEM CALIBRATION AND TRANSFORMATION 16
NEW CAHSEE PASSING SCORES 17
Table 3.1: Passing Scores on the February 2004 CAHSEE *17*
TRUE-SCORE EQUATING FOR SEPTEMBER AND NOVEMBER 2005, FEBRUARY, MARCH AND MAY 2006 18
Table 3.2: Summary of Cut Scores and Passing Rates Based on Equating Samples *19*
BRAILLE, LARGE PRINT, AND AUDIO CD FORM EQUATING 20
CONVERSION TABLES AND CONDITIONAL STANDARD ERRORS OF MEASUREMENT 20
APPENDIX 3.A: SCORING TABLES FOR OPERATIONAL AND LARGE PRINT CONVERSIONS—SEPTEMBER 2005 21
Table 3.A.1: Operational and Large Print Conversion—ELA September 2005 ..... *21*
Table 3.A.2: Operational and Large Print Conversion—Mathematics September 2005 ..... *22*
APPENDIX 3.B: SCORING TABLES FOR OPERATIONAL AND LARGE PRINT CONVERSIONS— 23
NOVEMBER 2005 23
Table 3.B.1: Operational and Large Print Conversion—ELA November 2005 ..... *23*
Table 3.B.2: Operational and Large Print Conversion—Mathematics November 2005 ..... *24*
APPENDIX 3.C: SCORING TABLES FOR OPERATIONAL AND LARGE PRINT CONVERSIONS— 25
FEBRUARY 2006 25
Table 3.C.1: Operational and Large Print Conversion—ELA February 2006 ..... *25*
Table 3.C.2: Operational and Large Print Conversion—Mathematics February 2006 ..... *26*
APPENDIX 3.D: SCORING TABLES FOR OPERATIONAL AND LARGE PRINT CONVERSIONS—MARCH 2006 27
Table 3.D.1: Operational and Large Print Conversion—ELA March 2006 ..... *27*
Table 3.D.2: Operational and Large Print Conversions—Mathematics March 2006 ..... *28*
APPENDIX 3.E: SCORING TABLES FOR OPERATIONAL AND LARGE PRINT CONVERSIONS—MAY 2006 29
Table 3.E.1: Operational and Large Print Conversions—ELA May 2006 ..... *29*
Table 3.E.2: Operational and Large Print Conversion—Mathematics May 2006 ..... *30*
APPENDIX 3.F: SCORING TABLES FOR AUDIO CD AND BRAILLE CONVERSIONS 31
Table 3.F.1: Audio CD and Braille Conversion—ELA September and November 2005 ..... *31*

Table 3.F.2: Audio CD and Braille Conversion—Mathematics September and November 2005.....32
Table 3.F.3: Audio CD and Braille Conversion—ELA February, March, and May 2006.....33
Table 3.F.4: Audio CD and Braille Conversion—Mathematics February, March, and May 2006.....34
APPENDIX 3.G: STANDARD ERRORS OF THETA BASED ON WEIGHTED RAW SCORES.....35

CHAPTER 4: SUMMARY OF ITEM-LEVEL ANALYSES.....36

Table 4.1: Summary of Items and Forms by Administration.....36
CLASSICAL ITEM ANALYSES.....36
Figure 4.1. CAHSEE Item Analysis – a Mathematics Item.....39
Figure 4.2. CAHSEE Item Analysis – an ELA Item.....40
DIFFERENTIAL ITEM FUNCTIONING (DIF).....40
Table 4.2: DIF Categories.....41
IRT ANALYSES.....42
Table 4.3: Items Recommended for Future Forms.....43
SUMMARY OF ITEM-LEVEL STATISTICS.....43
Table 4.4: Listing of Summary Tables.....44
APPENDIX 4.A: CAHSEE FIELD-TEST ITEM REVIEW – DESCRIPTION AND EXAMPLES OF CLASSIFICATION CATEGORIES.....45
Figure 4.B: Samples of CAHSEE Item-Fit Rating Categories.....46
APPENDIX 4.B: ITEM AND DIF STATISTICS FOR SEPTEMBER 2005.....47
Table 4.B.1: Operational Items Containing Significant Negative DIF.....47
Table 4.B.2: Field-Test Items Containing Significant Negative DIF.....47
Table 4.B.3: Listing of CR Item Statistics—ELA.....48
Table 4.B.4: Summary of Operational Item Statistics—ELA.....48
Table 4.B.5: Summary of Operational Item Statistics—Mathematics.....49
Table 4.B.6: Summary of Field-Test Item Statistics—ELA.....49
Table 4.B.7: Summary of Field-Test Item Statistics—Mathematics.....49
Table 4.B.8: IRT Model Data Fit Distribution of Operational Items—ELA.....50
Table 4.B.9: IRT Model Data Fit Distribution of Operational Items—Mathematics.....50
Table 4.B.10: IRT Model Data Fit Distribution of Field-Test Items—ELA.....50
Table 4.B.11: IRT Model Data Fit Distribution of Field-Test Items—Mathematics.....51
Table 4.B.12: Distribution of Operational Item DIF Classifications—ELA.....51
Table 4.B.13: Distribution of Operational Item DIF Classifications—Mathematics.....52
Table 4.B.14: Distribution of Field-Test Item DIF Classifications—ELA.....52
Table 4.B.15: Distribution of Field-Test Item DIF Classifications—Mathematics.....53
APPENDIX 4.C: ITEM AND DIF STATISTICS FOR NOVEMBER 2005.....54
Table 4.C.1: Operational Items Containing Significant Negative DIF.....54
Table 4.C.2: Field-Test Items Containing Significant Negative DIF.....54
Table 4.C.3: Listing of CR Item Statistics—ELA.....55
Table 4.C.4: Summary of Operational Item Statistics—ELA.....55
Table 4.C.5: Summary of Operational Item Statistics—Mathematics.....56
Table 4.C.6: Summary of Field-Test Item Statistics—ELA.....56
Table 4.C.7: Summary of Field-Test Item Statistics—Mathematics.....56
Table 4.C.8: IRT Model Data Fit Distribution of Operational Items—ELA.....57
Table 4.C.9: IRT Model Data Fit Distribution of Operational Items—Mathematics.....57
Table 4.C.10: IRT Model Data Fit Distribution of Field-Test Items—ELA.....57
Table 4.C.11: IRT Model Data Fit Distribution of Field-Test Items—Mathematics.....58
Table 4.C.12: Distribution of Operational Item DIF Classifications—ELA.....58
Table 4.C.13: Distribution of Operational Item DIF Classifications—Mathematics.....59
Table 4.C.14: Distribution of Field-Test Item DIF Classifications—ELA.....59
Table 4.C.15: Distribution of Field-Test Item DIF Classifications—Mathematics.....60
APPENDIX 4.D: ITEM AND DIF STATISTICS FOR FEBRUARY 2006.....61
Table 4.D.1: Operational Items Containing Significant Negative DIF.....61
Table 4.D.2: Field-Test Items Containing Significant Negative DIF.....62
Table 4.D.3: Listing of CR Item Statistics—ELA.....63
Table 4.D.4: Summary of Operational Item Statistics—ELA.....63

Table 4.D.5: Summary of Operational Item Statistics—Mathematics 64
Table 4.D.6: Summary of Field-Test Item Statistics—ELA 65
Table 4.D.7: Summary of Field-Test Item Statistics—Mathematics 66
Table 4.D.8: IRT Model Data Fit Distribution of Operational Items—ELA 66
Table 4.D.9: IRT Model Data Fit Distribution of Operational Items—Mathematics 66
Table 4.D.10: IRT Model Data Fit Distribution of Field-Test Items—ELA 67
Table 4.D.11: IRT Model Data Fit Distribution of Field-Test Items—Mathematics 67
Table 4.D.12: Distribution of Operational Item DIF Classifications—ELA 68
Table 4.D.13: Distribution of Operational Item DIF Classifications—Mathematics 68
Table 4.D.14: Distribution of Field-Test Item DIF Classifications—ELA 69
Table 4.D.15: Distribution of Field-Test Item DIF Classifications-Mathematics 70
APPENDIX 4.E: ITEM AND DIF STATISTICS FOR MARCH 2006 71
Table 4.E.1: Operational Items Containing Significant Negative DIF 71
Table 4.E.2: Field-Test Items Containing Significant Negative DIF 71
Table 4.E.3: Listing of CR Item Statistics—ELA 73
Table 4.E.4: Summary of Operational Item Statistics—ELA 73
Table 4.E.5: Summary of Operational Item Statistics—Mathematics 74
Table 4.E.6: Summary of Field-Test Item Statistics—ELA 74
Table 4.E.7: Summary of Field-Test Item Statistics—Mathematics 74
Table 4.E.8: IRT Model Data Fit Distribution of Operational Items—ELA 75
Table 4.E.9: IRT Model Data Fit Distribution of Operational Items—Mathematics 75
Table 4.E.10: IRT Model Data Fit Distribution of Field-Test Items—ELA 75
Table 4.E.11: IRT Model Data Fit Distribution of Field-Test Items—Mathematics 76
Table 4.E.12: Distribution of Operational Item DIF Classifications—ELA 76
Table 4.E.13: Distribution of Operational Item DIF Classifications—Mathematics 77
Table 4.E.14: Distribution of Field-Test Item DIF Classifications—ELA 77
Table 4.E.15: Distribution of Field-Test Item DIF Classifications—Mathematics 78
APPENDIX 4.F: ITEM AND DIF STATISTICS FOR MAY 2006 79
Table 4.F.1: Operational Items Containing Significant DIF 79
Table 4.F.2: Field-Test Items Containing Significant DIF 79
Table 4.F.3: Listing of CR Item Statistics—ELA 80
Table 4.F.4: Summary of Operational Item Statistics—ELA 80
Table 4.F.5: Summary of Operational Item Statistics—Mathematics 81
Table 4.F.6: Summary of Field-Test Item Statistics—ELA 81
Table 4.F.7: Summary of Field-Test Item Statistics—Mathematics 81
Table 4.F.8: IRT Model Data Fit Distribution of Operational Items—ELA 82
Table 4.F.9: IRT Model Data Fit Distribution of Operational Items—Mathematics 82
Table 4.F.10: IRT Model Data Fit Distribution of Field-Test Items—ELA 82
Table 4.F.11: IRT Model Data Fit Distribution of Field-Test Items—Mathematics 83
Table 4.F.12: Distribution of Operational Item DIF Classifications—ELA 83
Table 4.F.13: Distribution of Operational Item DIF Classifications—Mathematics 84
Table 4.F.14: Distribution of Field-Test Item DIF Classifications—ELA 84
Table 4.F.15: Distribution of Field-Test Item DIF Classifications—Mathematics 85

CHAPTER 5: SUMMARY OF TEST-LEVEL ANALYSES 86

DEMOGRAPHIC DISTRIBUTIONS 86
SCORE DISTRIBUTIONS AND SUMMARY STATISTICS 86
STRAND INTERCORRELATIONS, RELIABILITY AND STANDARD ERROR OF MEASUREMENT 86
CR ITEM AND RATER AGREEMENT SUMMARY 88
RELIABILITY FOR SUB-GROUPS 89
DECISION CLASSIFICATION ANALYSES 90
Table 5.1: NCLB Reliability Classifications: September 2005 91
Table 5.2: Pass/Not Pass Classifications: September 2005 92
Table 5.3: NCLB Reliability Classifications: November 2005 93
Table 5.4: Pass/Not Pass Classifications: November 2005 94
Table 5.5: NCLB Reliability Classifications: February 2006 95

Table 5.6: Pass/Not Pass Classifications: February 2006 ..... *96*
Table 5.7: NCLB Reliability Classifications: March 2006 ..... *97*
Table 5.8: Pass/Not Pass Classifications: March 2006 ..... *98*
Table 5.9: NCLB Reliability Classifications: May 2006 ..... *99*
Table 5.10: Pass/Not Pass Classifications: May 2006 ..... *100*
Table 5.11: Listing of Demographic Summaries, Frequency Distributions, Intercorrelations, and Reliability and SEMS of Sub Groups Tables *101*
APPENDIX 5.A: DEMOGRAPHIC SUMMARIES, FREQUENCY DISTRIBUTIONS, INTERCORRELATIONS, AND RELIABILITY AND SEMS OF SUB GROUPS—SEPTEMBER 2005 102
Table 5.A.1: Demographic Summary for All Examinees[1] ELA—September 2005 ..... *102*
Table 5.A.2: Demographic Summary for All Examinees[1] Mathematics—September 2005 ..... *103*
Table 5.A.3: NCLB Demographic Summary for All CAHSEE Examinees ELA— September 2005 ..... *104*
Table 5.A.4: NCLB Demographic Summary for All CAHSEE Examinees Mathematics—September 2005 ..... *105*
Table 5.A.5: Demographic Summary for All Examinees[1] ELA—September 2005 ..... *106*
Table 5.A.6: Demographic Summary for All Examinees[1] Mathematics—September 2005 ..... *107*
Table 5.A.7: Frequency Distributions ELA—September 2005 ..... *108*
Table 5.A.8: Frequency Distributions Mathematics—September 2005 ..... *108*
Table 5.A.9: Frequency Distributions ELA—September 2005 ..... *109*
Table 5.A.10: Frequency Distributions Mathematics—September 2005 ..... *110*
Table 5.A.11: Intercorrelations[1] and Reliability Estimates by Section—September 2005 ..... *111*
Table 5.A.12: Agreement of First and Second Ratings on CR item *112*
Table 5.A.13: Summary Statistics for CR item *112*
APPENDIX 5.B: DEMOGRAPHIC SUMMARIES, FREQUENCY DISTRIBUTIONS, INTERCORRELATIONS, AND RELIABILITY AND SEMS OF SUB GROUPS—NOVEMBER 2005 113
Table 5.B.1: Demographic Summary for All Examinees[1] ELA—November 2005 ..... *113*
Table 5.B.2: Demographic Summary for All Examinees[1] Mathematics—November 2005 ..... *114*
Table 5.B.3: NCLB Demographic Summary for All CAHSEE Examinees ELA—November 2005 ..... *115*
Table 5.B.4: NCLB Demographic Summary for All CAHSEE Examinees Mathematics—November 2005 ..... *116*
Table 5.B.5: Demographic Summary for All Examinees[1] ELA—November 2005 ..... *117*
Table 5.B.6: Demographic Summary for All Examinees[1] Mathematics—November 2005 ..... *118*
Table 5.B.7: Frequency Distributions ELA—November 2005 ..... *119*
Table 5.B.8: Frequency Distributions Mathematics—November 2005 ..... *120*
Table 5.B.9: Frequency Distributions ELA—November 2005 ..... *121*
Table 5.B.10: Frequency Distributions Mathematics—November 2005 ..... *122*
Table 5.B.11: Intercorrelations[1] and Reliability Estimates by Section—November 2005 ..... *123*
Table 5.B.12: Agreement of First and Second Ratings on CR item *124*
Table 5.B.13: Summary Statistics for CR item *124*
APPENDIX 5.C: DEMOGRAPHIC SUMMARIES, FREQUENCY DISTRIBUTIONS, INTERCORRELATIONS, AND RELIABILITY AND SEMS OF SUB GROUPS—FEBRUARY 2006 125
Table 5.C.1: Demographic Summary for All Examinees[1] ELA—February 2006 ..... *125*
Table 5.C.2: Demographic Summary for All Examinees[1] Mathematics—February 2006 ..... *126*
Table 5.C.3: NCLB Demographic Summary for All CAHSEE Examinees ELA—February 2006 ..... *127*
Table 5.C.4: NCLB Demographic Summary for All CAHSEE Examinees Mathematics—February 2006 ..... *128*
Table 5.C.5: Demographic Summary for All Examinees[1] ELA—February 2006 ..... *129*
Table 5.C.6: Demographic Summary for All Examinees[1] Mathematics—February 2006 ..... *130*
Table 5.C.7: Frequency Distributions ELA—February 2006 ..... *131*
Table 5.C.8: Frequency Distributions Mathematics—February 2006 ..... *132*
Table 5.C.9: Frequency Distributions ELA—February 2006 ..... *133*
Table 5.C.10: Frequency Distributions Mathematics—February 2006 ..... *134*
Table 5.C.11: Intercorrelations[1] and Reliability Estimates by Section—February 2006 ..... *135*
Table 5.C.12: Agreement of First and Second Ratings on CR item *136*
Table 5.C.13: Summary Statistics for CR item *136*
Table 5.C.14: Reliabilities (REL) and Standard Errors of Measurement (SEM) of Sub groups for the English-Language Arts—February 2006 ..... *137*
Table 5.C.15: Reliabilities (REL) and Standard Errors of Measurement (SEM) of Sub groups for Mathematics – February 2006 ..... *138*

APPENDIX 5.D: DEMOGRAPHIC SUMMARIES, FREQUENCY DISTRIBUTIONS, INTERCORRELATIONS, AND RELIABILITY AND SEMS OF SUB GROUPS—MARCH 2006 139
Table 5.D.1: Demographic Summary for All Examinees[1] ELA—March 2006 ..... *139*
Table 5.D.2: Demographic Summary for All Examinees[1] Mathematics—March 2006 ..... *140*
Table 5.D.3: NCLB Demographic Summary for All CAHSEE Examinees ELA—March 2006 ..... *141*
Table 5.D.4: NCLB Demographic Summary for All CAHSEE Examinees Mathematics—March 2006 ..... *142*
Table 5.D.5: Demographic Summary for All Examinees[1] ELA—March 2006 ..... *143*
Table 5.D.6: Demographic Summary for All Examinees[1] Mathematics—March 2006 ..... *144*
Table 5.D.7: Frequency Distributions ELA—March 2006 ..... *145*
Table 5.D.8: Frequency Distributions Mathematics—March 2006 ..... *146*
Table 5.D.9: Frequency Distributions ELA—March 2006 ..... *147*
Table 5.D.10: Frequency Distributions Mathematics—March 2006 ..... *148*
Table 5.D.11: Intercorrelations[1] and Reliability Estimates by Section—March 2006 ..... *149*
Table 5.D.12: Agreement of First and Second Ratings on CR item *150*
Table 5.D.13: Summary Statistics for CR item *150*
Table 5.D.14: Reliabilities (REL) and Standard Errors of Measurement (SEM) of Sub groups for the English-Language Arts—March 2006 ..... *151*
Table 5.D.15: Reliabilities (REL) and Standard Errors of Measurement (SEM) of Sub groups for Mathematics – March 2006 ..... *152*
APPENDIX 5.E: DEMOGRAPHIC SUMMARIES, FREQUENCY DISTRIBUTIONS, INTERCORRELATIONS, AND RELIABILITY AND SEMS OF SUB GROUPS—MAY 2006 153
Table 5.E.1: Demographic Summary for All Examinees[1] ELA May 2006 ..... *153*
Table 5.E.2: Demographic Summary for All Examinees[1] Mathematics—May 2006 ..... *154*
Table 5.E.3: NCLB Demographic Summary for All CAHSEE Examinees ELA—May 2006 ..... *155*
Table 5.E.4: NCLB Demographic Summary for All CAHSEE Examinees Mathematics— May 2006 ..... *156*
Table 5.E.5: Demographic Summary for All Examinees[1] ELA—May 2006 ..... *157*
Table 5.E.6: Demographic Summary for All Examinees[1] Mathematics—May 2006 ..... *158*
Table 5.E.7: Frequency Distributions ELA—May 2006 ..... *159*
Table 5.E.8: Frequency Distributions Mathematics—May 2006 ..... *160*
Table 5.E.9: Frequency Distributions ELA—May 2006 ..... *161*
Table 5.E.10: Frequency Distributions Mathematics—May 2006 ..... *162*
Table 5.E.11: Intercorrelations[1] and Reliability Estimates by Section—May 2006 ..... *163*
Table 5.E.12: Agreement of First and Second Ratings on CR item *164*
Table 5.E.13: Summary Statistics for CR item *164*

CHAPTER 6: SPECIAL ANALYSES 165

DISABILITY/TESTING VARIATIONS SUMMARY ANALYSIS 165
GENERALIZABILITY ANALYSES 166
Table 6.1: Generalizability Results September 2005 ..... *166*
Table 6.2: Generalizability Results November 2005 ..... *167*
Table 6.3: Generalizability Results February 2006 ..... *167*
Table 6.4: Generalizability Results March 2006 ..... *167*
Table 6.5: Generalizability Results May 2006 ..... *168*
MARK DISCRIMINATION ANALYSES 168
Background *168*
CAHSEE Answer Document Scanning [1] *168*
Purpose *169*
Table 6.6: Number and Percentage of Schools Meeting the Threshold Where Scores Changed from Not Pass to Pass as a Result of Erasures* *170*
Table 6.7: Listing of Testing Variations and Disability Tables *171*
APPENDIX 6.A: RESULTS OF TESTING VARIATIONS AND DISABILITY ANALYSES—SEPTEMBER 2005 172
Table 6.A.1: Summary Statistics by Testing Variations and Disability—ELA, September 2005 ..... *172*
Table 6.A.2: Summary Statistics by Testing Variations and Disability—Mathematics, September 2005 ..... *173*
Table 6.A.3: Demographic Summary for All Examinees[1] by Testing Variations—ELA, September 2005 ..... *174*

Table 6.A.4: Demographic Summary for All Examinees[1] by Testing Variations—Mathematics, September 2005 175
Table 6.A.5: Percentiles of Scale Scores for Students with Testing Variations —ELA, September 2005* 176
Table 6.A.6: Percentiles of Scale Scores for Students with Testing Variations — Mathematics, September 2005* 177
Table 6.A.7: Summary of Scale Scores and Passing Rates by Disability and Testing Variations—ELA, September 2005* 178
Table 6.A.8: Summary of Scale Scores and Passing Rates by Disability and Testing Variations—Mathematics, September 2005* 179
Table 6.A.9: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations—ELA, September 2005* 180
Table 6.A.10: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations—Mathematics, September 2005* 181
APPENDIX 6.B: RESULTS OF TESTING VARIATIONS AND DISABILITY ANALYSES—NOVEMBER 2005 182
Table 6.B.1: Summary Statistics by Testing Variations and Disability—ELA, November 2005 182
Table 6.B.2: Summary Statistics by Testing Variations and Disability—Mathematics, November 2005 183
Table 6.B.3: Demographic Summary for All Examinees[1] by Testing Variations—ELA, November 2005 184
Table 6.B.4: Demographic Summary for All Examinees[1] by Testing Variations—Mathematics, November 2005 185
Table 6.B.5: Percentiles of Scale Scores for Students with Testing Variations —ELA, November 2005* 186
Table 6.B.6: Percentiles of Scale Scores for Students with Testing Variations — Mathematics, November 2005* 187
Table 6.B.7: Summary of Scale Scores and Passing Rates by Disability and Testing Variations—ELA, November 2005* 188
Table 6.B.8: Summary of Scale Scores and Passing Rates by Disability and Testing Variations—Mathematics, November 2005* 190
Table 6.B.9: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations—ELA, November 2005* 192
Table 6.B.10: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations—Mathematics, November 2005* 194
APPENDIX 6.C: RESULTS OF TESTING VARIATIONS AND DISABILITY ANALYSES—FEBRUARY 2006 195
Table 6.C.1: Summary Statistics by Testing Variations and Disability—ELA, February 2006 195
Table 6.C.2: Summary Statistics by Testing Variations and Disability—Mathematics, February 2006 196
Table 6.C.3: Demographic Summary for All Examinees[1] by Testing Variations—ELA, February 2006 197
Table 6.C.4: Demographic Summary for All Examinees[1] by Testing Variations—Mathematics, February 2006 198
Table 6.C.5: Percentiles of Scale Scores for Students with Testing Variations —ELA, February 2006* 199
Table 6.C.6: Percentiles of Scale Scores for Students with Testing Variations — Mathematics, February 2006* 200
Table 6.C.7: Summary of Scale Scores and Passing Rates by Disability and Testing Variations—ELA, February 2006* 201
Table 6.C.8: Summary of Scale Scores and Passing Rates by Disability and Testing Variations—Mathematics, February 2006* 203
Table 6.C.9: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations—ELA, February 2006* 205
Table 6.C.10: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations—Mathematics, February 2006* 207
APPENDIX 6.D: RESULTS OF TESTING VARIATIONS AND DISABILITY ANALYSES—MARCH 2006 208
Table 6.D.1: Summary Statistics by Testing Variations and Disability—ELA, March 2006 208
Table 6.D.2: Summary Statistics by Testing Variations and Disability—Mathematics, March 2006 209
Table 6.D.3: Demographic Summary for All Examinees[1] by Testing Variations—ELA, March 2006 210
Table 6.D.4: Demographic Summary for All Examinees[1] by Testing Variations—Mathematics, March 2006 211
Table 6.D.5: Percentiles of Scale Scores for Students with Testing Variations —ELA, March 2006* 212
Table 6.D.6: Percentiles of Scale Scores for Students with Testing Variations — Mathematics, March 2006* 213

Table 6.D.7: Summary of Scale Scores and Passing Rates by Disability and Testing Variations—ELA, March 2006* *214*
Table 6.D.8: Summary of Scale Scores and Passing Rates by Disability and Testing Variations—Mathematics, March 2006* *216*
Table 6.D.9: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations—ELA, March 2006* *218*
Table 6.D.10: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations—Mathematics, March 2006* *220*
APPENDIX 6.E: RESULTS OF TESTING VARIATIONS AND DISABILITY ANALYSES—MAY 2006 221
Table 6.E.1: Summary Statistics by Testing Variations and Disability—ELA, May 2006 ..... *221*
Table 6.E.2: Summary Statistics by Testing Variations and Disability—Mathematics, May 2006 ..... *222*
Table 6.E.3: Demographic Summary for All Examinees[1] by Testing Variations—ELA, May 2006 ..... *223*
Table 6.E.4: Demographic Summary for All Examinees[1] by Testing Variations—Mathematics, May 2006 ..... *224*
Table 6.E.5: Percentiles of Scale Scores for Students with Testing Variations —ELA, May 2006* *225*
Table 6.E.6: Percentiles of Scale Scores for Students with Testing Variations — Mathematics, May 2006* *226*
Table 6.E.7: Summary of Scale Scores and Passing Rates by Disability and Testing Variations—ELA, May 2006* *227*
Table 6.E.8: Summary of Scale Scores and Passing Rates by Disability and Testing Variations—Mathematics, May 2006* *228*
Table 6.E.9: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations—ELA, May 2006* *229*
Table 6.E.10: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations—Mathematics, May 2006* *230*
REFERENCES 231

Executive Summary

The California High School Exit Examination (CAHSEE) has been developed by the California Department of Education (CDE) to assess achievement of content standards for English-language and Arts (ELA) and mathematics set by the California State Board of Education (SBE). The CAHSEE is typically administered five times per year between September 2005 and May 2006 to allow several testing opportunities for those students who have not yet passed the examination. This report covers the five CAHSEE test administrations given in September and November of 2005 and February, March and May of 2006.

Each test form was constructed from items that had been previously administered and placed onto the operational scale. There were 80 operational multiple-choice (MC) items in each mathematics form and 72 MC and one constructed-response (CR) item in each ELA form. Each test form also included a set of anchor items that were used to maintain the operational scale across administrations. All items included on operational test forms had been evaluated for bias and sensitivity and for alignment of the content standards. In addition, each test form was reviewed and approved by the California Department of Education (CDE).

Table E.1 presents the administration dates and total number of examinees taking one or both CAHSEE content areas during the September and November 2005 and February, March and May 2006 administrations. The majority of examinees in February and March were first time examinees. Examinees taking only one content area were repeat examinees that did not pass that content area during a previous administration.

Table E.1: Summary of Examinees Tested for Each Administration by Content

Administration	Total Examinees*	ELA & Math	ELA Only	Math Only
September 2005	63,586	30,517	15,463	17,606
November 2005	155,095	73,828	36,722	44,545
February 2006	239,913	194,619	21,704	23,590
March 2006	391,483	324,577	30,949	35,957
May 2006	69,976	29,244	20,021	20,711

*Total number of examinees consists of examinees taking ELA & Math and either ELA or Math for each administration.

The passing rates for all students taking each content area by test administration are presented in Table E.2.

Table E.2: Summary of Passing Rates by Content Area and Test Administration

	English-Language Arts		Mathematics	
Administration	**N Tested**	**N Passed (%)**	**N Tested**	**N Passed (%)**
September 2005	45,980	15,307(33%)	48,123	14,816(31%)
November 2005	110,550	43,577(39%)	118,373	41,101(35%)
February 2006	216,323	146,133(68%)	218,209	139,991(64%)
March 2006	355,526	253,627(71%)	360,534	255,084(71%)
May 2006	49,265	15,244(31%)	49,955	16,160(32%)

The Educational Testing Service (ETS) conducted a series of statistical analyses to evaluate the items and test forms for each of the CAHSEE administrations. For each administration the following analyses were completed: classical item analyses, differential item functioning, item response theory (IRT) calibration, scaling and equating. Scoring tables were also created for each operational test form and reliability indices were calculated. In addition, this technical report includes results from the following studies: inter-rater agreement for the ELA constructed response (CR) item, generalizability, decision accuracy, and mark discrimination studies. Additional summary analyses conducted for students having special accommodation needs are included in this report.

All item analyses, including calibration, equating and scaling, were completed using GENASYS (ETS proprietary software) or commercially available software (e.g., SAS, SPSS, and GENOVA). In all cases, analyses were conducted on complete records for each content area (i.e., students must have attempted at least 5 items on the test form). Because students are allowed to take either ELA or mathematics in separate administrations, not all students took the ELA and mathematics examinations in a single administration. Individuals who entered invalid form numbers, left fields blank or double gridded fields were excluded for the purposes of the analyses reported in this technical report. Students having blank sections were excluded from the equating samples.

Highlights of the results for 2005-2006 CAHSEE administrations included in this report are presented in tables E.3 and E.4 below. These statistics indicate satisfactory performance of the test form constructed for these examinations.

Table E.3.1: CAHSEE Summary Statistics—English-Language Arts (September and November 2005)

Administration	September 2005	November 2005
Scale Score Information		
Number of Examinees	45980	110550
Mean	338	343
SD	32	31
Possible Range	275	275
Obtained Range	275	275
Median	337	343
Test Information		
Reliability	0.91	0.91
Raw Score Standard Error of Measurement	4.62	4.62
Mean Omits	0.92	0.78
SD Omits	5.89	5.35
% Responding all items	87	87
% responding all items – 1 item	96	96
% responding all items –2 items	97	98
% responding all items –3 items	98	98
% responding all items –4 items	98	98
% responding all items –5 items	98	98
Item Information*		
Number of Items	72	72
Mean Observed Average Item Score (AIS)	0.56	0.57
Equated Mean Rasch B-Value	-0.13	-0.07
Mean R-biserial	0.48	0.47
SD R-biserial	0.09	0.08
Examinee Information		
ELA Only Examinees		
Number of Examinees	15463	36722
Mean Scale Score	341	344
Scale Score SD	27	26
Median Scale Score	341	345
ELA and Mathematics Examinees		
Number of Examinees	30517	73828
Mean Scale Score	337	342
Scale Score SD	33	33
Median Scale Score	335	339

*Means and standard deviations for item information section are computed on 72 MC items.

Table E.3.2: CAHSEE Summary Statistics—English-Language Arts (February, March and May 2006)

Administration	February 2006	March 2006	May 2006
Scale Score Information			
Number of Examinees	216323	355526	49265
Mean	369	374	336
SD	40	41	34
Possible Range	275	275	275
Obtained Range	275	275	275
Median	370	374	333
Test Information			
Reliability	0.94	0.91	0.91
Raw Score Standard Error of Measurement	4.18	4.62	4.62
Mean Omits	0.43	0.32	1.05
SD Omits	3.89	3.11	6.49
% Responding all items	92	91	87
% responding all items – 1 item	98	98	95
% responding all items –2 items	99	99	97
% responding all items –3 items	99	99	97
% responding all items –4 items	99	99	98
% responding all items –5 items	99	99	98
Item Information*			
Number of Items	72	72	72
Mean Observed Average Item Score (AIS)	0.70	0.71	0.55
Equated Mean Rasch B-Value	-0.08	-0.03	-0.17
Mean R-biserial	0.55	0.55	0.51
SD R-biserial	0.09	0.07	0.11
Examinee Information			
ELA Only Examinees			
Number of Examinees	21704	30949	20021
Mean Scale Score	342	345	338
Scale Score SD	30	31	31
Median Scale Score	342	344	337
ELA and Mathematics Examinees			
Number of Examinees	194619	324577	29244
Mean Scale Score	372	376	335
Scale Score SD	40	40	35
Median Scale Score	375	377	331

*Means and standard deviations for item information section are computed on 72 MC items.

Table E.4.1: CAHSEE Summary Statistics—Mathematics (September and November 2005)

Administration	September 2005	November 2005
Scale Score Information		
Number of Examinees	48123	118373
Mean	340	343
SD	25	27
Possible Range	275	275
Obtained Range	275	275
Median	338	342
Test Information		
Reliability	0.89	0.89
Raw Score Standard Error of Measurement	4.09	4.09
Mean Omits	0.56	0.51
SD Omits	4.05	3.81
% Responding all items	86	87
% responding all items – 1 item	96	96
% responding all items –2 items	98	98
% responding all items –3 items	98	99
% responding all items –4 items	99	99
% responding all items –5 items	99	99
Item Information		
Number of Items	80	80
Mean Observed Average Item Score (AIS)	0.47	0.49
Equated Mean Rasch B-Value	-0.26	-0.27
Mean R-biserial	0.41	0.44
SD R-biserial	0.12	0.11
Examinee Information		
Mathematics Only Examinees		
Number of Examinees	17606	44545
Mean Scale Score	344	345
Scale Score SD	20	21
Median Scale Score	345	345
ELA and Mathematics Examinees		
Number of Examinees	30517	73828
Mean Scale Score	338	342
Scale Score SD	27	30
Median Scale Score	335	338

Table E.4.2: CAHSEE Summary Statistics—Mathematics (February, March and May 2006)

Administration	February 2006	March 2006	May 2006
Scale Score Information			
Number of Examinees	218209	360534	49955
Mean	368	374	342
SD	38	39	29
Possible Range	275	275	275
Obtained Range	275	275	275
Median	364	370	338
Test Information			
Reliability	0.95	0.89	0.89
Raw Score Standard Error of Measurement	3.78	4.09	4.09
Mean Omits	0.33	0.23	0.65
SD Omits	2.96	2.20	4.55
% Responding all items	90	91	86
% responding all items – 1 item	97	98	96
% responding all items –2 items	99	99	98
% responding all items –3 items	99	99	98
% responding all items –4 items	99	99	99
% responding all items –5 items	99	100	99
Item Information			
Number of Items	80	80	80
Mean Observed Average. Item Score (AIS)	0.62	0.65	0.47
Equated Mean Rasch B-Value	-0.21	-0.20	-0.22
Mean R-biserial	0.56	0.57	0.46
SD R-biserial	0.10	0.10	0.12
Examinee Information			
Mathematics Only Examinees			
Number of Examinees	23590	35957	20711
Mean Scale Score	346	348	344
Scale Score SD	23	24	26
Median Scale Score	346	348	342
ELA and Mathematics Examinees			
Number of Examinees	194619	324577	29244
Mean Scale Score	371	377	340
Scale Score SD	39	39	31
Median Scale Score	368	375	335

The chapters that follow describe the technical procedures applied to the CAHSEE for the two 2005 and the three 2006 administrations, and the results of statistical analyses based on the data from these administrations. Chapter 1 provides background information and Chapter 2 summarizes the statistical specifications followed in test form assembly. The equating procedures and conversions of the five administrations are presented in Chapter 3. Chapter 4 summarizes item-level analyses of the five CAHSEE administrations, including classical item analyses, DIF, IRT analyses, and evaluations of model-data fit. Chapter 5 summarizes test-level analyses, including reliability, decision consistency, decision accuracy, and technical characteristics of the CR item scoring for ELA. Chapter 6 describes a number of special analyses applied to the CAHSEE administrations, including summaries of test results for students with disabilities and special accommodations, generalizability analyses, and mark discrimination analyses on the CAHSEE mathematics and ELA tests by school.

Chapter 1: Background

The California Department of Education (CDE) initiated the development of the California High School Exit Examination (CAHSEE) to ensure that all students graduating from high school demonstrate grade-level competency in reading, writing and mathematics. The CAHSEE was first administered to ninth graders on a voluntary basis in March and May of 2001. Beginning October 1, 2001, CDE entered a contract with Educational Testing Service (ETS) and its subcontractors for the development and administration of the CAHSEE. In July 2004, ETS was awarded the new contract for another three years. In 2005-2006, the CAHSEE was administered five times. This report covers the five administrations: September 2005, November 2005, February 2006, March 2006, and May 2006.

Target Population

The target population for the CAHSEE is all California public high school students. The 2005-2006 administrations consisted primarily of 10th grade students testing for the first time and those who did not pass CAHSEE at the first attempt. Beginning in the 2005-2006 school year, no student will receive a public high school diploma without having passed the CAHSEE, as well as having met the district's requirements for graduation.

Test Description

The CAHSEE offers an examination in mathematics and an examination in English-Language Arts (ELA). Students may take either one or both examinations in a single administration. The multiple-choice portion of both examinations are right-scored (i.e., one point is assigned for each correct answer). One test form was constructed for each operational administration consisting of available items from the item bank. In addition to the standard forms, Braille, large-print, and audio CD versions were also available. One emergency form was also constructed to cover all administrations, although it was not necessary to use this form.

The ELA examination measures reading and writing skills as defined by the State Board of Education (SBE) standards through grade 10. The reading portion of the examination covers topics such as vocabulary and informational and literary reading. The writing portion of the examination covers topics such as writing strategies, applications, and conventions. The ELA examination consists of 72 multiple-choice (MC) questions and one constructed response (CR) item. The CR item is related to a literature or informational passage or is a written response to a writing prompt.

The CAHSEE mathematics examination measures standards adopted by the SBE through Algebra I. It covers topics such as statistics, data analysis and probability, number sense, measurement and geometry, algebra, and mathematical reasoning. There are 80 operational questions in each mathematics form.

In addition to the operational items, test forms also include field-test items. In order to maintain the item pool for construction of future forms, multiple forms are administered, each containing the same operational item set and a set of unique MC field-test items. In mathematics, the field-

test section consisted of 12 MC items, and in ELA, the field-test section consisted of 7 MC items. ELA CR items are field-tested separately from the operational CAHSEE administrations. A summary of the items included in the five administrations is shown in Table 1.1.

Table 1.1: Items Included in the 2005-2006 Administrations

Administration	Operational Items	Field-Test Forms	Number of Field-Test Items*
September 2005			
English-Language Arts	72 MC, 1 CR	1	7
Mathematics	80 MC	1	12
November 2005			
English-Language Arts	72 MC, 1 CR	1	7
Mathematics	80 MC	1	12
February 2006			
English-Language Arts	72 MC, 1 CR	25	173*
Mathematics	80 MC	10	120
March 2006			
English-Language Arts	72 MC, 1 CR	50	334*
Mathematics	80 MC	35	420
May 2006			
English-Language Arts	72 MC, 1 CR	1	7
Mathematics	80 MC	1	12

*In some cases the same field-test items may have appeared in more than one form.

Scores for Analysis and Reporting

Each correct MC item is worth one point, and the points are summed to calculate the total MC score. The CR item included on the ELA test is scored on a rubric ranging from 1 to 4 points. Constructed-response scores in half-point intervals are possible because two raters score the writing exercise. The results are averaged when the scores assigned by the raters are adjacent scores. When the raters assign non-adjacent scores, the scoring leader, who assigns the final score, provides resolution.

The Online Scoring Network (OSN) is used for scoring CAHSEE CR items. This system was developed at ETS for the purpose of transmitting CR items electronically to readers at remote locations via the Internet. CR items are displayed on a PC screen to readers who enter their scores via simple mouse clicks. The structure of a typical scoring session, whether half-day or full day, is standardized. At the beginning of each scoring session, readers enter the OSN software and score a calibration set — a set of pre-scored responses to one topic arranged in an electronic folder. Each scoring leader can monitor reader performance via the OSN software. Depending on a reader's results (exact, adjacent, or discrepant scores), the scoring leader will either allow the reader to proceed to operational scoring of examinee responses or will require the reader to score an additional calibration set. If the reader cannot calibrate successfully, he or she is not allowed to score operational CR items. OSN automates the distribution of sets of

papers to the required number of readers. Two readers are provided for each response, with a third scorer providing resolution of non-adjacent scores. As with paper and pencil scoring, the third reading, when required, is provided by staff with more experience and authority, typically a scoring leader. OSN produces topic and reader summary reports for future reference by Test Development (topics) and OSN staff (readers).

Weighting Scheme for Reported Scores

The ELA section consists of 45 MC items measuring reading, 27 MC items measuring writing, and one CR prompt. The weighting of these components is as follows:

MC Reading Items: 45 items times scoring weight of 1.0 = 45 points
MC Writing Items: 27 items times scoring weight of 1.0 = 27 points
CR Item: 4 point rubric times scoring weight of 4.5 = 18 points

Total points MC = 72 points (80% of the total points)
Total points CR = 18 points (20% of the total points)
Total points: Composite (MC + Weighted CR) = 90 points.

There is no special weighting scheme for the mathematics section – each item is worth one score point. In all cases, total raw scores on the CAHSEE are transformed to a reported scale that ranges from 275 to 450, with the minimum passing score set at 350.

Subscores

In addition to total scores, student performance is reported for a number of content strands associated with each test. Table 1.2 below summarizes the subscores reported for the CAHSEE. A CR item score is also given. Number correct and percentage correct scores are reported for each content strand. In mathematics, a separate score based on items that measure Mathematical Reasoning (8 items total), in addition to the primary strand classification, is calculated but not reported to schools or to students. The Math Reasoning subscore overlaps with other content strands.

Table 1.2: Mathematics and ELA Subscores

Mathematics Content Standard	Number of Items	ELA Content Standard	Number of Items
Probability & Statistics (PS)	13	Word Analysis (RV)	7
Number Sense (NS)	17	Reading Comprehension (RC)	18
Algebra & Functions (AF)	20	Literary Responses & Analysis (RL)	20
Measurement & Geometry (MG)	18	Writing Strategies (WS)	12
Algebra 1 (A1)	12	Writing Conventions (WC)	15
Mathematical Reasoning (MR)[1]	8	Writing Applications-CR (WA)	1

[1]Items in this category are also classified under one of the other identified strands.

CAHSEE Passing Scores

In September 2003, a standard setting study was carried out using CAHSEE test forms that were constructed to meet the new blueprints and difficulty specifications. In November 2003, after reviewing the results of this study, the SBE set new passing scores on the CAHSEE corresponding to specific score levels on the test forms used in the standard settings: 55 percent correct on the mathematics portion (44 out of 80) and 60 percent of the points on the ELA portion (54 points out of 90). As a result a new reporting scale was established beginning with the February 2004 administration. Scaled score conversions were established on the February 2004 administration and have been maintained through the use of IRT-based equating procedures for the subsequent administrations.

Raw Score to Scale Score Conversion

Students taking the CAHSEE have multiple opportunities to take the exam until they pass both the ELA and mathematics portions. When administering multiple forms of a test there is a need for a "constant scale". This means that the passing score must represent the same level of achievement on all forms (versions) of the CAHSEE. To maintain comparability of scores across multiple test forms, number correct or raw scores are converted to scale scores. The raw-score to scale-score conversion reflects the relationship between the difficulty of individual test items comprising each test form and the constant measure of achievement indicated by the reported scale scores. For different test forms, the expected number-correct score for a given level of achievement may vary somewhat due to (usually small) differences in the average difficulty of the items in one form compared to the average difficulty of items in other test forms. This is why the conversion tables for each test administration will differ slightly in relating raw scores to scale scores. Total scores on the CAHSEE are transformed to a reported scale that ranges from 275 to 450, with the minimum passing score set at 350.

Chapter 2: CAHSEE Test Development Procedures

Test forms are constructed to meet content and specific statistical specifications. The test construction process is completed using the CAHSEE item bank.

To begin the test construction process, test developers first construct anchor item sets that are representative of the test form with regard to content and item difficulty. Approximately one-half of the anchor items are selected from each of the February and March administrations in order to minimize item exposure for students retaking the test in another testing cycle. Initial anchor item selections are reviewed and approved prior to the selection of the remaining operational items.

Figure 2.1 is an example of a test characteristic curve (TCC) which falls within the specifications.

Tables 2.1 to 2.4 list the recommended statistical specifications for CAHSEE test assembly, articulated in terms of equated Rasch item difficulty values (b-values) and item biserial correlations for the total test. All CAHSEE items have been calibrated and scaled to the CAHSEE item bank. In general, test developers are asked to match the statistical characteristics as closely as possible. The distributions of items in each of the intervals are used as guidelines by the test developers to match the mean equated Rasch difficulty for each form. Tables 2.2 and 2.4 provide the statistical guidelines for content strands in each of the test forms.

In addition to difficulty specifications, information about model-data fit is taken into account during test assembly (see Chapter 4 for a description of the procedures used for evaluating model-data fit). Test developers are instructed to exclude items with fit classifications of F, as well as items that have been flagged for severe (C-) DIF.

Once constructed, the forms are reviewed and approved first by Statistical Analysis Staff and then by CDE. If any items are replaced, test developers resend the forms for approval to the statisticians.

Figure 2.1: Example of Test Characteristic Curves

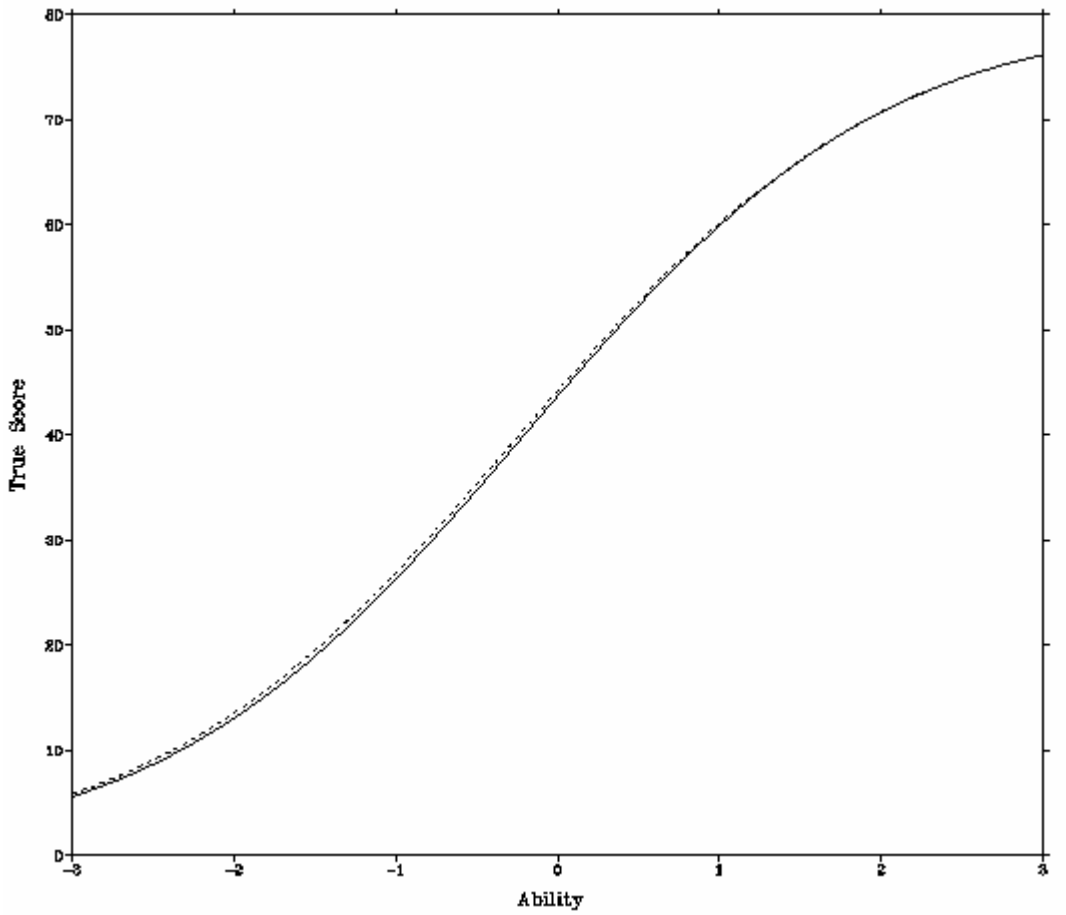


Table 2.1: Difficulty (B) and Discrimination (Rbis) Specifications for ELA

Low B	High B	Specifications
-1.75	-1.50	0 - 1
1.50	-1.25	1 - 2
-1.25	-1.00	2 - 4
-1.00	-0.75	4 - 6
-0.75	-0.50	7 - 9
-0.50	-0.25	9 - 13
-0.25	0.00	10 - 14
0.00	0.25	9 - 13
0.25	0.50	7 - 12
0.50	0.75	7 - 10
0.75	1.00	2 - 5
1.00	1.25	2 - 5
1.25	1.50	1 - 3
1.50	1.75	0 - 2
	# MC Items	**72**
	MC Mean	**-0.10 - 0.10**
	MC SD	**0.55 - 0.70**
Low Rbis	**High Rbis**	**Specifications**
0	0.1	0 - 0
0.1	0.2	0 - 0
0.2	0.3	4 - 10
0.3	0.4	16 - 24
0.4	0.5	16 - 24
0.5	0.6	16 - 24
0.6	0.7	7 - 10
0.7	0.8	1 - 3
	# MC Items	**72**
	MC Mean	**0.44 - 0.54**
	MC SD	**0.10 - 0.15**

Table 2.2: Number of Items and Mean B-Values by Content Strand for ELA

Content Class	# Items	Mean B
Reading Comprehension	18	-0.05 -- 0.20
Literary Response & Analysis	20	-0.20 -- 0.00
Word Analysis	7	-0.40 -- 0.15
Writing Conventions	15	-0.03 -- 0.25
Writing Strategies	12	0.07 -- 0.50
Total	**72**	

Table 2.3: Difficulty (B) and Discrimination (Rbis) Specifications for Mathematics

Low B	High B	Specifications
-1.75	-1.50	0 - 1
-1.50	-1.25	1 - 2
-1.25	-1.00	2 - 4
-1.00	-0.75	7 - 10
-0.75	-0.50	7 - 10
-0.50	-0.25	7 - 10
-0.25	0.00	9 - 13
0.00	0.25	9 - 13
0.25	0.50	7 - 10
0.50	0.75	7 - 10
0.75	1.00	2 - 5
1.00	1.25	2 - 4
1.25	1.50	0 - 1
	# Items	**80**
	Mean	**-0.30 - -0.20**
	SD	**0.65 - 0.80**
Low Rbis	**High Rbis**	**Specifications**
0	0.1	0 - 0
0.1	0.2	0 - 0
0.2	0.3	3 - 7
0.3	0.4	10 - 12
0.4	0.5	12 - 16
0.5	0.6	24 - 28
0.6	0.7	19 - 23
0.7	0.8	2 - 4
	# Items	**80**
	Mean	**0.44 - 0.54**
	SD	**0.10 - 0.15**

Table 2.4: Number of Items and Mean B-Values by Content Strand for Mathematics

Content Class	# Items	Mean B
Probability and Statistics	13	-0.8 -- -0.4
Number Sense	17	-0.7 -- -0.3
Algebra and Functions	20	-0.7 -- -0.3
Measurement & Geometry	18	-0.4 -- 0.0
Algebra I	12	0.0 -- 0.4
Total	**80**	

Chapter 3: Equating Procedures

Item Calibration and Transformation

Equating the CAHSEE involves three steps: item calibration, item parameter scaling, and true-score equating. The samples used for item calibration, scaling, and equating include scanned and scored student records provided in statistical file extracts. Typically, over 90 percent of the data are available for equating, although in the March administration a slightly lower percentage of the ELA records were available because of the large numbers of CR items scored. Students taking special test forms (Large Print, CD-ROM and Braille) are excluded from the equating sample. Incomplete data records are also removed. In addition, data records are eliminated based on analyses of performance on different sections of the tests. Specifically, outlier scores are identified for mathematics and ELA by comparing scores on the first and second sections of the test, and for ELA by comparing scores on the MC and CR components of the test. Finally, the equating samples exclude students who did not indicate a valid test form code. For the purposes of score equating and production of scoring tables for score reporting, calibration, scaling and equating analyses are conducted including only the operational items. Field-test items are analyzed and calibrated separately.

A proprietary version of the PARSCALE computer program (Muraki & Bock, 1995) was used for all item calibration work. This program estimates parameters for a generalized partial-credit model using procedures described by Muraki (1992). For the analysis of the CAHSEE forms, the PARSCALE program is constrained by setting a common discrimination value for all items equal to 1.0 / 1.7 (or 0.588) and by fixing the lower asymptote for all MC items to zero. The resulting estimation is equivalent to the Rasch model for MC items and the Rasch partial-credit model for CR (polytomously scored) items, as required by the CAHSEE program.

The PARSCALE program is run in two stages. In the first stage, the estimation imposes normal constraints on the updated prior 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 (E-M) cycle. For both stages, the multiplicative metric of the scale is controlled by the use of the fixed discrimination parameters.

The resulting calibrations are then scaled to the bank estimates using the Stocking and Lord (1983) procedure. Because only a constant is added to the new item parameter estimates, this procedure is essentially equivalent to setting the means of the new estimates equal to their bank values. The linking process is iterative and involves an inspection of differences between the new estimates and the bank estimates for the linking items. Items with large weighted or unweighted root-mean-square differences (WRMSD) between item characteristic curves (ICCs) based on the old and new difficulty estimates are eliminated and the linking constants re-estimated. The differences are calculated as follows:

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

where θ_j ranges from –3.0 to 3.0 by 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 reference form (i.e., the bank estimates). Any linking items for which the difference WRMSD is greater than 0.125 are eliminated from the anchor set. This criterion was established in early CAHSEE calibration work and has been used satisfactorily across a number of CAHSEE administrations.

For each administration, plots of new transformed difficulty estimates against the original bank estimates are then produced and inspected. Results across administrations have consistently indicated high correlations between the new and original bank difficulty estimates, and typically no more than two or three items are eliminated from the linkings because of large WRMSD differences. In general, the correlation between the new and bank difficulty estimates tends to be slightly higher for mathematics than for ELA, possibly because ELA items are passage-dependent and more susceptible to context and position effects.

New CAHSEE Passing Scores

Following the February 2004 administration, new cut-scores were established. The February 2004 items were calibrated and linked to the CAHSEE item bank scale. IRT-based equating procedures were used to determine the theta levels corresponding to each raw score. First, the passing scores on the February test forms were set at the raw scores corresponding to the theta levels that were closest to the cut score theta levels established in the standard setting (.5356 for ELA and -.0701 for mathematics). The raw scores associated with passing on the February 2004 form were 54 for ELA and 43 for mathematics[1].

Table 3.1: Passing Scores on the February 2004 CAHSEE

English-Language Arts			Mathematics	
Raw Score	**Theta**		**Raw Score**	**Theta**
53	0.4724		42	-0.1249
54	0.5290	**⇐ 350 ⇒**	43	-0.0685
55	0.5863		44	-0.0118

Second, the new reporting scales for the ELA and mathematics portion were established. The reporting scale was obtained by establishing linear scaling parameters to transform the theta values corresponding to each raw score to the reporting scale. The transformation constants associated with these scoring tables are as follows:

ELA: Scale Score = Theta * 33.7230 + 332.1605
Mathematics: Scale Score = Theta * 32.2900 + 352.2119

[1] Since raw scores are integers and the theta metric is continuous, the cut score theta levels will usually fall between the thetas at adjacent raw scores. In this situation, the raw score corresponding to the theta level closest to the values of .5356 for ELA and -.0701 for mathematics were chosen as the raw score cutpoints.

The resulting scale has several notable characteristics:

1. The passing raw scores (54 and 43, respectively) are set to a scale score of 350.

2. The "Proficient" cut scores to be used for NCLB accountability purposes have been set at 380 for both ELA and mathematics. On the theta scale the Proficient cut-scores were 1.4152 and 0.8762, respectively. These translate to scale scores of 379.88 for ELA and 380.50 for mathematics on the new scale. To simplify the communication of these important NCLB cut-scores to a wide audience, 380 are used for both ELA and mathematics.

3. The "Advanced" cut scores to be used for NCLB accountability purposes were at thetas of 2.1056 for ELA and 2.1456 for mathematics, which translate to 403 and 422, respectively.

4. The minimum and maximum scale scores were set at 275 and 450.

True-Score Equating for September and November 2005, February, March and May 2006

For the September, November 2005 and February, March and May 2006 administrations, once the items were calibrated and linked to the operational theta scale, IRT true-score equating procedures were utilized to transform the new form to the base form scale (February 2004). The base forms consist of item parameter estimates from PARSCALE calibrations of data from the February 2004 administrations that have been placed on the new CAHSEE scale. The true-score equating procedure is based on the relationship between raw scores and ability. For mathematics, which consists entirely of MC items, this is the well-known relationship defined in Lord (1980; eq. 4-5):

$$\xi(\theta) = \sum_{i=1}^{n} P_i(\theta) \ , \qquad (2)$$

where $P_i(\theta)$ is the probability of a correct response to item i at ability level θ (defined by the Rasch model) and $\xi(\theta)$ is the corresponding true score, and the summation is over the n items in the test.

For ELA, $\xi(\theta)$ is based on a weighted sum of MC and CR items, and the relationship can be defined as:

$$\xi(\theta) = w_{mc} \sum_{i=1}^{nmc} P_i(\theta) + w_{cr} \sum_{j=1}^{ncr} \sum_{x=1}^{m} s_x P_{xj}(\theta) \ , \qquad (3)$$

where $w_{mc} = 1.000$, $w_{cr} = 4.500$, s_x is the score value for category x, nmc is the number of MC items in the test, ncr is the number of CR 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 eight possible scores: 0, 1, 1.5, 2, 2.5, 3, 3.5, and 4.

For each integer score ξ_n on the new form, the true-score equating procedure first solves for the corresponding ability level using equations 2 (for mathematics) or 3 (for ELA). Next, the procedure uses that ability level (θ) to find the corresponding score, ξ_b, on the base form. Finally, each score ξ_b is transformed to the CAHSEE scale-score scale using the raw-score-to-scale-score conversion table developed for the February 2004 administration and linear interpolation.

For both ELA and mathematics, the September 2005, November 2005, February 2006, March 2006, and May 2006 forms were linked back to the new scale.

The following rule is followed in determining the raw cut score a student must achieve to be classified as Passing, Proficient, or Advanced. For each administration, scale scores and raw scores that correspond to these cuts are identified. First, the scale score that is equal to or greater than the cut point, e.g. 350 is located. If 350 is not found in the conversion, the next higher score, say 351, was used as the cutoff point. The corresponding raw score associated with that rounded scale score is defined to be the raw score equivalent of that cut. Table 3.2 is a summary of the cuts and overall passing rates based on equating samples for each administration.

Table 3.2: Summary of Cut Scores and Passing Rates Based on Equating Samples

Administration	Levels	Mathematics		ELA	
		Cut	%	Cut	%
September 2005	Pass	44	30%	56	33%
	Proficient	59	6%	69	9%
	Advanced	73	1%	77	4%
November 2005	Pass	44	34%	54	39%
	Proficient	59	8%	68	10%
	Advanced	73	2%	76	4%
February 2006	Pass	43	63%	55	67%
	Proficient	58	35%	68	41%
	Advanced	72	12%	76	21%
March 2006	Pass	42	70%	55	71%
	Proficient	58	41%	69	44%
	Advanced	72	14%	76	27%
May 2006	Pass	43	32%	58	30%
	Proficient	59	9%	72	10%
	Advanced	73	2%	79	4%

Braille, Large Print, and Audio CD Form Equating

Separate IRT true score equating can be carried out for versions of the CAHSEE test forms in situations where these test forms do not consist of all of the items that are administered in the operational tests. In the past, this has occurred only for mathematics in cases where, in the judgment of test development experts, it was not possible to translate all of the items to Braille without compromising the validity of the items. In these cases, the Braille form equating uses the operational item difficulty estimates for only the items that were included in a particular form. The September 2005 Braille form was used for both September and November administrations. The February 2006 form was the version used for Braille for all three 2006 administrations. This form was identical to the standard form, so no special equating analyses were required. Similarly, the large print versions of the test forms were identical to the standard form administered for all administrations. The same Audio CD and Braille form was given for each administration.

Conversion Tables and Conditional Standard Errors of Measurement

Following the equating analyses, scale score conversion tables and conditional standard errors of measurement (CSEMs) were produced. CSEMs for CAHSEE scale scores are based on item response theory (IRT) and are calculated by the IRTEQUATE module in GENASYS. For mathematics, where reported scores are based on number-correct scores, the calculation of the CSEMs based on Rasch model difficulty estimates is straightforward. However, for ELA, reported scores are based on a weighted composite of the MC and CR items. Because the raw-to-scale score conversions for the base form are nonlinear, the scale score CSEMs estimated in GENASYS are characterized by minor irregularities that are smoothed in a subsequent step. Operational and Large Print score conversions and the smoothed CSEMs at score points for the ELA and mathematics tests are presented in Tables 3.A.1 to 3.E.2 of Appendices 3.A through 3.E and in Tables 3.F.1 through 3.F.4 in Appendix 3.F for the Audio CD and Braille forms. Appendix 3.G presents equations for calculating the standard errors of theta based on weighted raw scores and using the Rasch and Rasch partial credit model.

Appendix 3.A: Scoring Tables for Operational and Large Print Conversions—September 2005

Table 3.A.1: Operational and Large Print Conversion—ELA September 2005

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
90	525.5854	450	
89	502.3268	450	
88	479.6512	450	
87	465.9509	450	
86	455.7555	450	23
85	447.3900	447	21
84	440.1800	440	17
83	433.7805	434	17
82	428.0084	428	17
81	422.7358	423	16
80	417.8807	418	15
79	413.3796	413	14
78	409.1787	409	14
77	405.2371	405	13
76	401.5266	402	13
75	398.0115	398	12
74	394.6677	395	12
73	391.4756	391	12
72	388.4201	388	11
71	385.4842	385	11
70	382.6560	383	11
69	379.9246	380	10
68	377.2896	377	10
67	374.7298	375	10
66	372.2439	372	10
65	369.8250	370	10
64	367.4688	367	10
63	365.1677	365	9
62	362.9188	363	9
61	360.7184	361	9
60	358.5638	359	9
59	356.4493	356	9
58	354.3733	354	9
57	352.3327	352	9
56	350.3235	350	9
55	348.3470	348	9
54	346.3966	346	9
53	344.4758	344	9
52	342.5767	343	9
51	340.7014	341	8
50	338.8430	339	8
49	337.0073	337	8
48	335.1840	335	8
47	333.3792	333	8
46	331.5886	332	8
45	329.8103	330	8

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
44	328.0422	328	8
43	326.2845	326	8
42	324.5339	325	8
41	322.7903	323	8
40	321.0504	321	9
39	319.3175	319	9
38	317.5821	318	9
37	315.8505	316	9
36	314.1141	314	9
35	312.3755	312	9
34	310.6297	311	9
33	308.8764	309	9
32	307.1098	307	9
31	305.3309	305	9
30	303.5345	304	9
29	301.7201	302	9
28	299.8814	300	9
27	298.0143	298	9
26	296.1166	296	10
25	294.1825	294	10
24	292.2071	292	10
23	290.1864	290	10
22	288.1136	288	10
21	285.9798	286	10
20	283.7788	284	11
19	281.5006	282	11
18	279.1398	279	11
17	276.6709	277	11
16	274.0884	275	12
15	271.3777	275	
14	268.5171	275	
13	265.4853	275	
12	262.2521	275	
11	258.7836	275	
10	255.0370	275	
9	250.9513	275	
8	246.4439	275	
7	241.4046	275	
6	235.6718	275	
5	228.9941	275	
4	220.9558	275	
3	210.6713	275	
2	196.3700	275	
1	172.2630	275	
0	147.2238	275	

Table 3.A.2: Operational and Large Print Conversion—Mathematics September 2005

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
80	517.0695	450	
79	492.8037	450	
78	469.5510	450	
77	455.7069	450	19
76	445.6975	446	17
75	437.7904	438	16
74	431.2113	431	15
73	425.5463	426	13
72	420.5498	421	13
71	416.0598	416	12
70	411.9737	412	11
69	408.2099	408	11
68	404.7116	405	10
67	401.4371	401	10
66	398.3502	398	10
65	395.4224	395	10
64	392.6345	393	9
63	389.9694	390	9
62	387.4103	387	9
61	384.9452	385	9
60	382.5627	383	9
59	380.2552	380	9
58	378.0126	378	8
57	375.8300	376	8
56	373.7004	374	8
55	371.6181	372	8
54	369.5795	370	8
53	367.5766	368	8
52	365.6078	366	8
51	363.6735	364	8
50	361.7645	362	8
49	359.8799	360	8
48	358.0163	358	8
47	356.1715	356	8
46	354.3433	354	8
45	352.5284	353	8
44	350.7240	351	8
43	348.9302	349	8
42	347.1427	347	8
41	345.3594	345	8
40	343.5797	344	8

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
39	341.8005	342	8
38	340.0204	340	8
37	338.2361	338	8
36	336.4458	336	8
35	334.6484	335	8
34	332.8415	333	8
33	331.0234	331	8
32	329.1892	329	8
31	327.3389	327	8
30	325.4672	325	8
29	323.5727	324	8
28	321.6555	322	8
27	319.7076	320	8
26	317.7257	318	8
25	315.7093	316	8
24	313.6498	314	8
23	311.5460	312	8
22	309.3923	309	8
21	307.1819	307	9
20	304.9066	305	9
19	302.5552	303	9
18	300.1270	300	9
17	297.6038	298	9
16	294.9778	295	9
15	292.2337	292	10
14	289.3521	289	10
13	286.3122	286	10
12	283.0867	283	10
11	279.6422	280	11
10	275.9336	276	11
9	271.9077	275	12
8	267.4853	275	
7	262.5547	275	
6	256.9624	275	
5	250.4619	275	
4	242.6393	275	
3	232.7205	275	
2	218.9644	275	
1	195.8228	275	
0	171.7079	275	

Appendix 3.B: Scoring Tables for Operational and Large Print Conversions—November 2005

Table 3.B.1: Operational and Large Print Conversion—ELA November 2005

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
90	525.5854	450	15
89	501.9392	450	23
88	479.4798	450	27
87	466.1912	450	26
86	456.5498	450	23
85	448.7308	449	21
84	442.0499	442	17
83	436.1458	436	17
82	430.8188	431	17
81	425.9307	426	15
80	421.3937	421	15
79	417.1463	417	14
78	413.1421	413	14
77	409.342	409	13
76	405.7261	406	13
75	402.2725	402	12
74	398.9605	399	12
73	395.7764	396	12
72	392.7088	393	11
71	389.7496	390	11
70	386.8905	387	11
69	384.1223	384	11
68	381.4384	381	10
67	378.835	379	10
66	376.3076	376	10
65	373.8473	374	10
64	371.4528	371	10
63	369.1214	369	10
62	366.8454	367	9
61	364.6234	365	9
60	362.4492	362	9
59	360.3228	360	9
58	358.2397	358	9
57	356.1952	356	9
56	354.1882	354	9
55	352.2152	352	9
54	350.2723	350	9
53	348.361	348	9
52	346.4744	346	9
51	344.6152	345	9
50	342.7761	343	9
49	340.9582	341	9
48	339.1553	339	9
47	337.3708	337	9
46	335.5971	336	9
45	333.8362	334	9

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
44	332.086	332	9
43	330.3426	330	9
42	328.6042	329	9
41	326.8697	327	9
40	325.1362	325	9
39	323.402	323	9
38	321.6642	322	9
37	319.9232	320	9
36	318.1736	318	9
35	316.4154	316	9
34	314.6448	315	9
33	312.8599	313	9
32	311.0578	311	9
31	309.2363	309	9
30	307.3913	307	9
29	305.5209	306	9
28	303.6202	304	9
27	301.689	302	9
26	299.7205	300	10
25	297.7099	298	10
24	295.6551	296	10
23	293.5484	294	10
22	291.3859	291	10
21	289.163	289	10
20	286.8682	287	10
19	284.495	284	11
18	282.0321	282	11
17	279.4731	279	11
16	276.8005	277	11
15	274.0015	275	12
14	271.0574	275	12
13	267.9427	275	13
12	264.6318	275	13
11	261.0861	275	13
10	257.2647	275	14
9	253.1092	275	15
8	248.5338	275	15
7	243.4259	275	16
6	237.6206	275	21
5	230.8596	275	24
4	222.712	275	27
3	212.3563	275	28
2	197.9547	275	26
1	173.6262	275	19
0	147.2238	275	8

Table 3.B.2: Operational and Large Print Conversion—Mathematics November 2005

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
80	517.0695	450	14
79	492.6376	450	20
78	469.3547	450	22
77	455.5003	450	19
76	445.4904	445	17
75	437.5886	438	16
74	431.0187	431	15
73	425.3660	425	13
72	420.3839	420	12
71	415.9095	416	12
70	411.8405	412	11
69	408.0943	408	11
68	404.6141	405	10
67	401.3578	401	10
66	398.2891	398	10
65	395.3793	395	10
64	392.6090	393	9
63	389.9610	390	9
62	387.4184	387	9
61	384.9692	385	9
60	382.6018	383	9
59	380.3087	380	9
58	378.0796	378	8
57	375.9095	376	8
56	373.7915	374	8
55	371.7197	372	8
54	369.6906	370	8
53	367.6964	368	8
52	365.7349	366	8
51	363.8065	364	8
50	361.9028	362	8
49	360.0219	360	8
48	358.1610	358	8
47	356.3175	356	8
46	354.4894	354	8
45	352.6732	353	8
44	350.8665	351	8
43	349.0684	349	8
42	347.2759	347	8
41	345.4857	345	8
40	343.6977	344	8

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
39	341.9089	342	8
38	340.1173	340	8
37	338.3202	338	8
36	336.5152	337	8
35	334.7016	335	8
34	332.8766	333	8
33	331.0386	331	8
32	329.1827	329	8
31	327.3087	327	8
30	325.4113	325	8
29	323.4892	323	8
28	321.5414	322	8
27	319.5607	320	8
26	317.5443	318	8
25	315.4900	315	8
24	313.3904	313	8
23	311.2434	311	8
22	309.0434	309	8
21	306.7835	307	9
20	304.4561	304	9
19	302.0506	302	9
18	299.5638	300	9
17	296.9781	297	9
16	294.2859	294	9
15	291.4707	291	10
14	288.5131	289	10
13	285.3918	285	10
12	282.0790	282	11
11	278.5407	279	11
10	274.7316	275	11
9	270.5982	275	12
8	266.0587	275	12
7	261.0014	275	13
6	255.2723	275	14
5	248.6213	275	14
4	240.6303	275	20
3	230.5126	275	20
2	216.4665	275	18
1	193.9871	275	13
0	171.7079	275	10

Appendix 3.C: Scoring Tables for Operational and Large Print Conversions—February 2006

Table 3.C.1: Operational and Large Print Conversion—ELA February 2006

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
90	525.5854	450	15
89	505.0328	450	23
88	484.4100	450	27
87	469.8865	450	26
86	459.2710	450	23
85	450.6264	450	21
84	443.2078	443	17
83	436.6458	437	17
82	430.7480	431	17
81	425.3780	425	16
80	420.4471	420	15
79	415.8893	416	14
78	411.6484	412	14
77	407.6749	408	13
76	403.9433	404	13
75	400.4150	400	12
74	397.0626	397	12
73	393.8641	394	12
72	390.8018	391	11
71	387.8619	388	11
70	385.0315	385	11
69	382.2965	382	10
68	379.6446	380	10
67	377.0742	377	10
66	374.5702	375	10
65	372.1307	372	10
64	369.7504	370	10
63	367.4247	367	9
62	365.1472	365	9
61	362.9151	363	9
60	360.7254	361	9
59	358.5760	359	9
58	356.4616	356	9
57	354.3810	354	9
56	352.3318	352	9
55	350.3102	350	9
54	348.3182	348	9
53	346.3494	346	9
52	344.4078	344	9
51	342.4854	342	9
50	340.5857	341	9
49	338.7013	339	9
48	336.8381	337	9
47	334.9869	335	9
46	333.1532	333	9
45	331.3335	331	9

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
44	329.5246	330	9
43	327.7265	328	9
42	325.9383	326	9
41	324.1574	324	9
40	322.3832	322	9
39	320.6136	321	9
38	318.8493	319	9
37	317.0842	317	9
36	315.3212	315	9
35	313.5539	314	9
34	311.7834	312	9
33	310.0052	310	9
32	308.2174	308	9
31	306.4163	306	9
30	304.6008	305	9
29	302.7661	303	9
28	300.9111	301	9
27	299.0278	299	10
26	297.1135	297	10
25	295.1654	295	10
24	293.1742	293	10
23	291.1363	291	10
22	289.0464	289	10
21	286.8944	287	10
20	284.6739	285	11
19	282.3743	282	11
18	279.9888	280	11
17	277.5031	278	11
16	274.9042	275	12
15	272.1768	275	12
14	269.3001	275	12
13	266.2512	275	13
12	263.0014	275	13
11	259.5148	275	14
10	255.7500	275	14
9	251.6472	275	15
8	247.1227	275	15
7	242.0671	275	16
6	236.3194	275	21
5	229.5834	275	24
4	221.4609	275	27
3	211.1353	275	28
2	196.7887	275	26
1	172.6062	275	19
0	147.2238	275	8

Table 3.C.2: Operational and Large Print Conversion—Mathematics February 2006

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
80	517.0695	450	14
79	493.7783	450	20
78	470.7517	450	22
77	457.0460	450	19
76	447.1384	447	17
75	439.3144	439	16
74	432.8063	433	14
73	427.2054	427	13
72	422.2681	422	12
71	417.8342	418	12
70	413.7903	414	11
69	410.0684	410	11
68	406.6053	407	10
67	403.3622	403	10
66	400.3044	400	10
65	397.4032	397	10
64	394.6361	395	9
63	391.9882	392	9
62	389.4475	389	9
61	386.9958	387	9
60	384.6259	385	9
59	382.3266	382	9
58	380.0929	380	8
57	377.9146	378	8
56	375.7886	376	8
55	373.7082	374	8
54	371.6686	372	8
53	369.6665	370	8
52	367.6941	368	8
51	365.7522	366	8
50	363.8385	364	8
49	361.9463	362	8
48	360.0737	360	8
47	358.2184	358	8
46	356.3779	356	8
45	354.5504	355	8
44	352.7326	353	8
43	350.9222	351	8
42	349.1183	349	8
41	347.3183	347	8
40	345.5187	346	8

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
39	343.7197	344	8
38	341.9181	342	8
37	340.1122	340	8
36	338.2992	338	8
35	336.4768	336	8
34	334.6441	335	8
33	332.7985	333	8
32	330.9381	331	8
31	329.0584	329	8
30	327.1587	327	8
29	325.2336	325	8
28	323.2818	323	8
27	321.3023	321	8
26	319.2872	319	8
25	317.2344	317	8
24	315.1399	315	8
23	312.9977	313	8
22	310.8041	311	8
21	308.5531	309	9
20	306.2374	306	9
19	303.8472	304	9
18	301.3743	301	9
17	298.8096	299	9
16	296.1379	296	9
15	293.3475	293	10
14	290.4187	290	10
13	287.3296	287	10
12	284.0539	284	11
11	280.5570	281	11
10	276.7948	277	11
9	272.7121	275	12
8	268.2316	275	12
7	263.2410	275	13
6	257.5850	275	14
5	251.0180	275	14
4	243.1254	275	20
3	233.1316	275	20
2	219.2930	275	18
1	196.0518	275	13
0	171.7079	275	10

Appendix 3.D: Scoring Tables for Operational and Large Print Conversions—March 2006

Table 3.D.1: Operational and Large Print Conversion—ELA March 2006

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
90	525.5854	450	15
89	504.8536	450	23
88	483.7205	450	27
87	469.0875	450	26
86	458.3778	450	23
85	449.6554	450	21
84	442.1735	442	17
83	435.5592	436	17
82	429.6203	430	17
81	424.2190	424	15
80	419.2688	419	15
79	414.7056	415	14
78	410.4809	410	13
77	406.5335	407	13
76	402.8399	403	12
75	399.3578	399	12
74	396.0603	396	12
73	392.9243	393	11
72	389.9312	390	11
71	387.0643	387	11
70	384.3064	384	10
69	381.6449	382	10
68	379.0696	379	10
67	376.5718	377	10
66	374.1428	374	10
65	371.7740	372	10
64	369.4616	369	9
63	367.1984	367	9
62	364.9792	365	9
61	362.7994	363	9
60	360.6562	361	9
59	358.5467	359	9
58	356.4654	356	9
57	354.4110	354	9
56	352.3799	352	9
55	350.3702	350	9
54	348.3823	348	9
53	346.4108	346	9
52	344.4576	344	9
51	342.5163	343	9
50	340.5899	341	9
49	338.6716	339	9
48	336.7670	337	8
47	334.8673	335	8
46	332.9775	333	8
45	331.0957	331	8

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
44	329.2179	329	9
43	327.3452	327	9
42	325.4766	325	9
41	323.6109	324	9
40	321.7473	322	9
39	319.8872	320	9
38	318.0268	318	9
37	316.1685	316	9
36	314.3085	314	9
35	312.4484	312	9
34	310.5854	311	9
33	308.7200	309	9
32	306.8480	307	9
31	304.9710	305	9
30	303.0844	303	9
29	301.1900	301	9
28	299.2797	299	9
27	297.3519	297	10
26	295.4053	295	10
25	293.4321	293	10
24	291.4304	291	10
23	289.3957	289	10
22	287.3177	287	10
21	285.1912	285	11
20	283.0073	283	11
19	280.7582	281	11
18	278.4342	278	11
17	276.0208	276	11
16	273.5063	275	12
15	270.8636	275	12
14	268.0667	275	12
13	265.1011	275	13
12	261.9352	275	13
11	258.5337	275	14
10	254.8515	275	14
9	250.8253	275	15
8	246.3711	275	16
7	241.3764	275	16
6	235.6779	275	21
5	229.0227	275	24
4	220.9918	275	27
3	210.6940	275	28
2	196.3735	275	26
1	172.2400	275	19
0	147.2238	275	8

Table 3.D.2: Operational and Large Print Conversions—Mathematics March 2006

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
80	517.0695	450	14
79	494.7998	450	20
78	472.5436	450	22
77	458.6470	450	19
76	448.6489	449	17
75	440.7617	441	16
74	434.2047	434	15
73	428.5586	429	13
72	423.5772	424	12
71	419.1029	419	12
70	415.0230	415	11
69	411.2660	411	11
68	407.7708	408	10
67	404.4955	404	10
66	401.4072	401	10
65	398.4771	398	10
64	395.6822	396	9
63	393.0048	393	9
62	390.4364	390	9
61	387.9586	388	9
60	385.5611	386	9
59	383.2359	383	9
58	380.9747	381	8
57	378.7713	379	8
56	376.6180	377	8
55	374.5119	375	8
54	372.4458	372	8
53	370.4169	370	8
52	368.4197	368	8
51	366.4502	366	8
50	364.5088	365	8
49	362.5910	363	8
48	360.6905	361	8
47	358.8082	359	8
46	356.9396	357	8
45	355.0839	355	8
44	353.2380	353	8
43	351.3983	351	8
42	349.5647	350	8
41	347.7357	348	8
40	345.9054	346	8

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
39	344.0754	344	8
38	342.2425	342	8
37	340.4044	340	8
36	338.5592	339	8
35	336.7031	337	8
34	334.8366	335	8
33	332.9560	333	8
32	331.0605	331	8
31	329.1445	329	8
30	327.2080	327	8
29	325.2447	325	8
28	323.2548	323	8
27	321.2359	321	8
26	319.1805	319	8
25	317.0868	317	8
24	314.9503	315	8
23	312.7655	313	8
22	310.5285	311	9
21	308.2332	308	9
20	305.8725	306	9
19	303.4358	303	9
18	300.9171	301	9
17	298.3043	298	9
16	295.5852	296	9
15	292.7464	293	10
14	289.7687	290	10
13	286.6308	287	10
12	283.3057	283	11
11	279.7599	280	11
10	275.9487	276	11
9	271.8191	275	12
8	267.2923	275	12
7	262.2570	275	13
6	256.5609	275	14
5	249.9589	275	14
4	242.0399	275	20
3	232.0359	275	20
2	218.2207	275	18
1	195.1005	275	13
0	171.7079	275	10

Appendix 3.E: Scoring Tables for Operational and Large Print Conversions—May 2006
Table 3.E.1: Operational and Large Print Conversions—ELA May 2006

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
90	525.5854	450	15
89	491.0166	450	23
88	466.2657	450	27
87	452.8784	450	26
86	442.9823	443	23
85	435.0638	435	21
84	428.4412	428	17
83	422.6848	423	17
82	417.5274	418	17
81	412.8351	413	14
80	408.5132	409	14
79	404.4987	404	13
78	400.7499	401	13
77	397.2223	397	12
76	393.8866	394	12
75	390.7200	391	12
74	387.7094	388	11
73	384.8293	385	11
72	382.0635	382	11
71	379.3984	379	10
70	376.8281	377	10
69	374.3358	374	10
68	371.9175	372	10
67	369.5656	370	10
66	367.2728	367	10
65	365.0319	365	9
64	362.8380	363	9
63	360.6872	361	9
62	358.5758	359	9
61	356.4978	356	9
60	354.4510	354	9
59	352.4323	352	9
58	350.4365	350	9
57	348.4664	348	9
56	346.5155	347	9
55	344.5847	345	9
54	342.6681	343	9
53	340.7673	341	8
52	338.8758	339	8
51	336.9995	337	8
50	335.1285	335	8
49	333.2690	333	8
48	331.4168	331	8
47	329.5703	330	8
46	327.7284	328	8
45	325.8913	326	8

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
44	324.0568	324	8
43	322.2251	322	8
42	320.3959	320	8
41	318.5692	319	8
40	316.7429	317	9
39	314.9187	315	9
38	313.0944	313	9
37	311.2711	311	9
36	309.4481	309	9
35	307.6246	308	9
34	305.8005	306	9
33	303.9756	304	9
32	302.1499	302	9
31	300.3221	300	9
30	298.4889	298	9
29	296.6507	297	9
28	294.8062	295	9
27	292.9511	293	10
26	291.0835	291	10
25	289.1949	289	10
24	287.2830	287	10
23	285.3451	285	10
22	283.3751	283	10
21	281.3684	281	10
20	279.3150	279	11
19	277.1875	277	11
18	274.9944	275	11
17	272.7252	275	11
16	270.3671	275	12
15	267.8806	275	12
14	265.2425	275	12
13	262.4456	275	13
12	259.4638	275	13
11	256.2648	275	14
10	252.7605	275	14
9	248.8825	275	15
8	244.5751	275	15
7	239.7236	275	16
6	234.1611	275	21
5	227.6316	275	24
4	219.7100	275	27
3	209.5961	275	28
2	195.5228	275	26
1	171.6936	275	19
0	147.2238	275	8

Table 3.E.2: Operational and Large Print Conversion—Mathematics May 2006

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
80	517.0695	450	14
79	492.2505	450	20
78	469.0140	450	22
77	455.2456	450	19
76	445.3277	445	17
75	437.5156	438	16
74	431.0310	431	14
73	425.4583	425	13
72	420.5509	421	12
71	416.1493	416	12
70	412.1426	412	11
69	408.4580	408	11
68	405.0351	405	10
67	401.8330	402	10
66	398.8158	399	10
65	395.9551	396	9
64	393.2305	393	9
63	390.6262	391	9
62	388.1269	388	9
61	385.7179	386	9
60	383.3905	383	9
59	381.1344	381	8
58	378.9435	379	8
57	376.8082	377	8
56	374.7259	375	8
55	372.6885	373	8
54	370.6926	371	8
53	368.7340	369	8
52	366.8040	367	8
51	364.9069	365	8
50	363.0381	363	8
49	361.1889	361	8
48	359.3619	359	8
47	357.5508	358	8
46	355.7553	356	8
45	353.9726	354	8
44	352.1997	352	8
43	350.4333	350	8
42	348.6752	349	8
41	346.9193	347	8
40	345.1650	345	8

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
39	343.4112	343	8
38	341.6547	342	8
37	339.8943	340	8
36	338.1265	338	8
35	336.3498	336	8
34	334.5628	335	8
33	332.7633	333	8
32	330.9489	331	8
31	329.1154	329	8
30	327.2622	327	8
29	325.3840	325	8
28	323.4788	323	8
27	321.5466	322	8
26	319.5791	320	8
25	317.5736	318	8
24	315.5277	316	8
23	313.4333	313	8
22	311.2881	311	8
21	309.0859	309	8
20	306.8191	307	9
19	304.4796	304	9
18	302.0552	302	9
17	299.5418	300	9
16	296.9202	297	9
15	294.1804	294	10
14	291.3032	291	10
13	288.2652	288	10
12	285.0415	285	10
11	281.5963	282	11
10	277.8863	278	11
9	273.8541	275	12
8	269.4243	275	12
7	264.4835	275	13
6	258.8731	275	14
5	252.3475	275	14
4	244.4877	275	20
3	234.5092	275	20
2	220.6458	275	18
1	197.2590	275	13
0	171.7079	275	10

Appendix 3.F: Scoring Tables for Audio CD and Braille Conversions

Table 3.F.1: Audio CD and Braille Conversion—ELA September and November 2005

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
90	525.5854	450	
89	502.3268	450	
88	479.6512	450	
87	465.9509	450	
86	455.7555	450	23
85	447.3900	447	21
84	440.1800	440	17
83	433.7805	434	17
82	428.0084	428	17
81	422.7358	423	16
80	417.8807	418	15
79	413.3796	413	14
78	409.1787	409	14
77	405.2371	405	13
76	401.5266	402	13
75	398.0115	398	12
74	394.6677	395	12
73	391.4756	391	12
72	388.4201	388	11
71	385.4842	385	11
70	382.6560	383	11
69	379.9246	380	10
68	377.2896	377	10
67	374.7298	375	10
66	372.2439	372	10
65	369.8250	370	10
64	367.4688	367	10
63	365.1677	365	9
62	362.9188	363	9
61	360.7184	361	9
60	358.5638	359	9
59	356.4493	356	9
58	354.3733	354	9
57	352.3327	352	9
56	350.3235	350	9
55	348.3470	348	9
54	346.3966	346	9
53	344.4758	344	9
52	342.5767	343	9
51	340.7014	341	8
50	338.8430	339	8
49	337.0073	337	8
48	335.1840	335	8
47	333.3792	333	8
46	331.5886	332	8
45	329.8103	330	8

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
44	328.0422	328	8
43	326.2845	326	8
42	324.5339	325	8
41	322.7903	323	8
40	321.0504	321	9
39	319.3175	319	9
38	317.5821	318	9
37	315.8505	316	9
36	314.1141	314	9
35	312.3755	312	9
34	310.6297	311	9
33	308.8764	309	9
32	307.1098	307	9
31	305.3309	305	9
30	303.5345	304	9
29	301.7201	302	9
28	299.8814	300	9
27	298.0143	298	9
26	296.1166	296	10
25	294.1825	294	10
24	292.2071	292	10
23	290.1864	290	10
22	288.1136	288	10
21	285.9798	286	10
20	283.7788	284	11
19	281.5006	282	11
18	279.1398	279	11
17	276.6709	277	11
16	274.0884	275	12
15	271.3777	275	
14	268.5171	275	
13	265.4853	275	
12	262.2521	275	
11	258.7836	275	
10	255.0370	275	
9	250.9513	275	
8	246.4439	275	
7	241.4046	275	
6	235.6718	275	
5	228.9941	275	
4	220.9558	275	
3	210.6713	275	
2	196.3700	275	
1	172.2630	275	
0	147.2238	275	

Table 3.F.2: Audio CD and Braille Conversion—Mathematics September and November 2005

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
80	517.0695	450	
79	492.8037	450	
78	469.5510	450	
77	455.7069	450	19
76	445.6975	446	17
75	437.7904	438	16
74	431.2113	431	15
73	425.5463	426	13
72	420.5498	421	13
71	416.0598	416	12
70	411.9737	412	11
69	408.2099	408	11
68	404.7116	405	10
67	401.4371	401	10
66	398.3502	398	10
65	395.4224	395	10
64	392.6345	393	9
63	389.9694	390	9
62	387.4103	387	9
61	384.9452	385	9
60	382.5627	383	9
59	380.2552	380	9
58	378.0126	378	8
57	375.8300	376	8
56	373.7004	374	8
55	371.6181	372	8
54	369.5795	370	8
53	367.5766	368	8
52	365.6078	366	8
51	363.6735	364	8
50	361.7645	362	8
49	359.8799	360	8
48	358.0163	358	8
47	356.1715	356	8
46	354.3433	354	8
45	352.5284	353	8
44	350.7240	351	8
43	348.9302	349	8
42	347.1427	347	8
41	345.3594	345	8
40	343.5797	344	8

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
39	341.8005	342	8
38	340.0204	340	8
37	338.2361	338	8
36	336.4458	336	8
35	334.6484	335	8
34	332.8415	333	8
33	331.0234	331	8
32	329.1892	329	8
31	327.3389	327	8
30	325.4672	325	8
29	323.5727	324	8
28	321.6555	322	8
27	319.7076	320	8
26	317.7257	318	8
25	315.7093	316	8
24	313.6498	314	8
23	311.5460	312	8
22	309.3923	309	8
21	307.1819	307	9
20	304.9066	305	9
19	302.5552	303	9
18	300.1270	300	9
17	297.6038	298	9
16	294.9778	295	9
15	292.2337	292	10
14	289.3521	289	10
13	286.3122	286	10
12	283.0867	283	10
11	279.6422	280	11
10	275.9336	276	11
9	271.9077	275	12
8	267.4853	275	
7	262.5547	275	
6	256.9624	275	
5	250.4619	275	
4	242.6393	275	
3	232.7205	275	
2	218.9644	275	
1	195.8228	275	
0	171.7079	275	

Table 3.F.3: Audio CD and Braille Conversion—ELA February, March, and May 2006

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
90	525.5854	450	15
89	505.0328	450	23
88	484.4100	450	27
87	469.8865	450	26
86	459.2710	450	23
85	450.6264	450	21
84	443.2078	443	17
83	436.6458	437	17
82	430.7480	431	17
81	425.3780	425	16
80	420.4471	420	15
79	415.8893	416	14
78	411.6484	412	14
77	407.6749	408	13
76	403.9433	404	13
75	400.4150	400	12
74	397.0626	397	12
73	393.8641	394	12
72	390.8018	391	11
71	387.8619	388	11
70	385.0315	385	11
69	382.2965	382	10
68	379.6446	380	10
67	377.0742	377	10
66	374.5702	375	10
65	372.1307	372	10
64	369.7504	370	10
63	367.4247	367	9
62	365.1472	365	9
61	362.9151	363	9
60	360.7254	361	9
59	358.5760	359	9
58	356.4616	356	9
57	354.3810	354	9
56	352.3318	352	9
55	350.3102	350	9
54	348.3182	348	9
53	346.3494	346	9
52	344.4078	344	9
51	342.4854	342	9
50	340.5857	341	9
49	338.7013	339	9
48	336.8381	337	9
47	334.9869	335	9
46	333.1532	333	9
45	331.3335	331	9

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
44	329.5246	330	9
43	327.7265	328	9
42	325.9383	326	9
41	324.1574	324	9
40	322.3832	322	9
39	320.6136	321	9
38	318.8493	319	9
37	317.0842	317	9
36	315.3212	315	9
35	313.5539	314	9
34	311.7834	312	9
33	310.0052	310	9
32	308.2174	308	9
31	306.4163	306	9
30	304.6008	305	9
29	302.7661	303	9
28	300.9111	301	9
27	299.0278	299	10
26	297.1135	297	10
25	295.1654	295	10
24	293.1742	293	10
23	291.1363	291	10
22	289.0464	289	10
21	286.8944	287	10
20	284.6739	285	11
19	282.3743	282	11
18	279.9888	280	11
17	277.5031	278	11
16	274.9042	275	12
15	272.1768	275	12
14	269.3001	275	12
13	266.2512	275	13
12	263.0014	275	13
11	259.5148	275	14
10	255.7500	275	14
9	251.6472	275	15
8	247.1227	275	15
7	242.0671	275	16
6	236.3194	275	21
5	229.5834	275	24
4	221.4609	275	27
3	211.1353	275	28
2	196.7887	275	26
1	172.6062	275	19
0	147.2238	275	8

Table 3.F.4: Audio CD and Braille Conversion—Mathematics February, March, and May 2006

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
80	517.0695	450	14
79	493.7783	450	20
78	470.7517	450	22
77	457.0460	450	19
76	447.1384	447	17
75	439.3144	439	16
74	432.8063	433	14
73	427.2054	427	13
72	422.2681	422	12
71	417.8342	418	12
70	413.7903	414	11
69	410.0684	410	11
68	406.6053	407	10
67	403.3622	403	10
66	400.3044	400	10
65	397.4032	397	10
64	394.6361	395	9
63	391.9882	392	9
62	389.4475	389	9
61	386.9958	387	9
60	384.6259	385	9
59	382.3266	382	9
58	380.0929	380	8
57	377.9146	378	8
56	375.7886	376	8
55	373.7082	374	8
54	371.6686	372	8
53	369.6665	370	8
52	367.6941	368	8
51	365.7522	366	8
50	363.8385	364	8
49	361.9463	362	8
48	360.0737	360	8
47	358.2184	358	8
46	356.3779	356	8
45	354.5504	355	8
44	352.7326	353	8
43	350.9222	351	8
42	349.1183	349	8
41	347.3183	347	8
40	345.5187	346	8

Raw Score	Unrounded Scale Score	Rounded Scale Score	CSEM
39	343.7197	344	8
38	341.9181	342	8
37	340.1122	340	8
36	338.2992	338	8
35	336.4768	336	8
34	334.6441	335	8
33	332.7985	333	8
32	330.9381	331	8
31	329.0584	329	8
30	327.1587	327	8
29	325.2336	325	8
28	323.2818	323	8
27	321.3023	321	8
26	319.2872	319	8
25	317.2344	317	8
24	315.1399	315	8
23	312.9977	313	8
22	310.8041	311	8
21	308.5531	309	9
20	306.2374	306	9
19	303.8472	304	9
18	301.3743	301	9
17	298.8096	299	9
16	296.1379	296	9
15	293.3475	293	10
14	290.4187	290	10
13	287.3296	287	10
12	284.0539	284	11
11	280.5570	281	11
10	276.7948	277	11
9	272.7121	275	12
8	268.2316	275	12
7	263.2410	275	13
6	257.5850	275	14
5	251.0180	275	14
4	243.1254	275	20
3	233.1316	275	20
2	219.2930	275	18
1	196.0518	275	13
0	171.7079	275	10

Appendix 3.G: Standard Errors of Theta based on Weighted Raw Scores

Let:

i = 1 represent dichotomous items (with scores U_j) scaled with Rasch model, with ICC $P_{j1}(\theta)$

i = 2 represent polytomous items (with scores Y_j) scaled with Rasch partial credit model; item j has m_j levels; score for k-th level is k-1, with ICC $P_{j2k}(\theta)$

w_{ji}= weight for the j-th item of type i

$$S = \text{rawscore} = \sum_{j=1}^{n_1} w_{j1} U_j + \sum_{j=1}^{n_2} w_{j2} Y_j$$

$$\hat{\theta} = \text{MLE of } \theta$$

$$\text{SEM}(\hat{\theta}) \approx [I(\theta, S)]^{-1/2}$$

$$I(\theta,S) = \frac{\left[\dfrac{d\ E(S \mid \theta)}{d\theta}\right]^2}{\sigma^2(S \mid \theta)}$$ see Lord (1980), pp. 67 and 73.

$$E(S \mid \theta) = \sum_{j=1}^{n_1} w_{j1} P_{j1}(\theta) + \sum_{j=1}^{n_2} w_{j2} \sum_{k=1}^{m_j} (k-1) P_{j2k}(\theta)$$

$$\frac{dE(S \mid \theta)}{d\theta} = \sum_{j=1}^{n_1} w_{j1} P'_{j1}(\theta) + \sum_{j=1}^{n_2} w_{j2} \sum_{k=1}^{m_j} (k-1) P'_{j2k}(\theta)$$

where

$$P'_{j1}(\theta) = P_{j1}(\theta)\left(1 - P_{j1}(\theta)\right)$$

$$P'_{j2k}(\theta) = P_{j2k}(\theta)\left[k - \sum_{r=1}^{m_j} r P_{j2r}(\theta)\right]$$

$$\sigma^2(S \mid \theta) = \sum_{j=1}^{n_1} (w_{j1})^2 P_{j1}(\theta)\left(1 - P_{j1}(\theta)\right) + \sum_{j=1}^{n_2} (w_{j2})^2 \sigma^2(Y_j \mid \theta)$$

$$\sigma^2(Y_j \mid \theta) = \left[\sum_{k=1}^{m_j} (k-1)^2 P_{j2k}(\theta)\right] - \left[\sum_{k=1}^{m_j} (k-1) P_{j2k}(\theta)\right]^2$$

Note also Lord (1980), Eq. (5-23) and Eq. (6-6) for transforming the standard error to other metrics.

Chapter 4: Summary of Item-Level Analyses

This section summarizes item-level statistics obtained for the CAHSEE for classical item analyses, differential item functioning (DIF), and IRT calibrations. The numbers of items included in the analyses are listed in Table 4.1. Items contributing to operational forms are analyzed without the field-test items for the creation of scoring tables. Field-test items are analyzed separately. Therefore, data are summarized separately for operational items and field-test items for each administration. A summary of the items included in the 2005 to 2006 administrations is shown in Table 4.1 below.

Table 4.1: Summary of Items and Forms by Administration

Administration	Operational Items	Field-Test Forms	Number of Field-Test Items*
September 2005			
English-Language Arts	72 MC, 1 CR	1	7
Mathematics	80 MC	1	12
November 2005			
English-Language Arts	72 MC, 1 CR	1	7
Mathematics	80 MC	1	12
February 2006			
English-Language Arts	72 MC, 1 CR	25	173[1]
Mathematics	80 MC	10	120
March 2006			
English-Language Arts	72 MC, 1 CR	50	334[2]
Mathematics	80 MC	35	420
May 2006			
English-Language Arts	72 MC, 1 CR	1	7
Mathematics	80 MC	1	12

Notes.* In some cases the same field-test items may have appeared in more than one form.
[1]Two items were repeated. [2]16 items were repeated.

Classical Item Analyses

For each administration, classical item analyses are completed prior to DIF and item calibration, scaling and equating. These analyses involve computing, for every item in each form, a set of statistics based on classical test theory. Each statistic is designed to provide some key information about the quality of each item from an empirical perspective. The statistics estimated for the CAHSEE are described below.

Classical item difficulty ("p-value"):

This statistic indicates the percent of examinees in the sample that answered the item correctly. Desired p-values generally fall within the range of 0.25 to 0.90.

Item discrimination:

An item is considered discriminating if high ability students tend to answer it correctly and low ability students tend to answer it incorrectly. Item discrimination is generally assessed by comparing how the performance on an item is related to the performance on the criterion score, which is usually the total score on the test. For ELA, the test criterion score is the raw weighted composite score which includes the total number-correct score on the MC items, plus the weighted CR item score. For mathematics, the test criterion score is the total number-correct score.

Item discrimination indices used for CAHSEE include the biserial correlation, the point-biserial correlation, and the polyserial correlation. Both the biserial correlation, or r-biserial, and the point-biserial correlation measure the relationship between a dichotomous item and the criterion score. A dichotomous item is an item that is scored as either correct or incorrect, such as the multiple choice items in ELA or Mathematics. Biserial and point-biserial correlations differ in their assumptions and in how they are computed. In biserial correlations, scores on the dichotomous item are treated as an indicator of a theoretical, underlying, normally-distributed proficiency; the biserial correlation is the estimated correlation between the total test score and a theoretical normally distributed proficiency that was dichotomized to produce the item score. For point-biserial correlations, the item scores are treated as what is observed, which is a binary classification – the correct answer or the incorrect answer. Point-biserial correlations are computed using the following formula:

$$r_{ptbis} = \frac{(\mu_+ - \mu_-)}{\sigma_{tot}} \sqrt{pq} \,,$$

where μ_+ is the mean criterion score of examinees answering the item correctly; μ_- is the mean criterion score of the examines answering the item incorrectly; σ_{tot} is the standard deviation of the criterion score of all examinees answering the item; p is proportion of examines answering the item correctly, and q equals $(1 - p)$.

The relationship of biserial and point-biserial correlations is presented in the following formula, which can also be used to compute the r-biserial correlation:

$$r_{bis} = \frac{\sqrt{pq}}{Y_{zp}} r_{ptbis} \,,$$

where Y_{zp} is the Y ordinate (height) of the standard normal curve at the z–score associated with the p-value for the item. It can be seen that the r_{bis} values are always greater than those of r_{ptbis}.

The polyserial correlation measures the relationship between a polytomous item and the criterion score. A polytomous item is an item that is scored with more than two ordered categories, such as the ELA essay. Polyserial correlations used

for CAHSEE are based on a polyserial regression model (Drasgow, 1988; Lewis & Thayer, 1996), which assumes that performance on an item is determined by the examinee's position on an underlying latent variable that is normally distributed at a given criterion score level. Based on this model, the polyserial correlation can be estimated using the formula:

$$r_{polyreg} = \frac{\beta\,\sigma_{tot}}{\sqrt{\beta^2\sigma_{tot}^2 + 1}}$$

where β is a series of parameters estimated from the data using maximum likelihood and σ_{tot} is the standard deviation of the criterion score.

Item discrimination indices are bounded by -1 and +1. The higher the value, the better the item distinguishes between higher- and lower-scoring examinees. Positive values indicate that the students who do well on the test have higher probability of answering the questions correctly, while negative value indicate that the students who do poorly on the test have higher probability of answering the questions correctly. Therefore, items with negative correlations can indicate serious problems with the item content (e.g., multiple correct answers or unusually difficult or complex content), or can indicate that students have not been taught the content.

Percent of students choosing each response option:

These statistics indicate the percent of examinees that selects each of the available answer options.

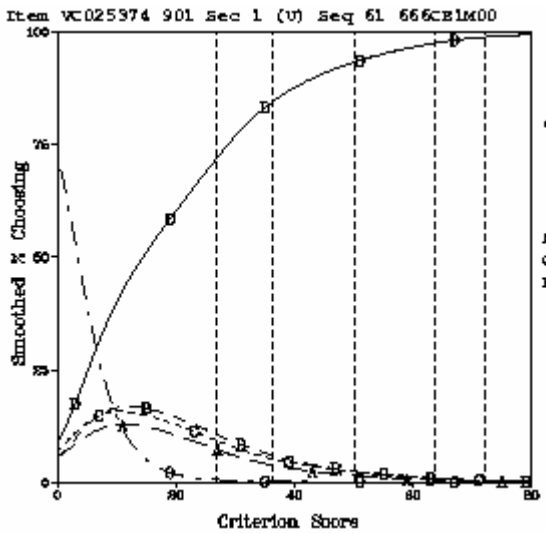
Percent of students omitting an item:

This statistic is useful for identifying problems with test features such as testing time and item/test layout. Typically, we would expect that if students have an adequate amount of testing time and are motivated to respond to the test questions, at least 95% of students should attempt to answer each question. When omit percentages exceeds 5% for a series of items at the end of a timed section, this may indicate that there was insufficient time for students to complete all items. Alternatively, if the omit percentage is greater than 5% for a single item, this could be an indication of an item/test layout problem. For example, students might accidentally skip an item that follows a lengthy stem.

Examples of the item analysis produced for CAHSEE are provided in Figures 4.1 and 4.2 for two items that have been released. For each item, statistical information is presented on the right and the graphical display is presented on the left. The keyed answer is flagged with an asterisk. Statistical information includes the number and percent of examinees choosing each option and their mean and standard deviation on the criterion score. The proportion of the top 20% choosing each option is presented on the far right column. Numbers of students reaching (Rch) or not reaching (NR) the item are also included. In addition, p-value (average item score), r-biserial (correlation with criterion) and percent reached are presented. Point-biserial correlations are not provided in these plots, but they are included in the files loaded in the CAHSEE client item bank.

The graph represents response curves for the key and the distractors of the item, with the horizontal axis indicating the criterion score and the vertical axis (Smoothed % Choosing) displaying the examinee's probability of answering the item correctly or the probability of choosing a distractor at each criterion score. The dashed vertical lines indicate 30th, 40th, 60th, 80th, and 90th percentiles of the distribution of the criterion score so that the information represented by the graph can be related to examinee abilities. Figure 4.1 provides an example of a Mathematics item. It is an easy item, with a p-value of .89. The lowest-scoring examinee has about an 11% probability of getting the item correct. When the total score increases, the probability of answering it correctly increases. Figure 4.2 provides an example of an ELA item with moderate difficulty. The item has an r-biserial correlation of .46 and it can be seen that it discriminates well among examinees across the range of the total score.

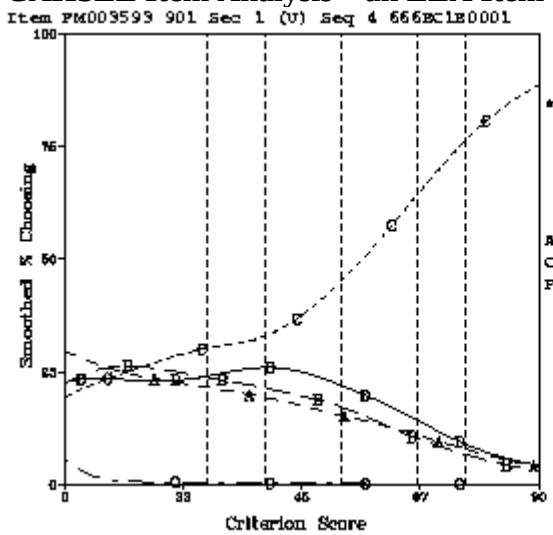
Figure 4.1. CAHSEE Item Analysis – a Mathematics Item



	N	%Tot	Criterion Mean	SD	Top 20%
A	5096	2.8	32.9	12.6	0.2
B	7374	4.1	33.3	12.3	0.3
C	6757	3.8	34.1	13.0	0.3
*D	159654	88.9	51.9	15.8	99.1
Omt	802	0.4	20.6	13.5	0.0
NR	0				
Rch	179623	100.0	49.8	16.6	

Average Item Score 0.89
Correlation with Crit. 0.59
Percent Reached 100.00

Figure 4.2. CAHSEE Item Analysis – an ELA Item



	N	%Tot	Criterion Mean	SD	Top 20%
A	4888	15.0	45.5	16.5	6.7
B	5180	15.9	44.4	15.8	5.6
*C	16148	49.7	58.9	17.2	80.7
D	6227	19.2	46.4	15.4	7.0
Omt	71	0.2	39.4	18.4	0.1
NR	0				
Rch	32514	100.0	52.2	17.9	

Average Item Score 0.50
Correlation with Crit. 0.46
Percent Reached 100.00

Differential Item Functioning (DIF)

Following the classical item analyses, DIF studies were completed. One of the goals of test development is to assemble a set of items that provides an estimate of a student's ability that is as fair and accurate as possible for all groups within the population. DIF statistics are used to identify those items that identifiable groups of students (e.g. females, African Americans, Hispanics) with the same underlying level of ability have different probabilities of answering them correctly. If the item is differentially more difficult for an identifiable subgroup, the item may be measuring something different from the intended construct. However, it is important to recognize that DIF flagged items might be related to actual differences in relevant knowledge or skill (item impact) or statistical Type I error. As a result, DIF statistics are used to identify potential sources of item bias. Subsequent review by content experts and bias/sensitivity committees are required to determine the source and meaning of any differences that are seen.

ETS used two DIF detection methods: the Mantel-Haenszel and standardization approaches. As part of the Mantel-Haenszel procedure, the statistic described by Holland & Thayer (1988), known as MH D-DIF, was used.[2] This statistic is expressed as the differences between the focal

[2] The formula for the estimate of constant odds ratio is:

$$\alpha_{MH} = \frac{\left(\sum_m \frac{R_{rm} W_{fm}}{N_m}\right)}{\left(\sum_m \frac{R_{fm} W_{rm}}{N_m}\right)},$$

and reference groups after conditioning on total test score. This statistic is reported on the ETS delta scale, which is a normalized transformation of item difficulty (proportion correct) with a mean of 13 and a standard deviation of 4. Negative MH D-DIF statistics favor the reference group and positive values favor the focal group. The classification logic used for flagging items is based on a combination of absolute differences and significance testing. Items that are not statistically significantly different based on the MH D-DIF ($p > 0.05$) are considered to have similar performance between the two studied groups; these items are considered to be functioning appropriately. For items where the statistical test indicates significant differences ($p < 0.05$), the effect size is used to determine the direction and severity of the DIF. For the ELA CR item, the Mantel-Haenszel procedure was executed where item categories are treated as integer scores and a chi-square test was carried out with one degree of freedom. The male and white groups are considered as reference groups and the female and other ethnic groups are categorized as focal groups.

Based on these DIF statistics, items are classified into one of three categories and assigned values of A, B, or C (see Table 4.2). Category A items contain negligible DIF, Category B items exhibit slight or moderate DIF, and Category C items have moderate to large values of DIF. Negative values imply that, conditional on the matching variable, the focal group has a lower mean item score than the reference group. In contrast, a positive value implies that, conditional on the matching variable, the reference group has lower mean item score than the focal group.

Table 4.2: DIF Categories

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

For constructed response (CR) items, the MH D-DIF statistic is not calculated; instead the standardization procedure is used in conjunction with the Mantel chi-square statistic. Analogous flagging rules have been developed that are used to classify the CR items into A, B, or C DIF categories. The flagging criteria for constructed response items are:

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where

R_{rm} = number in reference group at ability level m answering the item right,
W_{fm} = number in focal group at ability level m answering the item wrong,
R_{fm} = number in focal group at ability level m answering the item right,
W_{rm} = number in reference group at ability level m answering the item wrong,
N_m = total group at ability level m.

This can then be used in the following formula (Holland & Thayer, 1985):

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

A) If the Mantel Chi-square p-value > 0.05 and/or the Mantel Chi-square p-value < 0.05 and the Standardized Mean Difference (SMD)/SD| ≤ 0.17, the item is classified as A.

B) If the Mantel Chi-square p-value < 0.05 and |SMD/SD| > 0.17 then the item is classified as B.

C) If the Mantel Chi-square p-value < 0.05 and |SMD/SD| > 0.25 then the item is classified as C.

Positive values favor the focal group and negative values favor the reference group.
All DIF analyses were performed according to the procedures specified in the document "CAHSEE DIF Procedures" dated February 22, 2002. According to those procedures, DIF analyses were performed for English Learners for mathematics. From September 2005, DIF analyses were also performed on English Learners for ELA. Operational items flagged for C DIF are reviewed by an expert committee DIF review panel consisting of CAHSEE item development staff, CDE staff responsible for the CAHSEE, external educators identified by CDE, and additional CDE content experts in ELA and mathematics, as needed, to ensure that the items are free from any bias before being used to produce final test scores.

All items flagged were reviewed by a panel of content experts, as specified in the CAHSEE DIF procedures, and found to measure essential test content. Some items were flagged for DIF in more than one administration. If an item passed the review process by the CAHSEE DIF Review Panel, the item was not reviewed a second time.

IRT Analyses

The item calibration studies (see Chapter 3 for details) estimate item difficulty, as measured by the Rasch difficulty parameter estimate (b-value) for both the operational items and the field-test items. In addition, statistics describing the fit of the Rasch model to the data, which is reported in letter categories of A, B, C, D, and F (IRT flag) are also produced. A description and examples of this model-data fit rating scheme are provided in Appendix 4.A. All items receiving a rating of "F" were also rated as "do not use."

The number and percentages of field-test items that received model-data fit ratings of A, B, C or D and were recommended for use in future operational tests are summarized in table 4.3.

Table 4.3: Items Recommended for Future Forms

Administration Date	Subject	Number of Items (%)
September 2005	ELA	7 (100%)
	Mathematics	11(92%)
November 2005	ELA	6 (86%)
	Mathematics	10 (83%)
February 2006	ELA	145 (84%)
	Mathematics	99 (83%)
March 2006	ELA	289 (87%)
	Mathematics	359 (86%)
May 2006	ELA	6 (86%)
	Mathematics	10 (83%)

Summary of Item-Level Statistics

To simplify the presentation of these data, all tables for this section are located in Appendix 4.B to Appendix 4.F. The same numbering system applies from 4.B (September 2005) to 4.F (May 2006) and is listed below in Table 4.4.

Table 4.4: Listing of Summary Tables

Table[1]	Content	Label
4.x.1	Significant Negative DIF: Operational Items	Operational Items Containing Significant Negative DIF
4.x.2	Significant Negative DIF: Field-Test Items	Field-Test Items Containing Significant Negative DIF
4.x.3	Summary of the ELA CR item, including the IRT b-value and step parameters, R-biserial correlation, and DIF results.	Listing of CR Item Statistics – ELA
4.x.4	Statistics for ELA Operational items: IRT b-value and R-biserial for all operational items and by strand	Summary of Operational Item Statistics – ELA
4.x.5	Statistics for mathematics Operational items: IRT b-value and R-biserial for all operational items and by strand	Summary of Operational Item Statistics – Mathematics
4.x.6	Statistics for ELA Field-Test items: IRT b-value and R-biserial for all operational items and by strand	Summary of Field-Test Item Statistics – ELA
4.x.7	Statistics for mathematics Field-Test items: IRT b-value and R-biserial for all operational items and by strand	Summary of Field-Test Item Statistics – Mathematics
4.x.8	IRT model data fit ELA operational items	IRT Model Data Fit Distribution of Operational Items – ELA
4.x.9	IRT model data fit mathematics operational items	IRT Model Data Fit Distribution of Operational Items – Mathematics
4.x.10	IRT model data fit ELA field-test items	IRT Model Data Fit Distribution of Field-Test Items – ELA
4.x.11	IRT model data fit mathematics field-test items	IRT Model Data Fit Distribution of Field-Test Items – Mathematics
4.x.12	Operational DIF classifications – ELA	Distribution of Operational DIF Classifications - ELA
4.x.13	Operational DIF classifications – mathematics	Distribution of Operational DIF Classifications – Mathematics
4.x.14	Field-test DIF classifications – ELA	Distribution of Field-Test DIF Classifications - ELA
4.x.15	Field-test DIF classifications – mathematics	Distribution of Field-Test DIF Classifications – Mathematics

Note: x = Administration, where B=September, C=November, D = February, E = March, F = May.

Appendix 4.A: CAHSEE Field-Test Item Review – Description and Examples of Classification Categories

The categories used by ETS statisticians to classify newly field-tested items for the CAHSEE, based on an evaluation of how well each item fits the Rasch model, are described below. The flagging scheme has categories of A, B, C, D, and F. Descriptors for each category are provided below. The IRT item characteristic curves and empirical data (item-ability regressions) for six recently field-tested items are shown on the next page, starting from the left-hand side upper corner. These six items illustrate the span of the rating categories. The item number in the calibration and ETS identification number for each item ("accession number") are listed next to one of the descriptions for the five possible categories provided below. This number can be used to identify the corresponding item-ability regression plot in the figure.

Flag A (Item 93, FM002619; Item 95, FM002640)

- Good fit of theoretical curve to empirical data along the entire ability range, may have some small divergence at the extremes
- Small Chi-square value relative to the other items in the calibration with similar sample sizes.

Flag B (Item 96, FM002641)

- Good fit at the passing score
- 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 97, FM002767)

- Acceptable fit at the passing score
- 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

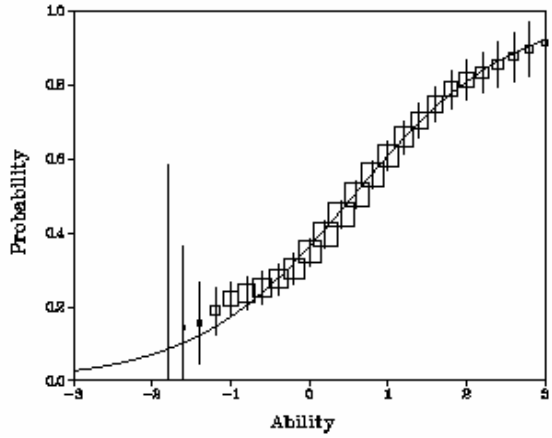
Flag D (Item 94, FM002620)

- Fit at the passing score may be slightly out of error range
- Theoretical curve outside of error range at some regions across ability range
- Empirical curve may have a zero slope at and around the passing score
- Large Chi-square value relative to the other items in the calibration with similar sample sizes
- Items receiving a D fit value also receive a Use Status of R. These items require additional examination and can be used if deemed appropriate.

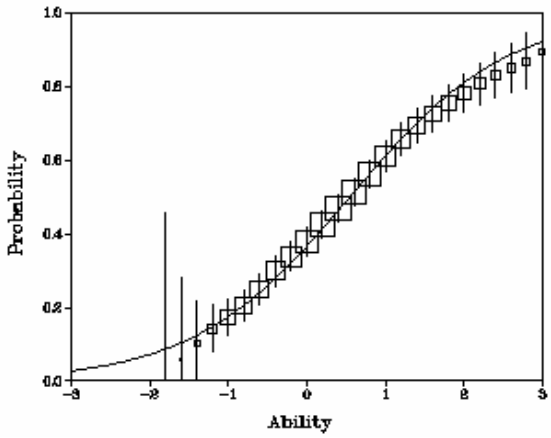
Flag F (Item 98, FM002768)

- Fit at the passing score outside error range
- Theoretical curve outside of error range at most regions across ability range
- Probability of answering item correctly may be greater at lower ability than higher ability (U shaped empirical curve)
- Very large Chi-square value (sometimes larger than three digits) relative to the other items with similar sample sizes
- Items receiving an F fit value also receive a Use Status code of X indication the item should not be used in its current form and must be revised and field-tested before operational use.

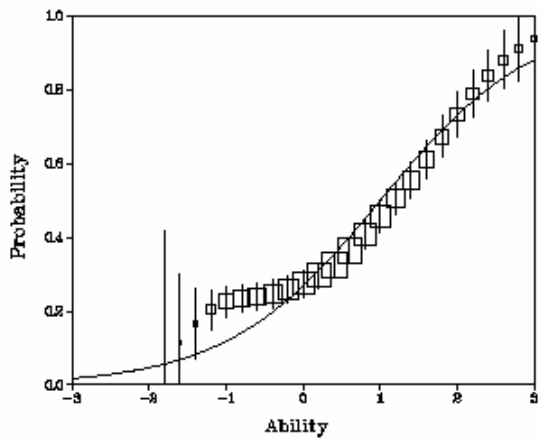
Figure 4.B: Samples of CAHSEE Item-Fit Rating Categories



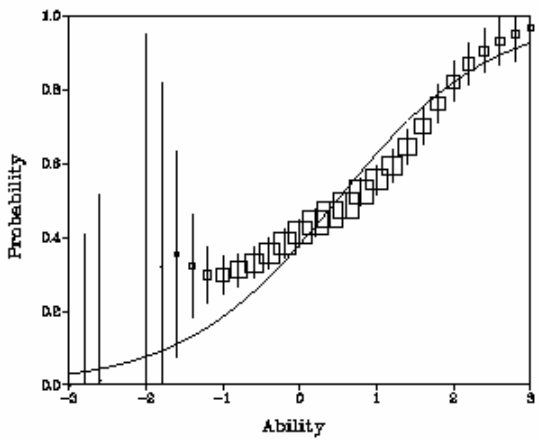
#93 FM002619901 4 Choice P+=0.494
a=0.588 F, b= 0.561, c= 0.000 F, CHI= 11.85



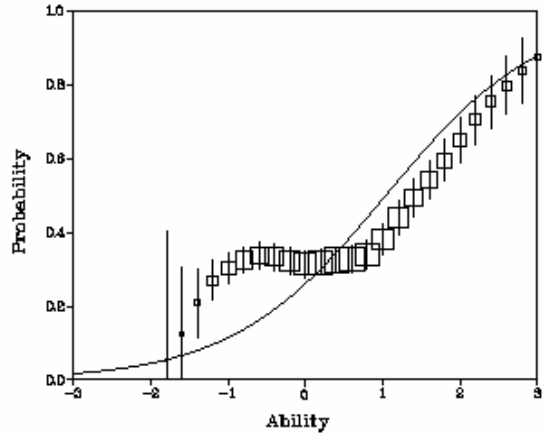
#95 FM002640901 4 Choice P+=0.496
a=0.588 F, b= 0.550, c= 0.000 F, CHI= 10.50



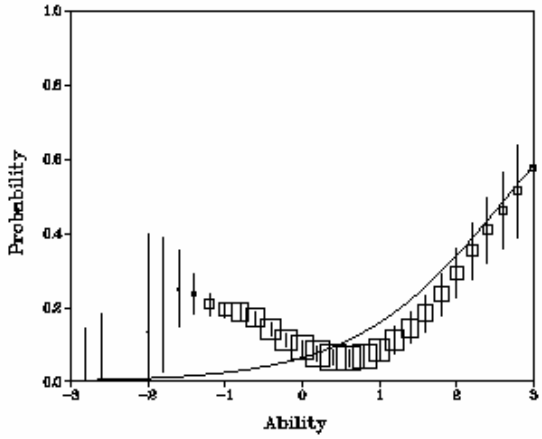
#96 FM002641901 4 Choice P+=0.402
a=0.588 F, b= 1.003, c= 0.000 F, CHI=116.63



#97 FM002767901 4 Choice P+=0.506
a=0.588 F, b= 0.486, c= 0.000 F, CHI=151.58



#94 FM002620901 4 Choice P+=0.395
a=0.588 F, b=1.040, c= 0.000 F, CHI=480.45



#98 FM002768901 4 Choice P+=0.136
a=0.588 F, b= 2.664, c= 0.000 F, CHI=720.60

Appendix 4.B: Item and DIF Statistics for September 2005

Table 4.B.1: Operational Items Containing Significant Negative DIF

Test	Accession #	CAHSEE ID	Form	Item #	Male-Female	White-American Indian	White-Asian	White-Pacific Islander	White-Filipino	White-Combined Asian	White-Hispanic	White-African American	Native English-English Learner
ELA	VC026192	L175B012	0	9	A	A	B-	B-	C-	B-	A	A	A
ELA	VC026193	L175B013	0	10	A	A	A	A	A	A	A	A	C-
ELA	VC019656	L262D003	0	52	A	A	A	A	C-	B-	A	A	A
ELA	VC017423	L10SA412	0	73	A	A	A	A	C-	B-	A	B-	B+
ELA	VC017359	L10SA335	0	74	A	A	C-	A	C-	C-	A	A	A
ELA	VC017443	L10SA440	0	75	A	A	B+	B+	A	A	A	C-	A
MATH	VC023693	M20363	0	9	C-	A	A	A	A	A	A	A	A
MATH	VC024855	M21817	0	30	A	A	A	A	A	A	A	A	C-
MATH	FM003512	M03115	0	34	A	A	A	A	C-	A	A	A	A

Table 4.B.2: Field-Test Items Containing Significant Negative DIF

Test	Accession #	CAHSEE ID	Form	Item #	Male-Female	White-American Indian	White-Asian	White-Pacific Islander	White-Filipino	White-Combined Asian	White-Hispanic	White-African American	Native English-English Learner
MATH	VC023907	M20620	1	18	C-	A	A	A	A	A	A	A	A

Table 4.B.3: Listing of CR Item Statistics—ELA

Accession number	**VC025865**
CAHSEE ID	**L20SA188**
Polyserial correlation	0.75
IRT b-Value	1.051
Step category 1*	2.456
Step category 2	1.386
Step category 3	2.408
Step category 4	-0.759
Step category 5	-0.700
Step category 6	-2.411
Step category 7	-2.381
DIF category, Male-Female	A
DIF category, White-American Indian	A
DIF category, White-Asian	A
DIF category, White-Pacific Islander	B
DIF category, White-Filipino	A
DIF category, White-Combined Asian	A
DIF category, White-Hispanic	A
DIF category, White-African American	A
Least favorable DIF category among all focal groups**	B

Notes: * Step categories refer to the parameters describing each item category in the CR item calibrations.
** This refers to the most disadvantageous DIF category found among all focal groups for which a comparison was made. Positive DIF categories disadvantage the reference group and negative DIF categories disadvantage the focal group.

Table 4.B.4: Summary of Operational Item Statistics—ELA

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	73	-0.11	0.60	-1.70	1.59	0.48	0.10	0.27	0.75
RC	18	-0.37	0.50	-1.37	0.50	0.49	0.08	0.38	0.59
RL	20	-0.19	0.74	-1.70	1.59	0.51	0.11	0.27	0.68
RW	7	-0.11	0.46	-0.74	0.46	0.49	0.08	0.34	0.56
WA	1	1.05	--	1.05	1.05	0.75	--	0.75	0.75
WC	15	-0.06	0.56	-1.32	0.76	0.46	0.09	0.31	0.61
WS	12	0.24	0.39	-0.17	1.11	0.45	0.11	0.27	0.60

Note: RC=Reading Comprehension, RL=Literary Response& Analysis, RW=Word Analysis; WA=Writing Applications, WC=Writing Conventions, WS=Writing Strategies.

Table 4.B.5: Summary of Operational Item Statistics—Mathematics

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	80	-0.26	0.68	-1.82	1.69	0.41	0.12	0.15	0.63
A1	12	0.40	0.51	-0.16	1.69	0.30	0.10	0.21	0.48
AF	20	-0.39	0.62	-1.27	1.07	0.44	0.11	0.21	0.63
MG	18	-0.20	0.56	-0.98	0.84	0.39	0.12	0.19	0.60
MR	8	-0.55	0.61	-1.58	0.18	0.43	0.10	0.31	0.56
NS	17	-0.37	0.58	-1.58	0.66	0.41	0.10	0.25	0.58
PS	13	-0.61	0.80	-1.82	1.33	0.46	0.13	0.15	0.60

Note: A1=Algebra I, AF=Algebra & Functions, MG=Measurement& Geometry, MR=Mathematical Reasoning, NS = Number Sense, PS=Probability & Statistics.

Table 4.B.6: Summary of Field-Test Item Statistics—ELA

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	7	0.86	0.24	0.55	1.20	0.23	0.06	0.14	0.30
RC	4	0.87	0.22	0.61	1.10	0.26	0.04	0.21	0.30
RL	1	0.55	--	0.55	0.55	0.16	--	0.16	0.16
RW	1	0.76	--	0.76	0.76	0.14	--	0.14	0.14
WC	1	1.20	--	1.20	1.20	0.25	--	0.25	0.25

Note. RC=Reading Comprehension; RL=Literary Responses & Analysis; RW = Word Analysis; WC= Writing Conventions

Table 4.B.7: Summary of Field-Test Item Statistics—Mathematics

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	12	0.51	0.79	-0.52	1.94	0.29	0.10	0.10	0.46
A1	2	-0.16	0.51	-0.52	0.20	0.27	0.11	0.19	0.35
AF	4	0.30	0.40	-0.04	0.74	0.28	0.15	0.10	0.40
MG	2	0.80	1.11	0.02	1.58	0.35	0.16	0.23	0.46
MR	1	0.20	--	0.20	0.20	0.40	--	0.40	0.40
NS	4	0.86	0.96	-0.40	1.94	0.30	0.02	0.28	0.33

Note: A1=Algebra I, AF=Algebra & Functions, MG=Measurement& Geometry, MR=Mathematical Reasoning, NS = Number Sense.

Table 4.B.8: IRT Model Data Fit Distribution of Operational Items—ELA

IRT review category	Status	Item count	Percent
A	Use	20	27
B	Use	24	33
C	Use	29	40
Total		73	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.

Table 4.B.9: IRT Model Data Fit Distribution of Operational Items—Mathematics

IRT review category	Status	Item count	Percent
A	Use	27	34
B	Use	22	28
C	Use	31	39
Total		80	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.

Table 4.B.10: IRT Model Data Fit Distribution of Field-Test Items—ELA

IRT review category	Status	Item count	Percent
C	Use	6	86
D[2]	Review	1	14
Total		7	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.
[2] D items were reviewed and rated appropriate before they were included in the operational form.

Table 4.B.11: IRT Model Data Fit Distribution of Field-Test Items—Mathematics

IRT review category	Status	Item count	Percent
A	Use	5	42
B	Use	1	8
C	Use	5	42
N/A	Dropped from Calibration	1	8
Total		12	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.

Table 4.B.12: Distribution of Operational Item DIF Classifications—ELA

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		Total C items across all analyses	
	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	4	5	1	1	0	0	1	1	6	8
B-	3	4	0	0	3	4	5	7	3	4	4	5	0	0	1	1		
A	68	93	73	100	66	90	65	89	62	85	66	90	73	100	71	97		
B+	2	3	0	0	2	3	3	4	4	5	2	3	0	0	0	0		
C+	0	0	0	0	1	1	0	0	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		
Total	73	100	73	100	73	100	73	100	73	100	73	100	73	100	73	100	7	9

Table 4.B.13: Distribution of Operational Item DIF Classifications—Mathematics

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		Total C items across all analyses	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	3
B-	5	6	0	0	3	4	1	1	4	5	1	1	0	0	0	0		
A	71	89	80	100	74	93	78	98	71	89	77	96	80	100	80	100		
B+	3	4	0	0	3	4	1	1	4	5	2	3	0	0	0	0		
C+	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		
Total	80	100	80	100	80	100	80	100	80	100	80	100	80	100	80	100	2	3

Table 4.B.14: Distribution of Field-Test Item DIF Classifications—ELA

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		Total C items across all analyses	
	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
B-	0	0	0	0	0	0	1	14	0	0	0	0	0	0	0	0		
A	7	100	7	100	7	100	6	86	7	100	7	100	7	100	7	100		
B+	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
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	7	100	7	100	7	100	7	100	7	100	7	100	7	100	7	100	0	0

Table 4.B.15: Distribution of Field-Test Item DIF Classifications—Mathematics

	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		Total C items across all analyses	
DIF category	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	1	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8
B-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
A	10	84	12	100	11	92	12	100	12	100	12	100	12	100	12	100		
B+	1	8	0	0	1	8	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
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	12	100	12	100	12	100	12	100	12	100	12	100	12	100	12	100	1	8

Appendix 4.C: Item and DIF Statistics for November 2005

Table 4.C.1: Operational Items Containing Significant Negative DIF

Test	Accession #	CAHSEE ID	Form	Item #	Male-Female	White-American Indian	White-Asian	White-Pacific Islander	White-Filipino	White-Combined Asian	White-Hispanic	White-African American	Native English-English Learner
ELA	VC019752	L266E001	0	1	A	A	A	A	C-	B-	A	A	C-
ELA	VC019763	L266E012	0	2	A	A	A	A	A	A	A	A	C-
ELA	FM007269	L250D004	0	6	A	A	C-	A	B-	C-	A	A	A
MATH	VC023116	M13491	0	3	C-	A	A	A	A	A	A	A	A

Table 4.C.2: Field-Test Items Containing Significant Negative DIF

No items exhibited significant C –DIF.

Table 4.C.3: Listing of CR Item Statistics—ELA

Accession number	**VC020112**
CAHSEE ID	**L290D018**
Polyserial correlation	0.77
IRT b Value	1.3205
Step category 1*	2.5862
Step category 2	1.3465
Step category 3	1.7466
Step category 4	-0.9531
Step category 5	-0.6435
Step category 6	-2.1164
Step category 7	-1.9662
DIF category, Male-Female	A
DIF category, White-American Indian	A
DIF category, White-Asian	A
DIF category, White-Pacific Islander	A
DIF category, White-Filipino	A
DIF category, White-Combined Asian	A
DIF category, White-Hispanic	A
DIF category, White-African American	A
Least favorable DIF category among all focal groups**	A

Notes: * Step categories refer to the parameters describing each item category in the CR item calibrations.
** This refers to the most disadvantageous DIF category found among all focal groups for which a comparison was made. Positive DIF categories disadvantage the reference group and negative DIF categories disadvantage the focal group.

Table 4.C.4: Summary of Operational Item Statistics—ELA

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	73	-0.05	0.65	-1.57	1.59	0.48	0.09	0.19	0.77
RC	18	-0.16	0.80	-1.57	1.59	0.49	0.09	0.35	0.66
RL	20	-0.15	0.47	-0.72	0.78	0.46	0.07	0.30	0.63
RW	7	-0.39	0.70	-1.15	0.80	0.49	0.06	0.38	0.56
WA	1	1.32	--	1.32	1.32	0.77	--	0.77	0.77
WC	15	0.04	0.62	-1.31	0.80	0.47	0.07	0.35	0.62
WS	12	0.23	0.52	-0.83	1.22	0.46	0.10	0.19	0.58

Note: RC=Reading Comprehension, RL=Literary Response& Analysis, RW=Word Analysis; WA=Writing Applications, WC=Writing Conventions, WS=Writing Strategies.

Table 4.C.5: Summary of Operational Item Statistics—Mathematics

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	80	-0.27	0.72	-2.57	1.87	0.44	0.11	0.19	0.70
A1	12	0.23	0.32	-0.51	0.73	0.35	0.08	0.21	0.50
AF	20	-0.41	0.96	-2.57	1.23	0.49	0.11	0.25	0.70
MG	18	-0.12	0.67	-1.10	1.87	0.43	0.11	0.19	0.59
MR	8	-0.26	0.58	-1.05	0.65	0.43	0.07	0.27	0.50
NS	17	-0.46	0.58	-1.72	0.48	0.45	0.10	0.29	0.60
PS	13	-0.48	0.57	-1.36	0.67	0.47	0.09	0.29	0.60

Note: A1=Algebra I, AF=Algebra & Functions, MG=Measurement& Geometry, MR=Mathematical Reasoning, NS = Number Sense, PS=Probability & Statistics.

Table 4.C.6: Summary of Field-Test Item Statistics—ELA

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	7	0.28	0.75	-0.85	1.12	0.31	0.20	-0.06	0.52
WC	1	-0.85	--	-0.85	-0.85	0.45	--	0.45	0.45
WS	6	0.51	0.57	-0.40	1.12	0.29	0.21	-0.06	0.52

Note. WC=Writing Conventions, WS=Writing Strategies.

Table 4.C.7: Summary of Field-Test Item Statistics—Mathematics

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	12	0.31	0.69	-0.77	1.43	0.28	0.17	-0.10	0.48
A1	2	0.20	0.28	0.01	0.40	0.37	0.16	0.26	0.48
AF	2	0.06	0.31	-0.16	0.28	0.33	0.11	0.25	0.40
MG	3	0.47	0.85	-0.40	1.29	0.37	0.02	0.35	0.39
MR	1	1.43	--	1.43	1.43	0.22	--	0.22	0.22
NS	3	1.43	--	1.43	1.43	0.05	0.16	-0.10	0.22
PS	2	-0.13	0.91	-0.77	0.52	0.38	0.01	0.37	0.39

Note: A1=Algebra I, AF=Algebra & Functions, MG=Measurement& Geometry, MR=Mathematical Reasoning, NS = Number Sense, PS=Probability & Statistics.

Table 4.C.8: IRT Model Data Fit Distribution of Operational Items—ELA

IRT review category	Status	Item count	Percent
A	Use	35	48
B	Use	31	42
C	Use	7	10
Total		73	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.

Table 4.C.9: IRT Model Data Fit Distribution of Operational Items—Mathematics

IRT review category	Status	Item count	Percent
A	Use	35	44
B	Use	28	35
C	Use	17	21
Total		80	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.

Table 4.C.10: IRT Model Data Fit Distribution of Field-Test Items—ELA

IRT review category	Status	Item count	Percent
A	Use	2	29
B	Use	3	43
D	Review	1	14
N/A	Dropped from Calibration	1	14
Total		7	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.

Table 4.C.11: IRT Model Data Fit Distribution of Field-Test Items—Mathematics

IRT review category	Status	Item count	Percent
A	Use	2	17
B	Use	6	50
C	Use	2	17
N/A	Dropped from Calibration	2	17
Total		12	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.

Table 4.C.12: Distribution of Operational Item DIF Classifications—ELA

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		Total C items across all analyses	
	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	3	4
B-	1	1	0	0	9	12	3	4	4	5	5	7	0	0	1	1		
A	72	99	73	100	57	78	69	95	64	88	63	86	73	100	72	99		
B+	0	0	0	0	4	5	1	1	4	5	4	5	0	0	0	0		
C+	0	0	0	0	2	3	0	0	0	0	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		
Total	73	100	73	100	73	100	73	100	73	100	73	100	73	100	73	100	5	7

Table 4.C.13: Distribution of Operational Item DIF Classifications—Mathematics

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		Total C items across all analyses	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
B-	1	1	0	0	6	8	1	1	2	3	4	5	0	0	2	3		
A	77	96	80	100	70	88	77	96	76	95	73	91	80	100	77	96		
B+	1	1	0	0	2	3	2	3	2	3	3	4	0	0	1	1		
C+	0	0	0	0	2	3	0	0	0	0	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		
Total	80	100	80	100	80	100	80	100	80	100	80	100	80	100	80	100	3	4

Table 4.C.14: Distribution of Field-Test Item DIF Classifications—ELA

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		Total C items across all analyses	
	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
B-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
A	7	100	7	100	7	100	7	100	7	100	7	100	7	100	7	100		
B+	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
Small N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	7	100	7	100	7	100	7	100	7	100	7	100	7	100	7	100	0	0

Table 4.C.15: Distribution of Field-Test Item DIF Classifications—Mathematics

	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		Total C items across all analyses	
DIF category	**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
B-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
A	12	100	12	100	11	92	12	100	11	92	11	92	12	100	12	100		
B+	0	0	0	0	1	8	0	0	1	8	1	8	0	0	0	0		
C+	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		
Total	12	100	12	100	12	100	12	100	12	100	12	100	12	100	12	100	0	0

Appendix 4.D: Item and DIF Statistics for February 2006

Table 4.D.1: Operational Items Containing Significant Negative DIF

Test	Accession #	CAHSEE ID	Form	Item #	Male-Female	White-American Indian	White-Asian	White-Pacific Islander	White-Filipino	White-Combined Asian	White-Hispanic	White-African American	Native English-English Learner
ELA	FM007667	L217D012	0	9	B-	A	A	A	C-	B-	A	B-	A
ELA	VC017705	L140B002	0	24	A	A	C-	A	B-	C-	B-	A	A
ELA	FM004932	L10SA273	0	72	A	A	C-	B-	C-	C-	B-	B-	C-
ELA	VC017238	L10SA110	0	73	A	A	A	A	A	A	C-	A	C-
ELA	FM007083	L10SA268	0	76	A	A	B-	B-	C-	B-	B-	A	A
MATH	VC021387	M00222	0	4	C-	A	A	A	A	A	A	A	A
MATH	VC023691	M20361	0	6	C-	A	A	A	A	A	A	A	A
MATH	VC024855	M21817	0	29	A	A	B-	A	A	A	A	A	C-

Table 4.D.2: Field-Test Items Containing Significant Negative DIF

Test	Accession #	CAHSEE ID	Form	Item #	Male-Female	White-American Indian	White-Asian	White-Pacific Islander	White-Filipino	White-Combined Asian	White-Hispanic	White-African American	Native English-English Learner
ELA	VC138471	L325G002	1	46	C-	A	B-	**	B-	B-	B-	A	B-
ELA	VC138473	L325G004	2	48	B-	**	B-	**	C-	B-	B-	A	A
ELA	VC138543	L383D002	3	46	A	A	C-	**	C-	C-	C-	B-	B-
ELA	VC138525	L354C021	6	49	A	**	C-	**	B-	C-	A	B-	A
ELA	VC138499	L328G006	12	48	C-	**	B-	**	A	B-	B-	A	A
ELA	VC138564	L3OSA416	17	71	A	**	C-	**	C-	C-	A	A	A
ELA	VC138483	L327G002	18	46	B-	**	A	**	B-	A	C-	B-	B-
ELA	VC020514	L329F005	22	47	A	**	A	**	C-	B-	A	A	A
ELA	VC138570	L3OSA422	22	71	A	**	C-	**	C-	C-	A	B-	A
MATH	VC023695	M20365	3	19	C-	A	A	B-	A	A	A	A	A
MATH	VC138606	M32080	3	21	A	A	B-	B-	A	B-	A	B-	C-
MATH	VC024205	M20990	7	18	C-	A	A	A	A	A	A	A	A
MATH	VC138588	M30819	8	19	B-	A	A	C-	A	A	A	A	A

** Minimum sample size for DIF analysis not met.

Table 4.D.3: Listing of CR Item Statistics—ELA

Accession number	**VC054288**
CAHSEE ID	**L20SA185**
Polyserial correlation	0.82
IRT b Value	1.08867
Step category 1*	2.3384
Step category 2	1.4273
Step category 3	2.4000
Step category 4	-0.6408
Step category 5	-0.6175
Step category 6	-2.4123
Step category 7	-2.4951
DIF category, Male-Female	A
DIF category, White-American Indian	A
DIF category, White-Asian	A
DIF category, White-Pacific Islander	A
DIF category, White-Filipino	A
DIF category, White-Combined Asian	A
DIF category, White-Hispanic	A
DIF category, White-African American	A
Least favorable DIF category among all focal groups**	A

Notes: * Step categories refer to the parameters describing each item category in the CR item calibrations.
** This refers to the most disadvantageous DIF category found among all focal groups for which a comparison was made. Positive DIF categories disadvantage the reference group and negative DIF categories disadvantage the focal group.

Table 4.D.4: Summary of Operational Item Statistics—ELA

Content Area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	73	-0.06	0.71	-1.71	1.64	0.55	0.10	0.35	0.82
RC	18	-0.24	0.55	-0.99	0.92	0.55	0.10	0.38	0.74
RL	20	-0.27	0.66	-1.26	0.90	0.55	0.10	0.37	0.70
RW	7	-0.17	0.83	-1.71	0.94	0.53	0.10	0.36	0.64
WA	1	1.09	--	1.09	1.09	0.82	--	0.82	0.82
WC	15	0.02	0.83	-1.70	1.64	0.57	0.08	0.35	0.71
WS	12	0.43	0.55	-0.51	1.36	0.54	0.08	0.42	0.65

Note: RC=Reading Comprehension, RL=Literary Response& Analysis, RW=Word Analysis; WA=Writing Applications, WC=Writing Conventions, WS=Writing Strategies.

Table 4.D.5: Summary of Operational Item Statistics—Mathematics

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	80	-0.21	0.71	-2.02	1.40	0.56	0.10	0.35	0.77
A1	12	0.32	0.57	-0.66	1.40	0.53	0.10	0.40	0.72
AF	20	-0.37	0.69	-1.45	0.89	0.55	0.09	0.40	0.77
MG	18	-0.02	0.67	-1.25	1.08	0.60	0.08	0.43	0.74
MR	8	0.04	0.61	-0.98	0.89	0.51	0.06	0.42	0.59
NS	17	-0.34	0.82	-2.02	0.73	0.57	0.11	0.38	0.74
PS	13	-0.56	0.40	-1.05	0.60	0.53	0.11	0.35	0.65

Note: A1=Algebra I, AF=Algebra & Functions, MG=Measurement& Geometry, MR=Mathematical Reasoning, NS = Number Sense, PS=Probability & Statistics.

Table 4.D.6: Summary of Field-Test Item Statistics—ELA

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	173	0.78	0.84	-1.39	2.86	0.43	0.16	-0.07	0.69
RC	22	0.98	0.66	-0.21	2.13	0.41	0.16	-0.01	0.65
RL	12	0.36	0.80	-0.55	1.93	0.51	0.21	-0.07	0.68
RW	6	0.14	0.72	-0.68	1.09	0.56	0.10	0.43	0.69
WC	25	0.43	1.11	-1.39	2.86	0.46	0.15	0.17	0.68
WS	108	0.91	0.76	-0.85	2.66	0.41	0.16	-0.04	0.67

Note. RC=Reading Comprehension; RL=Literary Responses & Analysis; RW = Word Analysis; WC= Writing Conventions; WS = Writing Strategies.

Table 4.D.7: Summary of Field-Test Item Statistics—Mathematics

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	120	0.31	0.89	-2.10	3.61	0.48	0.14	0.00	0.70
A1	20	0.37	0.75	-0.65	2.17	0.46	0.12	0.21	0.64
AF	26	0.10	0.80	-1.18	1.79	0.48	0.15	0.00	0.67
MG	32	0.62	1.12	-1.14	3.61	0.42	0.19	0.00	0.70
MR	16	0.09	0.80	-1.19	1.26	0.46	0.11	0.17	0.61
NS	28	0.42	0.73	-1.19	2.36	0.51	0.09	0.20	0.68
PS	14	-0.23	0.74	-2.10	0.69	0.56	0.07	0.40	0.69

Note: A1=Algebra I, AF=Algebra & Functions, MG=Measurement& Geometry, MR=Mathematical Reasoning, NS = Number Sense, PS=Probability & Statistics.

Table 4.D.8: IRT Model Data Fit Distribution of Operational Items—ELA

IRT review category	Status	Item count	Percent
A	Use	23	32
B	Use	26	36
C	Use	20	27
D[2]	Review	4	5
Total		73	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.
[2] D items were reviewed and rated appropriate before they were included in the operational form.

Table 4.D.9: IRT Model Data Fit Distribution of Operational Items—Mathematics

IRT review category	Status	Item count	Percent
A	Use	29	36
B	Use	25	31
C	Use	19	24
D[2]	Review	7	9
Total		80	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.
[2] D items were reviewed and rated appropriate before they were included in the operational form.

Table 4.D.10: IRT Model Data Fit Distribution of Field-Test Items—ELA

IRT review category	Status	Item count	Percent
A	Use	27	16
B	Use	38	22
C	Use	70	40
D[2]	Review	10	6
F	Do not use	19	11
N/A	Dropped from Calibration	9	5
Total		173	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.
[2] D items were reviewed and rated appropriate before they were included in the operational form.

Table 4.D.11: IRT Model Data Fit Distribution of Field-Test Items—Mathematics

IRT review category	Status	Item count	Percent
A	Use	17	14
B	Use	32	27
C	Use	37	31
D[2]	Review	13	11
F	Do not use	17	14
N/A	Dropped from Calibration	4	3
Total		120	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.
[2] D items were reviewed and rated appropriate before they were included in the operational form.

Table 4.D.12: Distribution of Operational Item DIF Classifications—ELA

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		English Proficient English Learner		Total C items across all analyses	
	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	2	3	0	0	3	4	2	3	1	1	0	0	2	3	5	7
B-	2	3	0	0	2	3	2	3	3	4	3	4	3	4	2	3	4	5		
A	70	96	73	100	67	92	71	97	67	92	68	93	69	95	70	96	66	91		
B+	1	1	0	0	2	3	0	0	0	0	0	0	0	0	1	1	1	1		
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		
Total	73	100	73	100	73	100	73	100	73	100	73	100	73	100	73	100	73	100	5	7

Table 4.D.13: Distribution of Operational Item DIF Classifications—Mathematics

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		English Proficient English Learner		Total C items across all analyses	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	4
B-	3	4	0	0	4	5	0	0	1	1	2	3	0	0	0	0	1	1		
A	74	93	80	100	74	93	78	98	79	99	77	96	80	100	80	100	78	98		
B+	1	1	0	0	2	3	2	3	0	0	1	1	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		
Total	80	100	80	100	80	100	80	100	80	100	80	100	80	100	80	100	80	100	3	4

Table 4.D.14: Distribution of Field-Test Item DIF Classifications—ELA

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		English Proficient English Learner		Total C items across all analyses	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	2	1	0	0	4	2	0	0	5	3	4	2	2	1	0	0	0	0	9	5
B-	5	3	0	0	15	9	0	0	14	8	11	6	6	3	11	6	10	5		
A	165	95	48	28	150	87	1	1	150	87	156	90	165	95	162	94	162	94		
B+	1	1	1	1	4	2	0	0	4	2	2	1	0	0	0	0	1	1		
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	124	72	0	0	172	99	0	0	0	0	0	0	0	0	0	0		
Total	173	100	173	100	173	100	173	100	173	100	173	100	173	100	173	100	173	100	9	5

Table 4.D.15: Distribution of Field-Test Item DIF Classifications-Mathematics

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		English Proficient English Learner		Total C items across all analyses	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	2	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	4	3
B-	2	2	1	1	5	4	7	6	5	4	3	3	1	1	4	3	6	5		
A	113	94	119	99	108	90	110	92	112	93	114	95	119	99	116	97	113	94		
B+	3	3	0	0	7	6	2	2	3	3	3	3	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		
Total	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	120	100	4	3

Appendix 4.E: Item and DIF Statistics for March 2006

Table 4.E.1: Operational Items Containing Significant Negative DIF

Test	Accession #	CAHSEE ID	Form	Item #	Male-Female	White-American Indian	White-Asian	White-Pacific Islander	White-Filipino	White-Combined Asian	White-Hispanic	White-African American	Native English-English Learner
MATH	VC024264	M21065	0	17	A	A	C-	A	B-	C-	A	B-	A
MATH	VC026445	M25303	0	33	A	A	C-	A	B-	C-	A	A	C-
MATH	VC022325	M11273	0	53	A	A	C-	B-	B-	B-	A	A	A

Note: Items with C- DIF values were reviewed by the DIF review committee prior to scoring.

Table 4.E.2: Field-Test Items Containing Significant Negative DIF

Test	Accession #	CAHSEE ID	Form	Item #	Male-Female	White-American Indian	White-Asian	White-Pacific Islander	White-Filipino	White-Combined Asian	White-Hispanic	White-African American	Native English-English Learner
ELA	VC151136	L321G006	1	50	A	**	A	**	C-	A	A	A	A
ELA	VC151134	L321G004	2	49	A	**	B-	**	A	A	A	A	C-
ELA	VC151192	L348A013	5	49	C-	**	A	**	B-	A	B-	B-	A
ELA	VC151204	L379D006	9	50	C-	**	B-	**	B-	B-	B-	A	A
ELA	VC151250	L3OSA412	9	74	A	**	C-	**	C-	C-	A	B-	A
ELA	VC151252	L3OSA426	11	74	A	**	A	**	A	A	A	A	C-
ELA	VC151260	L3OSA452	14	74	A	**	B+	**	A	B+	C-	A	A
ELA	VC151226	L3OSA369	31	74	A	**	A	**	A	A	B-	A	C-
ELA	VC151102	L262E018	36	51	C-	**	A	**	A	A	A	B-	A
ELA	VC151231	L3OSA388	36	74	A	**	B-	**	C-	B-	B-	A	C-
ELA	VC151095	L262E005-F	37	47	A	**	B-	**	C-	B-	B-	A	A
ELA	VC151098	L262E012	37	49	C-	**	A	**	A	A	B-	C-	A
ELA	VC020902	L372E001	38	46	A	**	C-	**	C-	C-	A	A	A
ELA	VC020908	L372E007-F	38	51	C-	**	A	**	B-	A	A	A	A
ELA	VC019638	L260E006	41	47	A	**	C-	**	B-	B-	A	A	A

ELA	VC019557	L254E002	42	46	A	**	C-	**	A	B-	A	A	A
ELA	VC019562	L254E007	42	48	A	**	C-	**	A	B-	A	A	A
ELA	VC151104	L307F002	46	47	A	**	A	**	A	A	A	A	C-
ELA	VC151267	L3OSA464	47	74	A	**	B-	**	B-	B-	A	C-	A
ELA	VC020196	L297D001	48	47	A	**	C-	**	B-	C-	A	A	B-
ELA	VC151269	L3OSA468	49	74	A	**	B-	**	C-	B-	A	B-	A
MATH	VC151381	M32098	2	35	A	**	A	**	A	A	A	A	C-
MATH	VC024209	M20996	6	20	C-	**	A	**	A	A	A	A	A
MATH	FM007791	M21857	7	21	A	**	A	**	A	A	A	A	C-
MATH	VC151446	M32239	10	18	C-	**	A	**	A	A	A	A	A
MATH	VC151480	M32306	11	21	A	**	A	**	A	B-	A	A	C-
MATH	VC151372	M32085	13	21	A	**	C-	**	B-	C-	A	B-	B-
MATH	VC025092	M22131	13	35	A	**	C-	**	B-	C-	B-	A	C-
MATH	VC151510	M32355	13	58	C-	**	A	**	B-	A	A	A	A
MATH	VC151382	M32102	14	18	B-	**	A	**	B-	A	A	A	C-
MATH	VC151447	M32241	14	20	C-	**	A	**	A	A	A	A	A
MATH	VC151375	M32089	14	21	B-	**	A	**	C-	A	C-	A	A
MATH	VC151391	M32131	14	57	C-	**	A	**	A	A	A	A	A
MATH	VC151378	M32093	17	35	C-	**	A	**	B-	A	A	A	A
MATH	VC151387	M32125	18	20	C-	**	A	**	B-	A	A	A	**
MATH	VC151479	M32305	18	21	A	**	C-	**	B-	B-	A	A	**
MATH	VC151388	M32128	20	18	C-	**	A	**	B-	A	A	A	**
MATH	VC151333	M31299	22	59	C-	**	B-	**	B-	B-	A	A	**
MATH	VC151370	M32081	26	21	A	**	A	**	C-	B-	A	A	**
MATH	VC151360	M32056	29	18	C-	**	A	**	A	A	A	A	**
MATH	VC151531	M32393	29	21	A	**	C-	**	C-	C-	C-	B-	**
MATH	VC022518	M11836	32	21	A	**	C-	**	A	B-	B-	A	**

** Minimum sample size for DIF analysis not met.

Table 4.E.3: Listing of CR Item Statistics—ELA

Accession number	**VC020387**
CAHSEE ID	**L30SA322**
Polyserial correlation	0.83
IRT b Value	0.7840
Step category 1*	2.2832
Step category 2	1.2476
Step category 3	2.8691
Step category 4	-0.5895
Step category 5	-0.4552
Step category 6	-2.6061
Step category 7	-2.7491
DIF category, Male-Female	A
DIF category, White-American Indian	A
DIF category, White-Asian	A
DIF category, White-Pacific Islander	A
DIF category, White-Filipino	A
DIF category, White-Combined Asian	A
DIF category, White-Hispanic	A
DIF category, White-African American	A
Least favorable DIF category among all focal groups**	A

Notes: * Step categories refer to the parameters describing each item category in the CR item calibrations.
** This refers to the most disadvantageous DIF category found among all focal groups for which a comparison was made. Positive DIF categories disadvantage the reference group and negative DIF categories disadvantage the focal group.

Table 4.E.4: Summary of Operational Item Statistics—ELA

Content Area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	73	-0.02	0.72	-1.77	1.69	0.55	0.08	0.33	0.83
RC	18	0.02	0.76	-1.77	1.67	0.56	0.07	0.44	0.65
RL	20	-0.13	0.68	-1.33	1.23	0.56	0.07	0.41	0.66
RW	7	-0.29	0.66	-1.03	0.79	0.48	0.10	0.33	0.63
WA	1	0.78	--	0.78	0.78	0.83	--	0.83	0.83
WC	15	0.02	0.79	-1.20	1.69	0.55	0.07	0.44	0.64
WS	12	0.15	0.72	-1.69	0.99	0.56	0.08	0.39	0.67

Note: RC=Reading Comprehension, RL=Literary Response& Analysis, RW=Word Analysis; WA=Writing Applications, WC=Writing Conventions, WS=Writing Strategies.

Table 4.E.5: Summary of Operational Item Statistics—Mathematics

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	80	-0.20	0.77	-1.87	1.59	0.57	0.10	0.36	0.78
A1	12	0.31	0.50	-0.78	0.91	0.53	0.12	0.36	0.72
AF	20	-0.36	0.80	-1.78	1.04	0.58	0.09	0.41	0.78
MG	18	-0.01	0.75	-1.87	1.59	0.58	0.11	0.40	0.73
MR	8	-0.39	0.72	-1.71	0.31	0.57	0.07	0.43	0.63
NS	17	-0.21	0.78	-1.62	1.00	0.56	0.08	0.40	0.71
PS	13	-0.70	0.67	-1.71	0.06	0.56	0.10	0.39	0.68

Note: A1=Algebra I, AF=Algebra & Functions, MG=Measurement& Geometry, MR=Mathematical Reasoning, NS = Number Sense, PS=Probability & Statistics.

Table 4.E.6: Summary of Field-Test Item Statistics—ELA

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	334	0.83	0.84	-1.24	3.07	0.44	0.14	-0.17	0.71
RC	83	0.69	0.79	-1.24	2.78	0.47	0.15	-0.17	0.71
RL	77	0.82	0.74	-0.71	2.80	0.44	0.15	0.07	0.66
RW	45	0.60	0.81	-1.06	2.44	0.45	0.13	0.08	0.65
WC	51	1.09	1.07	-1.11	3.07	0.40	0.17	-0.04	0.66
WS	78	0.96	0.81	-0.82	2.85	0.42	0.12	0.10	0.65

Note: RC=Reading Comprehension, RL=Literary Response& Analysis, RW=Word Analysis, WC=Writing Conventions, WS=Writing Strategies.

Table 4.E.7: Summary of Field-Test Item Statistics—Mathematics

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	420	0.58	0.96	-2.01	3.70	0.46	0.15	-0.19	0.74
A1	70	1.17	0.73	-0.54	3.12	0.37	0.19	-0.19	0.66
AF	91	0.49	0.81	-1.51	2.34	0.51	0.11	0.15	0.69
MG	99	0.64	1.11	-1.79	3.70	0.46	0.17	-0.12	0.74
MR	37	0.13	0.93	-1.27	1.95	0.46	0.16	0.12	0.67
NS	98	0.47	0.83	-1.82	2.79	0.49	0.12	0.16	0.72
PS	62	0.23	1.06	-2.01	3.46	0.47	0.14	0.12	0.67

Note: A1=Algebra I, AF=Algebra & Functions, MG=Measurement& Geometry, MR=Mathematical Reasoning, NS = Number Sense, PS=Probability & Statistics.

Table 4.E.8: IRT Model Data Fit Distribution of Operational Items—ELA

IRT review category	Status	Item count	Percent
A	Use	34	47
B	Use	19	26
C	Use	16	22
D[2]	Review	4	5
Total		73	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.
[2] D items were reviewed and rated appropriate before they were included in the operational form.

Table 4.E.9: IRT Model Data Fit Distribution of Operational Items—Mathematics

IRT review category	Status	Item count	Percent
A	Use	29	36
B	Use	11	14
C	Use	28	35
D[2]	Review	12	15
Total		80	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.
[2] D items were reviewed and rated appropriate before they were included in the operational form.

Table 4.E.10: IRT Model Data Fit Distribution of Field-Test Items—ELA

IRT review category	Status	Item count	Percent
A	Use	69	21
B	Use	78	23
C	Use	130	39
D	Review	12	4
F	Do not use	38	11
N/A	Dropped from Calibration	7	2
Total		334	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.
[2] D items were reviewed and rated appropriate before they were included in the operational form.

Table 4.E.11: IRT Model Data Fit Distribution of Field-Test Items—Mathematics

IRT review category	Status	Item count	Percent
A	Use	73	17
B	Use	86	20
C	Use	169	40
D[2]	Review	31	7
F	Do not use	48	11
N/A	Dropped from Calibration	13	3
Total		420	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.
[2] D items were reviewed and rated appropriate before they were included in the operational form.

Table 4.E.12: Distribution of Operational Item DIF Classifications—ELA

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		English proficient-English Learner		Total C items across all analyses	
	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	3	4	2	3	4	5	3	4	4	5	1	1	3	4		
A	71	97	73	100	65	89	71	97	65	89	67	92	69	95	72	99	69	95		
B+	1	1	0	0	5	7	0	0	4	5	3	4	0	0	0	0	1	1		
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		
Total	73	100	73	100	73	100	73	100	73	100	73	100	73	100	73	100	73	100	0	0

Table 4.E.13: Distribution of Operational Item DIF Classifications—Mathematics

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		English proficient-English Learner		Total C items across all analyses	
	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	1	1	3	4
B-	3	4	0	0	2	3	1	1	4	5	2	3	0	0	1	1	3	4		
A	75	94	80	100	73	91	79	99	76	95	76	95	80	100	79	99	76	95		
B+	2	3	0	0	2	3	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[3]	0	0	0	0	0	0	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	3	4

Table 4.E.14: Distribution of Field-Test Item DIF Classifications—ELA

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		English proficient-English Learner		Total C items across all analyses	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	5	1	0	0	6	2	0	0	6	2	3	1	1	0	2	1	5	1	21	6
B-	11	3	2	1	21	6	0	0	23	7	16	5	13	4	9	3	17	5		
A	315	94	8	2	283	85	0	0	293	88	298	89	320	96	323	97	310	93		
B+	3	1	1	0	20	6	0	0	10	3	15	4	0	0	0	0	2	1		
C+	0	0	0	0	4	1	0	0	2	1	2	1	0	0	0	0	0	0	8	3
Small N	0	0	323	97	0	0	334	100	0	0	0	0	0	0	0	0	0	0		
Total	334	100	334	100	334	100	334	100	334	100	334	100	334	100	334	100	334	100	29	9

Table 4.E.15: Distribution of Field-Test Item DIF Classifications—Mathematics

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		English proficient-English Learner		Total C items across all analyses	
	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.
C-	10	2	0	0	5	1	0	0	3	1	3	1	2	0	0	0	5	1	21	5
B-	31	7	0	0	13	3	0	0	29	7	14	3	9	2	19	5	13	3		
A	379	90	0	0	385	92	0	0	384	91	397	95	409	97	401	95	368	88		
B+	0	0	0	0	15	4	0	0	4	1	6	1	0	0	0	0	0	0		
C+	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Small N	0	0	420	100	0	0	420	100	0	0	0	0	0	0	0	0	34	8		
Total	420	100	420	100	420	100	420	100	420	100	420	100	420	100	420	100	420	100	23	5

Appendix 4.F: Item and DIF Statistics for May 2006

Table 4.F.1: Operational Items Containing Significant DIF

Test	Accession #	CAHSEE ID	Form	Item #	Male-Female	White-American Indian	White-Asian	White-Pacific Islander	White-Filipino	White-Combined Asian	White-Hispanic	White-African American	Native English-English Learner
ELA	VC026214	L188B001	0	1	C-	B-	C-	C-	B-	C-	B-	C-	B-
ELA	VC018634	L226E003	0	12	A	A	A	A	A	A	A	A	C+
ELA	FM005500	L226C010	0	26	A	A	A	A	C-	A	A	A	A
ELA	VC070780	L395F007	0	61	A	A	A	A	B+	A	A	A	C+
ELA	FM004932	L10SA273	0	75	A	A	C-	A	A	B-	A	A	C-

Note: Items with C DIF values were reviewed by the DIF review committee prior to scoring.

Table 4.F.2: Field-Test Items Containing Significant DIF

Test	Accession #	CAHSEE ID	Form	Item #	Male-Female	White-American Indian	White-Asian	White-Pacific Islander	White-Filipino	White-Combined Asian	White-Hispanic	White-African American	Native English-English Learner
ELA	VC157625	L324G004	1	47	A	A	B-	B-	C-	B-	B-	B-	A

Table 4.F.3: Listing of CR Item Statistics—ELA

Accession number	**VC025863**
CAHSEE ID	**L30SA239**
Polyserial correlation	0.78
IRT b Value	0.40875
Step category 1*	1.574
Step category 2	1.147
Step category 3	2.926
Step category 4	-0.762
Step category 5	-0.402
Step category 6	-2.293
Step category 7	-2.191
DIF category, Male-Female	A
DIF category, White-American Indian	A
DIF category, White-Asian	A
DIF category, White-Pacific Islander	A
DIF category, White-Filipino	A
DIF category, White-Combined Asian	A
DIF category, White-Hispanic	A
DIF category, White-African American	A
Least favorable DIF category among all focal groups**	A

Notes: * Step categories refer to the parameters describing each item category in the CR item calibrations.
** This refers to the most disadvantageous DIF category found among all focal groups for which a comparison was made. Positive DIF categories disadvantage the reference group and negative DIF categories disadvantage the focal group.

Table 4.F.4: Summary of Operational Item Statistics—ELA

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	73	-0.17	0.62	-1.59	1.09	0.51	0.12	0.28	0.78
RC	18	-0.29	0.62	-1.37	1.09	0.52	0.12	0.36	0.78
RL	20	-0.21	0.45	-1.39	0.46	0.51	0.09	0.28	0.66
RW	7	-0.41	0.50	-1.13	0.49	0.46	0.09	0.36	0.60
WA	1	0.41	--	0.41	0.41	0.78	--	0.78	0.78
WC	15	-0.18	0.80	-1.59	1.01	0.52	0.15	0.29	0.74
WS	12	0.21	0.58	-1.25	0.98	0.50	0.11	0.31	0.70

Note: RC=Reading Comprehension, RL=Literary Response& Analysis, RW=Word Analysis; WA=Writing Applications, WC=Writing Conventions, WS=Writing Strategies.

Table 4.F.5: Summary of Operational Item Statistics—Mathematics

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	80	-0.22	0.61	-1.80	1.10	0.46	0.12	0.24	0.70
A1	12	0.26	0.44	-0.65	0.91	0.37	0.10	0.24	0.58
AF	20	-0.37	0.68	-1.80	1.10	0.53	0.12	0.30	0.70
MG	18	-0.03	0.56	-0.98	0.76	0.47	0.10	0.25	0.63
MR	8	-0.27	0.39	-0.89	0.23	0.49	0.09	0.36	0.62
NS	17	-0.32	0.54	-1.13	0.91	0.45	0.09	0.31	0.63
PS	13	-0.57	0.50	-1.72	0.38	0.47	0.13	0.26	0.62

Note: A1=Algebra I, AF=Algebra & Functions, MG=Measurement& Geometry, MR=Mathematical Reasoning, NS = Number Sense, PS=Probability & Statistics.

Table 4.F.6: Summary of Field-Test Item Statistics—ELA

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	7	0.80	0.58	0.11	1.56	0.30	0.14	0.09	0.50
WC	1	0.39	--	0.39	0.39	0.50	--	0.50	0.50
WS	6	0.88	0.61	0.11	1.56	0.27	0.12	0.09	0.46

Note. WC=Writing Conventions, WS=Writing Strategies.

Table 4.F.7: Summary of Field-Test Item Statistics—Mathematics

Content area	Number of items	IRT b value				R-biserial			
		Mean	SD	Minimum	Maximum	Mean	SD	Minimum	Maximum
Overall	12	-0.03	1.12	-2.72	1.25	0.33	0.22	-0.09	0.67
A1	2	0.78	--	0.78	0.78	0.03	0.17	-0.09	0.15
AF	3	0.27	0.92	-0.57	1.25	0.40	0.17	0.21	0.54
MG	3	0.61	0.45	0.29	0.93	0.23	0.20	0.09	0.45
MR	2	0.28	0.92	-0.37	0.93	0.32	0.25	0.14	0.49
NS	3	-0.12	0.40	-0.37	0.34	0.43	0.08	0.34	0.49
PS	1	-2.72	--	-2.72	-2.72	0.67	--	0.67	0.67

Note: A1=Algebra I, AF=Algebra & Functions, MG=Measurement& Geometry, MR=Mathematical Reasoning, NS = Number Sense, PS=Probability & Statistics.

Table 4.F.8: IRT Model Data Fit Distribution of Operational Items—ELA

IRT review category	Status	Item count	Percent
A	Use	14	19
B	Use	26	36
C	Use	33	45
Total		73	100

Note: [1] Total percent may differ slightly from 100% due to rounding.
[2] D items were reviewed and rated appropriate before they were included in the operational form.

Table 4.F.9: IRT Model Data Fit Distribution of Operational Items—Mathematics

IRT review category	Status	Item count	Percent
A	Use	21	26
B	Use	31	39
C	Use	28	35
Total		80	100

Note: [1] Total percent may differ slightly from 100% due to rounding.
[2] D items were reviewed and rated appropriate before they were included in the operational form.

Table 4.F.10: IRT Model Data Fit Distribution of Field-Test Items—ELA

IRT review category	Status	Item count	Percent
A	Use	1	14
B	Use	1	14
C	Use	4	57
N/A	Dropped from Calibration	1	14
Total		7	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.

Table 4.F.11: IRT Model Data Fit Distribution of Field-Test Items—Mathematics

IRT review category	Status	Item count	Percent
A	Use	1	8
B	Use	5	42
C	Use	4	33
N/A	Dropped from Calibration	2	17
Total		12	100[1]

Note: [1] Total percent may differ slightly from 100% due to rounding.

Table 4.F.12: Distribution of Operational Item DIF Classifications—ELA

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		English proficient-English Learner		Total C items across all analyses	
	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	1	1	1	1	1	1	0	0	1	1	1	1	3	4
B-	0	0	1	1	5	7	1	1	3	4	3	4	1	1	1	1	4	5		
A	71	97	72	99	62	85	70	96	64	88	68	93	72	99	71	97	62	85		
B+	1	1	0	0	4	5	1	1	5	7	1	1	0	0	0	0	4	5		
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	2	3
Small N[3]	0	0	0	0	0	0	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	5	7

Table 4.F.13: Distribution of Operational Item DIF Classifications—Mathematics

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		English proficient-English Learner		Total C items across all analyses	
	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	4	0	0	4	5	1	1	3	4	1	1	0	0	0	0	2	3		
A	75	94	80	100	72	90	77	96	73	91	79	99	80	100	80	100	77	96		
B+	2	3	0	0	4	5	2	3	4	5	0	0	0	0	0	0	1	1		
C+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small N[3]	0	0	0	0	0	0	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	0	0

Table 4.F.14: Distribution of Field-Test Item DIF Classifications—ELA

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		English proficient-English Learner		Total C items across all analyses	
	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	14	0	0	0	0	0	0	0	0	1	14
B-	0	0	0	0	1	14	1	14	0	0	1	14	1	14	1	14	0	0		
A	7	100	7	100	6	86	6	86	6	86	6	86	6	86	6	86	7	100		
B+	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		
Total	7	100	7	100	7	100	7	100	7	100	7	100	7	100	7	100	7	100	1	14

Table 4.F.15: Distribution of Field-Test Item DIF Classifications—Mathematics

DIF category	Male-Female		White-American Indian		White-Asian		White-Pacific Islander		White-Filipino		White-Combined Asian		White-Hispanic		White-African American		English proficient-English Learner		Total C items across all analyses	
	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		
A	12	100	12	100	12	100	12	100	12	100	12	100	12	100	12	100	12	100		
B+	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		
Total	12	100	12	100	12	100	12	100	12	100	12	100	12	100	12	100	12	100	0	0

Chapter 5: Summary of Test-Level Analyses

This chapter summarizes the test-level statistics obtained for the five CAHSEE administrations given in September 2005, November 2005, February 2006, March 2006, and May 2006. Test-level statistics are discussed for the ELA and mathematics examinations. To simplify the presentation of data, all tables for this section except Reliability of Classification (Tables 5.1 to 5.10) are located in Appendices 5.A to 5.E. The same table numbering system applies in Appendices 5.A (September), 5.B (November) 5.C (February) 5.D (March) 5.E. (May), as described in the following paragraphs.

Demographic Distributions

The target population for the CAHSEE is California high school students who are in at least the 10th grade. Summary statistics for the subgroups based on grade, gender, ethnicity, language fluency, economic disadvantage and special education programs are presented in Tables 1 (ELA) and 2 (Mathematics) in the appendices for September (5.A), November (5.B), February (5.C), March (5.D), and May (5.E). These summary statistics are based on all students taking each of the administrations.

Similar summary statistics for demographic groups are presented in Tables 3 and 4 in Appendices 5.A to 5.E. These summary statistics are based on students taking each of the administrations and display the percents at the NCLB cuts of below proficient, proficient and advanced levels.

Selected percentiles, scale-score means and standard deviations for the subgroups mentioned above based on gender, ethnicity, grade, language fluency, economic disadvantage, and special education program are presented for all students in Tables 5 and 6 in Appendices 5.A to 5.E.

Score Distributions and Summary Statistics

Frequency distributions of scale scores for ELA and mathematics are presented in Tables 7 and 8 in Appendices 5.A to 5.E. The passing line indicates the Pass/Not Pass cuts. Similar distributions of scale scores for ELA and mathematics, with the NCLB cuts indicated are presented in Tables 9 and 10 in Appendices 5.A to 5.E. The first line indicates the Advanced level cut; while the second line indicates the Proficient level cut.

Strand Intercorrelations, Reliability and Standard Error of Measurement

Intercorrelations, reliability, and standard error of measurement estimates are reported for each major assessment – mathematics, ELA and the CR item - as well as for each major content area within each assessment: for ELA, word analysis, reading comprehension, literary responses and analysis, writing strategies, writing conventions, and for mathematics, probability and statistics, number sense, algebra and functions, measurement and geometry, and Algebra I. Reliabilities and intercorrelations among the MC English-Language Arts and mathematics sections, CR items, and reported subscores appear in Tables 11 in Appendices 5.A to 5.E. Summary analyses

also include information about rater consistency for each CR item in Tables 12 and 13 in Appendices 5.A to 5.E.

Observed-score correlations are the correlations between the raw scores obtained on the different tests or sections by individual test takers. Across the 2005-2006 administrations, the correlations between the ELA MC and CR item sections ranged from 0.71 to 0.79, while the correlations between ELA and mathematics ranged from .65 to .79. The correlation between the ELA CR item and mathematics ranged 0.48 to 0.62 respectively. Correlations between total ELA and the ELA subscores ranged from 0.70 to 0.92, while correlations between the CR items and the ELA subscores ranged from 0.43 to 0.63. Total mathematics correlated from 0.62 to 0.93 with the mathematics subscores. Correlations between total ELA and the mathematics subscores ranged from 0.36 to 0.74 and correlations between total mathematics and the ELA subscores ranged from 0.45 to 0.72. The unweighted CR item and mathematics subscores correlations ranged from 0.28 to 0.57 (See Table 11).

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 factors other than those of interest. 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 variance) and partly due to random 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 variance. Several different ways of estimating this proportion exist. The estimates of reliability reported in this report 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 the examinee's state of health or the testing environment. Reliability coefficients 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 took another form of the test. The formulas for the internal consistency reliability and for the weighted composite reliability are reported below.

(1) Coefficient Alpha (Cronbach, 1951):

$$\alpha = \frac{n}{n-1}\left[1 - \frac{\sum_{i=1}^{n} \sigma_i^{\,2}}{\sigma_x^2}\right]$$

where n is the number of items, σ_i^2 is the variance of scores on the i-th item, and σ_x^2 is the variance of the total score (sum of scores on the individual items).

(2) Reliability of composite scores (Feldt & Brennan, 1989):

$$\alpha_c = 1 - \frac{\sum_{j=1}^{k} \left(w_j \sigma_{e_j}\right)^2}{\sigma_c^2}$$

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 CR items can be estimated indirectly by examining the correlation between the MC and CR item components in relation to the MC reliability. The lower bound reliability for a CR item in a test with MC items and only 1 CR item can be found using the squared correlation between the MC and CR item portions of the test and dividing by the reliability of the MC portion of the test:

$$(3) \quad \alpha_{cr} = \frac{r_{mc.cr}^2}{\alpha_{mc}}$$

Reliability estimates for the ELA section across the five administrations ranged from 0.91 to 0.94. Reliability estimates for the Mathematics section across the five administrations ranged from 0.89 to 0.95. Reliabilities for the subsections for ELA ranged from 0.54 to 0.83, while the subscore reliabilities for Mathematics ranged from 0.49 to 0.85. The reliabilities for the CR (unweighted) item score ranged from 0.37 to 0.50.

The formula for computing the standard error of measurement is:

$$(4) \quad \sigma_e = \sigma_x \sqrt{1-\alpha}$$

where reliability is the reliability estimated using (1), (2), or (3) above, and σ_x is the standard deviation of the score being examined.

The standard errors of measurement (SEM) for the ELA weighted raw scores and the Mathematics raw scores across the 2005-2006 administrations ranged from 4.04 to 4.62 and 3.70 to 4.09, respectively. The standard errors of measurement for the subsections for ELA ranged from 1.02 to 2.00, while the standard error of measurement of subsections for Mathematics ranged from 1.40 to 2.04. The standard errors for the CR item ranged from 0.50 to 0.59.

CR item and Rater Agreement Summary

The test form for each administration includes one CR item question. It is either a passage-based prompt or a stand-alone prompt. Two raters using the Online Scoring Network (OSN) score responses to each prompt. An important part of the analysis of any multiple-rated CR item is the degree to which the individual rater scores agree. Table 12 in Appendices 5.A to 5.E presents the possible score combinations which each CR item received after two ratings and the distribution of differences between the first and second ratings of each CR item. As the diagonals of the tables show, the majority of raters assigned the same score to a CR item, while most ratings assigning different scores differed by only 1 point. About 1% of CR item scores assigned by the two raters differed by two score points for the November 2005, February 2006 and March 2006

administrations. In the five administrations, no raters differed by more than 2 points. Whenever raters differ by more than one point a third rater is used to determine the score.

Table 13 in Appendices 5.A to 5.E presents the mean of the first and second ratings for each CR item and the corresponding standard deviation, mean absolute difference, and the correlation between the first and second ratings. The mean absolute difference between the first and second ratings for the five administrations ranged from 0.26 to 0.33. The correlation between first and second ratings across the five administrations ranged from 0.72 to 0.79 for the CR item.

Table 13 also summarizes the reasons given for CR items that received a score of zero. Zero scores are given if a CR item is left blank, is illegible, does not address the topic, is a cartoon/drawing, uses inappropriate content, or if a CR item was not written in English. During the five administrations, the percentage of zero scores received on the CR item ranged from 2% to 9% with the majority of zero scores due to CR items, which were either left blank or written off topic. The lowest percentage of zero scores for the CR item was in the February 2006 and March 2006 administrations and the largest percentage was in the November 2005 administration. Most 10th graders are 1st time test-takers during the February and March 2006 administrations. The November 2005 administration consists of more repeat test-takers.

Reliability for Sub-Groups

Reliabilities (REL) and standard error of measurement estimates (SEMS) are reported for sub groups for the two census administrations, where larger case counts are available: February and March of 2006. Tables 5.C.14 in Appendix 5.C shows reliabilities and standard errors of measurement for total scores and subscores for gender, ethnic, accommodation, non-accommodation, English learner and English proficient groups for the ELA February 2006 administration and Tables 5.C.15 for the February 2006 administration in mathematics. Tables 5.D.14 and 5.D.15 in Appendix 5.D provide reliabilities and SEMS for the same subgroups for ELA and mathematics for the March 2006 administration. The case counts for these reliabilities also appear in these tables.

Reliability estimates for the ELA composite (MC+CR) scores are similar for the gender groups across the two administrations. The SEMS are slightly lower for the female group than the male group. In general, although reliabilities and SEMS for the ethnic groups are more variable, the Asian group had higher reliabilities and lower SEMS. All reliabilities are greater than 0.90.

The reliabilities for the accommodation groups are slightly lower than the non-accommodation group and the SEMS are slightly higher. Reliabilities for the English Learner group are slightly lower than that for the English Proficient group. SEMS are higher for the English Learner group than the English Proficient group.

Reliabilities and SEMS for the mathematics total score are similar for gender groups. Reliabilities for ethnic groups are higher for the Asian American and White groups. SEMS for these same groups are lower. Reliabilities and SEMS for the accommodation groups and the non-accommodation groups are similar. Reliability for the English Proficient Group is higher than

that for the English Learner group whereas the SEMS are higher for the English Learner group than the English Proficient group.

Decision Classification Analyses

The method 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 the alternate (parallel) form. RELCLASS-COMP estimates decision *accuracy* using an estimated multivariate distribution of reported classifications on the current form of the exam and the classifications based on an all-forms average (true score). 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 the cut score is estimated by collapsing the multivariate distribution at the passing score boundary into a *n* by *n* table (where *n* is the number of proficiency levels) and summing the entries in the diagonal.

The reliability classification results for the NCLB cuts at the advanced and proficient levels, for both accuracy and consistency, are reported in Tables 5.1, 5.3, 5.5, 5.7 and 5.9. During the five administrations the decision accuracy for ELA at the advanced level ranged from 0.93 to 0.98, while the decision accuracy for mathematics at the advanced level ranged from 0.96 to 0.99. The decision consistency for ELA at the advanced level ranged from 0.90 to 0.97, while the decision consistency for mathematics at the advanced level ranged from 0.94 to 0.99. The decision accuracy for ELA at the proficient level ranged from 0.92 to 0.96, while the decision accuracy for mathematics at the proficient level ranged from 0.94 to 0.97. The decision consistency for ELA at the proficient level ranged from 0.89 to 0.95, while the decision consistency for mathematics ranged from 0.92 to 0.96 at the proficient level.

The reliability classification results for the cuts at the pass/not pass levels, for both accuracy and consistency are reported in Tables 5.2, 5.4, 5.6, 5.8 and 5.10. During the five administrations the decision accuracy for ELA at the pass/not pass level ranged from 0.91 to 0.94, while the decision accuracy for mathematics at the pass/not pass level ranged from 0.92 to 0.94. The decision consistency for ELA at the pass/not pass level ranged from 0.88 to 0.92, while the decision consistency for mathematics ranged from 0.89 to 0.92. The magnitudes of the numbers (0.88 or above) reflect a high level of accuracy and consistency in the student classifications.

Table 5.1: NCLB Reliability Classifications: September 2005

English-Language Arts
Decision Accuracy

Classification on all-forms average*				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (77-90)	0.02	0.01	0.00	0.04
Proficient (69-76)	0.00	0.04	0.02	0.06
Below Proficient (0-68)	0.00	0.02	0.89	0.91
Estimated Proportion Correctly Classified at Advanced				0.98
Estimated Proportion Correctly Classified at Proficient				0.96

* True Score

Decision Consistency

Classification on all-forms average				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (77-90)	0.02	0.01	0.01	0.04
Proficient (69-76)	0.01	0.03	0.02	0.06
Below Proficient (0-68)	0.00	0.03	0.87	0.91
Estimated Proportion Consistently Classified at Advanced				0.97
Estimated Proportion Consistently Classified at Proficient				0.94

Mathematics
Decision Accuracy

Classification on all-forms average*				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (73-80)	0.00	0.00	0.00	0.01
Proficient (59-72)	0.00	0.04	0.01	0.05
Below Proficient (0-58)	0.00	0.01	0.93	0.94
Estimated Proportion Correctly Classified at Advanced				0.99
Estimated Proportion Correctly Classified at Proficient				0.97

* True Score

Decision Consistency

Classification on all-forms average				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (73-80)	0.00	0.00	0.00	0.01
Proficient (59-72)	0.00	0.03	0.01	0.05
Below Proficient (0-58)	0.00	0.02	0.92	0.94
Estimated Proportion Consistently Classified at Advanced				0.99
Estimated Proportion Consistently Classified at Proficient				0.96

Table 5.2: Pass/Not Pass Classifications: September 2005

English-Language Arts
Decision Accuracy

Classification on all-forms average*			
Placement Score	Category Pass	Category Fail	Category Total
56-90	0.28	0.04	0.33
0-55	0.04	0.63	0.67
Estimated Proportion Correctly Classified			0.91

*True Score

Decision Consistency

Classification on all-forms average			
Placement Score	Category Pass	Category Fail	Category Total
56-90	0.27	0.06	0.33
0-55	0.06	0.61	0.67
Estimated Proportion Consistently Classified			0.88

Mathematics
Decision Accuracy

Classification on all-forms average*			
Placement Score	Category Pass	Category Fail	Category Total
44 - 80	0.26	0.04	0.30
0 - 43	0.04	0.66	0.70
Estimated Proportion Correctly Classified			0.92

*True Score

Decision Consistency

Classification on all-forms average			
Placement Score	Category Pass	Category Fail	Category Total
44 - 80	0.25	0.06	0.30
0 - 43	0.06	0.64	0.70
Estimated Proportion Consistently Classified			0.89

Table 5.3: NCLB Reliability Classifications: November 2005

English-Language Arts
Decision Accuracy

Classification on all-forms average*				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (76-90)	0.02	0.02	0.00	0.04
Proficient(68-75)	0.00	0.04	0.02	0.06
Below Proficient (0-67)	0.00	0.02	0.88	0.90
Estimated Proportion Correctly Classified at Advanced				0.98
Estimated Proportion Correctly Classified at Proficient				0.95

* True Score

Decision Consistency

Classification on all-forms average				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (76-90)	0.02	0.01	0.01	0.04
Proficient (68-75)	0.01	0.03	0.02	0.06
Below Proficient (0-67)	0.00	0.04	0.86	0.90
Estimated Proportion Consistently Classified at Advanced				0.97
Estimated Proportion Consistently Classified at Proficient				0.93

Mathematics
Decision Accuracy

Classification on all-forms average*				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (73-80)	0.00	0.01	0.01	0.02
Proficient (59-72)	0.00	0.06	0.01	0.06
Below Proficient (0-58)	0.00	0.02	0.90	0.92
Estimated Proportion Correctly Classified at Advanced				0.99
Estimated Proportion Correctly Classified at Proficient				0.97

* True Score

Decision Consistency

Classification on all-forms average				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (73-80)	0.01	0.01	0.00	0.02
Proficient (59-72)	0.00	0.05	0.01	0.06
Below Proficient (0-58)	0.00	0.03	0.89	0.92
Estimated Proportion Consistently Classified at Advanced				0.99
Estimated Proportion Consistently Classified at Proficient				0.95

Table 5.4: Pass/Not Pass Classifications: November 2005

English-Language Arts
Decision Accuracy

Classification on all-forms average*			
Placement Score	Category Pass	Category Fail	Category Total
54 - 90	0.34	0.05	0.39
0 - 53	0.04	0.57	0.61
Estimated Proportion Correctly Classified			0.91

*True Score

Decision Consistency

Classification on all-forms average			
Placement Score	Category Pass	Category Fail	Category Total
54 - 90	0.32	0.06	0.39
0 - 53	0.06	0.55	0.61
Estimated Proportion Consistently Classified			0.87

Mathematics
Decision Accuracy

Classification on all-forms average*			
Placement Score	Category Pass	Category Fail	Category Total
44 - 80	0.30	0.04	0.34
0 - 43	0.04	0.63	0.66
Estimated Proportion Correctly Classified			0.92

*True Score

Decision Consistency

Classification on all-forms average			
Placement Score	Category Pass	Category Fail	Category Total
44 - 80	0.29	0.05	0.34
0 - 43	0.06	0.61	0.66
Estimated Proportion Consistently Classified			0.89

Table 5.5: NCLB Reliability Classifications: February 2006

English-Language Arts
Decision Accuracy

Classification on all-forms average*				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (76-90)	0.18	0.04	0.00	0.21
Proficient (68-75)	0.04	0.13	0.04	0.20
Below Proficient (0-67)	0.00	0.04	0.55	0.59
Estimated Proportion Correctly Classified at Advanced				0.93
Estimated Proportion Correctly Classified at Proficient				0.92

* True Score

Decision Consistency

Classification on all-forms average				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (76-90)	0.17	0.05	0.00	0.21
Proficient (68-75)	0.05	0.10	0.05	0.20
Below Proficient (0-67)	0.00	0.05	0.53	0.59
Estimated Proportion Consistently Classified at Advanced				0.90
Estimated Proportion Consistently Classified at Proficient				0.89

Mathematics
Decision Accuracy

Classification on all-forms average*				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (72-80)	0.09	0.02	0.00	0.12
Proficient (58-71)	0.01	0.20	0.03	0.23
Below Proficient (0-57)	0.00	0.03	0.62	0.65
Estimated Proportion Correctly Classified at Advanced				0.96
Estimated Proportion Correctly Classified at Proficient				0.94

* True Score

Decision Consistency

Classification on all-forms average				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (72-80)	0.09	0.03	0.00	0.12
Proficient (58-71)	0.02	0.18	0.04	0.23
Below Proficient (0-57)	0.00	0.04	0.61	0.65
Estimated Proportion Consistently Classified at Advanced				0.95
Estimated Proportion Consistently Classified at Proficient				0.92

Table 5.6: Pass/Not Pass Classifications: February 2006

English-Language Arts
Decision Accuracy

Classification on all-forms average*			
Placement Score	Category Pass	Category Fail	Category Total
55 - 90	0.64	0.03	0.67
0 - 54	0.03	0.30	0.33
Estimated Proportion Correctly Classified			0.94

*True Score

Decision Consistency

Classification on all-forms average			
Placement Score	Category Pass	Category Fail	Category Total
55 - 90	0.62	0.05	0.67
0 - 54	0.04	0.29	0.33
Estimated Proportion Consistently Classified			0.91

Mathematics
Decision Accuracy

Classification on all-forms average*			
Placement Score	Category Pass	Category Fail	Category Total
43 - 80	0.60	0.03	0.63
0 - 42	0.03	0.34	0.37
Estimated Proportion Correctly Classified			0.94

*True Score

Decision Consistency

Classification on all-forms average			
Placement Score	Category Pass	Category Fail	Category Total
43 - 80	0.59	0.04	0.63
0 - 42	0.04	0.32	0.37
Estimated Proportion Consistently Classified			0.91

Table 5.7: NCLB Reliability Classifications: March 2006

English-Language Arts
Decision Accuracy

Classification on all-forms average*				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (76-90)	0.23	0.04	0.00	0.26
Proficient (69-75)	0.03	0.10	0.04	0.18
Below Proficient (0-68)	0.00	0.04	0.53	0.56
Estimated Proportion Correctly Classified at Advanced				0.93
Estimated Proportion Correctly Classified at Proficient				0.93

* True Score

Decision Consistency

Classification on all-forms average				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (76-90)	0.21	0.04	0.00	0.26
Proficient (69-75)	0.05	0.08	0.05	0.18
Below Proficient (0-68)	0.01	0.05	0.51	0.56
Estimated Proportion Consistently Classified at Advanced				0.90
Estimated Proportion Consistently Classified at Proficient				0.89

Mathematics
Decision Accuracy

Classification on all-forms average*				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (72-80)	0.11	0.02	0.00	0.14
Proficient (58-71)	0.02	0.22	0.03	0.27
Below Proficient (0-57)	0.00	0.03	0.57	0.59
Estimated Proportion Correctly Classified at Advanced				0.96
Estimated Proportion Correctly Classified at Proficient				0.94

* True Score

Decision Consistency

Classification on all-forms average				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (72-80)	0.11	0.03	0.00	0.14
Proficient (58-71)	0.03	0.20	0.04	0.27
Below Proficient (0-57)	0.00	0.04	0.55	0.59
Estimated Proportion Consistently Classified at Advanced				0.94
Estimated Proportion Consistently Classified at Proficient				0.92

Table 5.8: Pass/Not Pass Classifications: March 2006

English-Language Arts
Decision Accuracy

Classification on all-forms average*			
Placement Score	Category Pass	Category Fail	Category Total
55 - 90	0.68	0.03	0.71
0 - 54	0.03	0.26	0.29
Estimated Proportion Correctly Classified			0.94

*True Score

Decision Consistency

Classification on all-forms average			
Placement Score	Category Pass	Category Fail	Category Total
55 - 90	0.67	0.04	0.71
0 - 54	0.04	0.25	0.29
Estimated Proportion Consistently Classified			0.92

Mathematics
Decision Accuracy

Classification on all-forms average*			
Placement Score	Category Pass	Category Fail	Category Total
42 - 80	0.67	0.03	0.70
0 - 41	0.03	0.27	0.30
Estimated Proportion Correctly Classified			0.94

*True Score

Decision Consistency

Classification on all-forms average			
Placement Score	Category Pass	Category Fail	Category Total
42 - 80	0.66	0.04	0.70
0 - 41	0.04	0.26	0.30
Estimated Proportion Consistently Classified			0.92

Table 5.9: NCLB Reliability Classifications: May 2006

English-Language Arts
Decision Accuracy

Classification on all-forms average*				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (79-90)	0.02	0.01	0.00	0.04
Proficient (72-78)	0.00	0.03	0.02	0.06
Below Proficient (0-71)	0.00	0.01	0.89	0.90
Estimated Proportion Correctly Classified at Advanced				0.98
Estimated Proportion Correctly Classified at Proficient				0.96

* True Score

Decision Consistency

Classification on all-forms average*				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (79-90)	0.02	0.01	0.01	0.04
Proficient (72-78)	0.01	0.03	0.02	0.06
Below Proficient (0-71)	0.00	0.02	0.87	0.90
Estimated Proportion Consistently Classified at Advanced				0.97
Estimated Proportion Consistently Classified at Proficient				0.95

Mathematics
Decision Accuracy

Classification on all-forms average*				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (73-80)	0.01	0.01	0.00	0.02
Proficient (59-72)	0.00	0.06	0.01	0.07
Below Proficient (0-58)	0.00	0.01	0.89	0.91
Estimated Proportion Correctly Classified at Advanced				0.99
Estimated Proportion Correctly Classified at Proficient				0.97

* True Score

Decision Consistency

Classification on all-forms average*				
Placement (Raw Score)	Category	Category	Category	Category
	Advanced	Proficient	Below Proficient	Total
Advanced (73-80)	0.01	0.01	0.00	0.02
Proficient (59-72)	0.00	0.06	0.02	0.07
Below Proficient (0-58)	0.00	0.02	0.88	0.91
Estimated Proportion Consistently Classified at Advanced				0.99
Estimated Proportion Consistently Classified at Proficient				0.96

Table 5.10: Pass/Not Pass Classifications: May 2006

English-Language Arts
Decision Accuracy

Classification on all-forms average*			
Placement Score	Category Pass	Category Fail	Category Total
58 - 90	0.27	0.03	0.30
0 - 57	0.04	0.65	0.70
Estimated Proportion Correctly Classified			0.93

*True Score

Decision Consistency

Classification on all-forms average			
Placement Score	Category Pass	Category Fail	Category Total
58 - 90	0.26	0.04	0.30
0 - 57	0.06	0.63	0.70
Estimated Proportion Consistently Classified			0.89

Mathematics
Decision Accuracy

Classification on all-forms average*			
Placement Score	Category Pass	Category Fail	Category Total
43 - 80	0.28	0.03	0.31
0 - 42	0.04	0.65	0.69
Estimated Proportion Correctly Classified			0.93

*True Score

Decision Consistency

Classification on all-forms average*			
Placement Score	Category Pass	Category Fail	Category Total
43 - 80	0.27	0.04	0.31
0 - 42	0.05	0.63	0.69
Estimated Proportion Consistently Classified			0.91

Table 5.11 is a listing of demographic summaries, frequency distributions, intercorrelations, reliability and standard error of measurement of sub groups for each administration found in Appendices 5.A. to 5.E.

Table 5.11: Listing of Demographic Summaries, Frequency Distributions, Intercorrelations, and Reliability and SEMS of Sub Groups Tables

Table[1]	Content	Label
5.x.1	Scale Score summary statistics and Passing Rates for all examinees - ELA	Demographic Summary For All Examinees - ELA
5.x.2	Scale Score summary statistics and Passing Rates for all examinees - Mathematics	Demographic Summary For All Examinees - Mathematics
5.x.3	NCLB Summary for all Examinees - ELA	NCLB Demographic Summary for All Examinees - ELA
5.x.4	NCLB Summary for all Examinees - Mathematics	NCLB Demographic Summary for All Examinees - Mathematics
5.x.5	Scale Score Percentiles for all examinees - ELA	Demographic Summary For All Examinees - ELA
5.x.6	Scale Score Percentiles for all examinees - Mathematics	Demographic Summary For All Examinees - Mathematics
5.x.7	Frequency distributions highlighted at Pass line- ELA	Frequency Distributions -ELA
5.x.8	Frequency distributions highlighted at Pass line- Mathematics	Frequency Distributions - Mathematics
5.x.9	Frequency distributions highlighted at NCLB cuts - ELA	Frequency Distributions - ELA
5.x.10	Frequency distributions highlighted at NCLB Cuts - Mathematics	Frequency Distributions - Mathematics
5.x.11	Intercorrelations and Reliability Estimates	Intercorrelations and Reliability Estimates By Section
5.x.12	CR Item first and second agreement ratings	Agreement of First and Second Ratings on CR item
5.x.13	CR Item Summary statistics	Summary Statistics for CR item
5.x.14	Reliability and SEM for Sub groups-ELA	Reliabilities and Standard Errors of Measurement for Sub- Groups - ELA
5.x.15	Reliability and SEM for Sub groups-Mathematics	Reliabilities and Standard Errors of Measurement for Sub- Groups - Mathematics

Note: [1] x = Administration, where A=September, B=November, C=February, D=March, E=May.
Tables 5.x.14 and 5.x.15 are only for February and March administrations.

Appendix 5.A: Demographic Summaries, Frequency Distributions, Intercorrelations, and Reliability and SEMS of Sub Groups—September 2005

Table 5.A.1: Demographic Summary for All Examinees[1] ELA—September 2005

	N Tested	N Pass	% Pass	N Fail	% Fail	Mean Scale Score	Reading [2] Avg. % Correct			Writing [2] Avg. % Correct		Writing Application Avg. Score
							WA	RC	LR/A	WS	WC	Essay
Total Examinees	45980	15307	33%	30673	67%	338	56%	61%	57%	48%	54%	1.8
Grade												
Tenth												
Eleventh	21121	7172	34%	13949	66%	338	55%	60%	57%	48%	55%	1.8
Twelfth	24226	7797	32%	16429	68%	338	55%	61%	56%	48%	54%	1.8
Adult Education	633	338	53%	295	47%	355	69%	72%	67%	59%	61%	2
Unknown												
Gender												
Male	27490	8754	32%	18736	68%	336	55%	60%	56%	47%	53%	1.8
Female	18404	6519	35%	11885	65%	342	57%	62%	58%	51%	57%	1.9
Unknown	86	34	40%	52	60%	341	57%	62%	58%	48%	55%	1.8
Race/Ethnicity												
American Indian or Alaska Native	435	171	39%	264	61%	343	59%	64%	60%	49%	56%	1.9
Asian	2262	689	30%	1573	70%	339	52%	59%	56%	51%	58%	1.9
Pacific Islander	295	108	37%	187	63%	342	57%	61%	58%	50%	55%	2
Filipino	534	234	44%	300	56%	349	60%	65%	62%	55%	62%	2
Hispanic or Latino	27743	7828	28%	19915	72%	334	53%	58%	54%	47%	53%	1.8
African American	4983	1629	33%	3354	67%	336	54%	61%	56%	46%	50%	1.8
White (not of Hispanic origin)	8612	4258	49%	4354	51%	352	63%	68%	65%	54%	61%	2
Unknown	1116	390	35%	726	65%	339	56%	60%	58%	49%	55%	1.8
Language Fluency												
English Only Students	22438	9222	41%	13216	59%	344	59%	64%	60%	50%	56%	1.9
Initially Fluent English Proficient (IFEP)	2532	1041	41%	1491	59%	343	59%	64%	60%	51%	57%	1.9
Redesignated Fluent English Proficient (RFEP)	2236	1020	46%	1216	54%	346	61%	65%	62%	53%	60%	2
English Learner Students	18047	3653	20%	14394	80%	330	50%	55%	51%	45%	51%	1.7
Unknown	727	371	51%	356	49%	355	66%	70%	66%	57%	62%	2
Economically Disadvantaged												
No	12093	5491	45%	6602	55%	348	61%	66%	62%	53%	59%	2
Yes	27565	7581	28%	19984	72%	334	53%	58%	54%	46%	52%	1.8
Unknown	6322	2235	35%	4087	65%	340	57%	62%	58%	49%	54%	1.8
Special Education Program Participation												
Students Receiving Services	10328	1591	15%	8737	85%	322	45%	51%	47%	39%	45%	1.5
Students Not Receiving Services	35652	13716	38%	21936	62%	343	59%	63%	60%	51%	57%	1.9

[1] Results for groups with less than 11 members are not reported

[2] WA — Word Analysis, RC — Reading Comprehension, LR/A — Literary Responses/Analysis, WS — Writing Strategies, WC — Writing Conventions

Table 5.A.2: Demographic Summary for All Examinees[1] Mathematics—September 2005

	N Tested	N Pass	% Pass	N Fail	% Fail	Mean Scale Score	Strands for Mathematics [2] Average Percent Correct				
							PS	NS	AF	MG	Alg1
Total Examinees	48123	14816	31%	33307	69%	340	55%	50%	50%	46%	34%
Grade											
Tenth											
Eleventh	23025	7239	31%	15786	69%	341	55%	50%	51%	46%	34%
Twelfth	24422	7293	30%	17129	70%	340	55%	49%	50%	46%	33%
Adult Education	675	283	42%	392	58%	347	61%	54%	55%	52%	33%
Unknown	1	.	.	.	.	.	.	.	.	.	.
Gender											
Male	25534	8246	32%	17288	68%	340	55%	51%	50%	46%	33%
Female	22503	6539	29%	15964	71%	340	56%	48%	51%	46%	35%
Unknown	86	31	36%	55	64%	346	57%	53%	52%	50%	36%
Race/Ethnicity											
American Indian or Alaska Native	473	134	28%	339	72%	339	56%	50%	49%	44%	31%
Asian	1421	637	45%	784	55%	354	59%	57%	58%	54%	44%
Pacific Islander	301	106	35%	195	65%	343	56%	51%	52%	47%	36%
Filipino	623	264	42%	359	58%	348	59%	53%	57%	51%	39%
Hispanic or Latino	28597	7632	27%	20965	73%	338	53%	47%	49%	45%	33%
African American	5863	1421	24%	4442	76%	336	53%	46%	47%	42%	31%
White (not of Hispanic origin)	9745	4259	44%	5486	56%	349	62%	56%	55%	50%	36%
Unknown	1100	363	33%	737	67%	342	55%	51%	51%	47%	35%
Language Fluency											
English Only Students	26240	8815	34%	17425	66%	342	58%	51%	51%	46%	33%
Initially Fluent English Proficient (IFEP)	3036	1065	35%	1971	65%	343	58%	51%	52%	47%	34%
Redesignated Fluent English Proficient (RFEP)	3074	1215	40%	1859	60%	345	61%	52%	55%	49%	36%
English Learner Students	15009	3394	23%	11615	77%	336	49%	46%	47%	45%	34%
Unknown	764	327	43%	437	57%	351	61%	57%	57%	53%	36%
Economically Disadvantaged											
No	14107	5487	39%	8620	61%	346	60%	54%	54%	49%	36%
Yes	27381	7155	26%	20226	74%	337	53%	47%	48%	44%	33%
Unknown	6635	2174	33%	4461	67%	342	56%	51%	51%	47%	34%
Special Education Program Participation											
Students Receiving Services	9821	1252	13%	8569	87%	327	45%	41%	41%	38%	29%
Students Not Receiving Services	38302	13564	35%	24738	65%	344	58%	52%	53%	48%	35%

[1] Results for groups with less than 11 members are not reported

[2] PS — Probability/ Statistics, NS — Number Sense, AF — Algebra & Functions, MG — Measurement/Geometry, Alg1 — Algebra 1

Table 5.A.3: NCLB Demographic Summary for All CAHSEE Examinees ELA—September 2005

Subgroup	Value	N Tested	N Below Proficient	% Below Proficient	N Proficient	% Proficient	N Advanced	% Advanced	N Above Proficient	% Above Proficient
Total Examinees		45980	41641	91	2667	6	1672	4	4339	9
Grade	Tenth	0	0	0	0	0	0	0	0	0
	Eleventh	21121	19204	91	1230	6	687	3	1917	9
	Twelfth	24226	21963	91	1335	6	928	4	2263	9
	Adult Education	633	474	75	102	16	57	9	159	25
	Unknown	0	0	0	0	0	0	0	0	0
Gender	Male	27490	25108	91	1563	6	819	3	2382	9
	Female	18404	16460	89	1095	6	849	5	1944	11
	Unknown	86	73	85	9	10	4	5	13	15
Race/Ethnicity	American Indian or Alaskan Native	435	380	87	38	9	17	4	55	13
	Asian	2262	2078	92	92	4	92	4	184	8
	Pacific Islander	295	260	88	24	8	11	4	35	12
	Filipino	534	449	84	51	10	34	6	85	16
	Hispanic or Latino	27743	26225	95	1100	4	418	2	1518	5
	African American	4983	4545	91	306	6	132	3	438	9
	White (not of Hispanic origin)	8612	6721	78	985	11	906	11	1891	22
	Unknown	1116	983	88	71	6	62	6	133	12
Language Fluency	English Only Students	22438	19124	85	1935	9	1379	6	3314	15
	Initially Fluent English Proficient (IFEP)	2532	2273	90	172	7	87	3	259	10
	Redesignated Fluent English Proficient (RFEP)	2236	2043	91	153	7	40	2	193	9
	English Learner Students	18047	17667	98	300	2	80	0	380	2
	Unknown	727	534	73	107	15	86	12	193	27
Economically	No	12093	9996	83	1136	9	961	8	2097	17
Disadvantaged	Yes	27565	26124	95	1063	4	378	1	1441	5
	Unknown	6322	5521	87	468	7	333	5	801	13
Special Education	Receiving Services	10328	10126	98	165	2	37	0	202	2
Program Participation	Not Receiving Services	35652	31515	88	2502	7	1635	5	4137	12

Table 5.A.4: NCLB Demographic Summary for All CAHSEE Examinees Mathematics—September 2005

Subgroup	Value	N Tested	N Below Proficient	% Below Proficient	N Proficient	% Proficient	N Advanced	% Advanced	N Above Proficient	% Above Proficient
Total Examinees		48123	45365	94	2295	5	463	1	2758	6
Grade	Tenth	0	0	0	0	0	0	0	0	0
	Eleventh	23025	21810	95	1018	4	197	1	1215	5
	Twelfth	24422	22941	94	1220	5	261	1	1481	6
	Adult Education	675	613	91	57	8	5	1	62	9
	Unknown	1	1	100						
Gender	Male	25534	23833	93	1425	6	276	1	1701	7
	Female	22503	21458	95	862	4	183	1	1045	5
	Unknown	86	74	86	8	9	4	5	12	14
Race/Ethnicity	American Indian or Alaskan Native	473	448	95	25	5			25	5
	Asian	1421	1158	81	173	12	90	6	263	19
	Pacific Islander	301	275	91	16	5	10	3	26	9
	Filipino	623	558	90	51	8	14	2	65	10
	Hispanic or Latino	28597	27714	97	818	3	65	0	883	3
	African American	5863	5639	96	203	3	21	0	224	4
	White (not of Hispanic origin)	9745	8573	88	920	9	252	3	1172	12
	Unknown	1100	1000	91	89	8	11	1	100	9
Language Fluency	English Only Students	26240	24298	93	1597	6	345	1	1942	7
	Initially Fluent English Proficient (IFEP)	3036	2857	94	148	5	31	1	179	6
	Redesignated Fluent English Proficient (RFEP)	3074	2952	96	108	4	14	0	122	4
	English Learner Students	15009	14612	97	347	2	50	0	397	3
	Unknown	764	646	85	95	12	23	3	118	15
Economically Disadvantaged	No	14107	12706	90	1103	8	298	2	1401	10
	Yes	27381	26558	97	756	3	67	0	823	3
	Unknown	6635	6101	92	436	7	98	1	534	8
Special Education Program Participation	Receiving Services	9821	9709	99	103	1	9	0	112	1
	Not Receiving Services	38302	35656	93	2192	6	454	1	2646	7

Table 5.A.5: Demographic Summary for All Examinees[1] ELA—September 2005

	Percentiles[2]									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD[3]	N Tested
Total Examinees	275	290	318	337	356	395	434	338	32	45980
Grade										
Tenth	0	0	0	0	0	0	0	0	0	0
Eleventh	275	290	318	337	356	391	428	338	31	21121
Twelfth	275	288	318	337	354	395	434	338	32	24226
Adult Education	290	304	330	354	380	413	447	355	34	633
Unknown	0	0	0	0	0	0	0	0	0	0
Gender										
Male	275	286	314	335	354	391	428	336	32	27490
Female	277	294	321	341	359	402	434	342	31	18404
Unknown	275	282	314	337	365	402	434	341	37	86
Race/Ethnicity										
American Indian or Alaska Native	279	292	321	343	363	402	418	343	31	435
Asian	275	294	321	337	352	391	440	339	30	2262
Pacific Islander	275	288	319	339	363	402	440	342	33	295
Filipino	279	302	330	344	365	409	447	349	32	534
Hispanic or Latino	275	290	316	335	352	380	409	334	28	27743
African American	275	284	312	337	354	391	423	336	32	4983
White (not of Hispanic origin)	275	292	326	348	375	423	450	352	38	8612
Unknown	275	286	316	337	359	405	434	339	34	1116
Language Fluency										
English Only Students	275	288	319	343	363	409	440	344	35	22438
Initially Fluent English Proficient (IFEP)	275	294	325	343	361	395	423	343	29	2532
Redesignated Fluent English Proficient (RFEP)	286	304	332	346	361	385	413	346	25	2236
English Learner Students	275	288	312	330	346	367	388	330	24	18047
Unknown	282	296	328	350	380	423	450	355	38	727
Economically Disadvantaged										
No	275	294	325	346	367	418	447	348	35	12093
Yes	275	288	314	333	350	380	409	334	28	27565
Unknown	275	286	316	337	359	405	440	340	35	6322
Special Education Program Participation										
Students Receiving Services	275	282	302	321	341	365	385	322	26	10328
Students Not Receiving Services	277	294	323	341	361	402	434	343	31	35652

[1] Results for groups with less than 11 members are not reported

[2] Mean scale scores are reported at each percentile

[3] SD - Standard Deviation

Table 5.A.6: Demographic Summary for All Examinees[1] Mathematics—September 2005

	Percentiles[2]									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD[3]	N Tested
Total Examinees	292	305	324	338	354	383	421	340	25	48123
Grade										
Tenth	0	0	0	0	0	0	0	0	0	0
Eleventh	295	305	324	340	354	380	421	341	24	23025
Twelfth	292	305	324	338	353	383	426	340	25	24422
Adult Education	303	312	331	344	360	390	416	347	24	675
Unknown	351	351	351	351	351	351	351	351		1
Gender										
Male	292	303	322	338	354	385	426	340	26	25534
Female	295	307	325	338	353	378	416	340	23	22503
Unknown	289	305	327	338	358	416	450	346	32	86
Race/Ethnicity										
American Indian or Alaska Native	292	305	322	338	351	380	408	339	23	473
Asian	298	309	331	347	366	431	450	354	34	1421
Pacific Islander	292	303	322	342	356	395	438	343	30	301
Filipino	300	312	333	345	358	398	431	348	26	623
Hispanic or Latino	295	305	322	336	351	372	395	338	21	28597
African American	289	303	320	335	349	376	401	336	23	5863
White (not of Hispanic origin)	295	307	329	345	362	405	446	349	29	9745
Unknown	294	305	324	338	356	393	424	342	27	1100
Language Fluency										
English Only Students	292	305	324	340	356	390	431	342	26	26240
Initially Fluent English Proficient (IFEP)	295	309	327	342	356	383	426	343	24	3036
Redesignated Fluent English Proficient (RFEP)	300	314	333	345	356	376	405	345	20	3074
English Learner Students	295	305	322	335	349	370	398	336	21	15009
Unknown	295	307	331	345	366	408	450	351	31	764
Economically Disadvantaged										
No	295	307	327	344	358	398	438	346	28	14107
Yes	292	305	322	336	351	372	395	337	22	27381
Unknown	289	303	324	340	356	393	431	342	27	6635
Special Education Program Participation										
Students Receiving Services	286	298	312	325	340	362	380	327	20	9821
Students Not Receiving Services	298	309	327	342	356	387	426	344	25	38302

[1] Results for groups with less than 11 members are not reported

[2] Mean scale scores are reported at each percentile

[3] SD - Standard Deviation

Table 5.A.7: Frequency Distributions ELA—September 2005

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	164	0	164	99
440-449	184	0	348	99
430-439	130	0	478	99
420-429	328	1	806	98
410-419	396	1	1202	97
400-409	719	2	1921	96
390-399	851	2	2772	94
380-389	1567	3	4339	91
370-379	2248	5	6587	86
360-369	3309	7	9896	78
350-359[1]	5411	12	15307	67
340-349	6101	13	21408	53
330-339	6851	15	28259	39
320-329	4682	10	32941	28
310-319	4692	10	37633	18
300-309	3718	8	41351	10
290-299	2410	5	43761	5
280-289	1185	3	44946	2
270-279	1034	2	45980	0

[1]Passing Line

Table 5.A.8: Frequency Distributions Mathematics—September 2005

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	143	0	143	99
440-449	71	0	214	99
430-439	149	0	363	99
420-429	177	0	540	99
410-419	220	0	760	98
400-409	370	1	1130	98
390-399	697	1	1827	96
380-389	931	2	2758	94
370-379	2096	4	4854	90
360-369	3807	8	8661	82
350-359[1]	6155	13	14816	69
340-349	9061	19	23877	50
330-339	7507	16	31384	35
320-329	7859	16	39243	18
310-319	4483	9	43726	9
300-309	3304	7	47030	2
290-299	731	2	47761	1
280-289	239	1	48000	0
270-279	123	0	48123	0

Table 5.A.9: Frequency Distributions ELA—September 2005

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	164	0	164	99
440-449	184	0	348	99
430-439	130	0	478	99
420-429	328	1	806	98
410-419	396	1	1202	97
403-409[1]	470	1	1672	96
390-402	1100	2	2772	94
380-389[2]	1567	3	4339	91
370-379	2248	5	6587	86
360-369	3309	7	9896	78
350-359	5411	12	15307	67
340-349	6101	13	21408	53
330-339	6851	15	28259	39
320-329	4682	10	32941	28
310-319	4692	10	37633	18
300-309	3718	8	41351	10
290-299	2410	5	43761	5
280-289	1185	3	44946	2
270-279	1034	2	45980	0

[1]Advanced Level Cut
[2]Proficient Level Cut

Table 5.A.10: Frequency Distributions Mathematics—September 2005

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	143	0	143	99
440-449	71	0	214	99
430-439	149	0	363	99
422-429[1]	100	0	463	99
410-421	297	1	760	98
400-409	370	1	1130	98
390-399	697	1	1827	96
380-389[2]	931	2	2758	94
370-379	2096	4	4854	90
360-369	3807	8	8661	82
350-359	6155	13	14816	69
340-349	9061	19	23877	50
330-339	7507	16	31384	35
320-329	7859	16	39243	18
310-319	4483	9	43726	9
300-309	3304	7	47030	2
290-299	731	2	47761	1
280-289	239	1	48000	0
270-279	123	0	48123	0

[1]Advanced Level Cut
[2]Proficient Level Cut

Table 5.A.11: Intercorrelations[1] and Reliability Estimates by Section—September 2005

	ELA[4]	Essay	Word Anal.	Read. Comp.	Lit. Resp. & Anal.	Writing Strat.	Writing Conv.	Math	Prob. & Stat.	Number Sense	Alg. & Func.	Meas. & Geom.	Alg1
ELA[2]	1.00	0.71	0.75	0.86	0.89	0.77	0.78	0.66	0.61	0.55	0.60	0.52	0.36
Essay	0.71	1.00	0.43	0.51	0.52	0.44	0.47	0.48	0.44	0.40	0.43	0.37	0.28
Word Analysis	0.75	0.43	1.00	0.62	0.66	0.51	0.52	0.49	0.46	0.42	0.44	0.38	0.25
Reading Comprehension	0.86	0.51	0.62	1.00	0.75	0.58	0.55	0.56	0.54	0.47	0.51	0.43	0.27
Literary Responses & Analysis	0.89	0.52	0.66	0.75	1.00	0.62	0.59	0.59	0.55	0.50	0.53	0.46	0.31
Writing Strategies	0.77	0.44	0.51	0.58	0.62	1.00	0.60	0.53	0.48	0.42	0.49	0.45	0.31
Writing Conventions	0.78	0.47	0.52	0.55	0.59	0.60	1.00	0.55	0.48	0.45	0.50	0.45	0.33
Math[3]	0.66	0.48	0.49	0.56	0.59	0.53	0.55	1.00	0.78	0.81	0.87	0.82	0.62
Probability and Statistics	0.61	0.44	0.46	0.54	0.55	0.48	0.48	0.78	1.00	0.57	0.62	0.53	0.32
Number Sense	0.55	0.40	0.42	0.47	0.50	0.42	0.45	0.81	0.57	1.00	0.62	0.54	0.39
Algebra & Functions	0.60	0.43	0.44	0.51	0.53	0.49	0.50	0.87	0.62	0.62	1.00	0.63	0.47
Measurement & Geometry	0.52	0.37	0.38	0.43	0.46	0.45	0.45	0.82	0.53	0.54	0.63	1.00	0.45
Algebra 1	0.36	0.28	0.25	0.27	0.31	0.31	0.33	0.62	0.32	0.39	0.47	0.45	1.00
Number of Items	73	1	7	18	20	12	15	80	13	17	20	18	12
Mean	48.36	1.83	3.89	10.92	11.37	5.80	8.15	38.04	7.19	8.43	10.09	8.28	4.06
SD	15.41	0.73	1.80	3.82	4.22	2.74	3.31	12.19	2.79	3.28	3.79	3.31	2.17
Reliability	0.91	0.37	0.56	0.76	0.79	0.67	0.73	0.89	0.68	0.67	0.71	0.65	0.49
SEM	4.62	0.58	1.19	1.87	1.95	1.58	1.74	4.09	1.58	1.89	2.04	1.96	1.55

[1] All correlations are for raw scores.

[2] Correlations for ELA section are reported for examinees completing ELA section. Number of examinees: 45903

[3] Correlations for Math section are reported for examinees completing Math section. Number of examinees: 48033

[4] Correlations between ELA and Math are reported for examinees taking both sections. Number of examinees: 30476

Table 5.A.12: Agreement of First and Second Ratings on CR item

(Cell Entry = Number of Examinee Responses)

First Rating	Second Rating					Overall	
	0	1	2	3	4	Total	Percent
0	3113	0	0	0	0	3113	7
1	0	5728	2774	27	0	8529	19
2	0	2714	22097	2943	49	27803	61
3	0	44	2906	2774	258	5982	13
4	0	1	59	241	175	476	1
Total	3113	8487	27836	5985	482	45903	100
Percent	7	18	61	13	1	100	

Differences Between First and Second Ratings on Essay

Difference	Frequency	Percent	Cumulative Percent
0	33887	74	74
1	11836	26	100
2	179	0	100
3	1	0	100
4	0	0	100

Table 5.A.13: Summary Statistics for CR item

	Mean	Standard Deviation
First Rating	1.83	0.77
Second Rating	1.83	0.77
Mean Absolute Difference Between First and Second Ratings		0.27
Correlation of First and Second Ratings		0.77

Summary of Essays Receiving Score of Zero

Essay	
Blank	1466
Illegible	0
Off Topic	1440
Cartoon / Inappropriate	181
Not in English	26
Total	3113

Appendix 5.B: Demographic Summaries, Frequency Distributions, Intercorrelations, and Reliability and SEMS of Sub Groups—November 2005

Table 5.B.1: Demographic Summary for All Examinees[1] ELA—November 2005

	N Tested	N Pass	% Pass	N Fail	% Fail	Mean Scale Score	Reading[2] Avg. % Correct			Writing[2] Avg. % Correct		Writing Application Avg. Score
							WA	RC	LR/A	WS	WC	Essay
Total Examinees	110550	43577	39%	66973	61%	343	63%	59%	59%	51%	55%	1.6
Grade												
Tenth												
Eleventh	73346	28333	39%	45013	61%	342	63%	58%	58%	50%	54%	1.6
Twelfth	32733	12597	38%	20136	62%	342	63%	59%	59%	51%	54%	1.6
Adult Education	4155	2495	60%	1660	40%	357	70%	70%	69%	60%	61%	1.8
Unknown	316	152	48%	164	52%	350	68%	62%	63%	56%	59%	1.8
Gender												
Male	63107	23536	37%	39571	63%	340	63%	58%	58%	49%	53%	1.6
Female	47319	19997	42%	27322	58%	346	63%	60%	60%	54%	57%	1.7
Unknown	124	44	35%	80	65%	334	62%	54%	56%	47%	48%	1.4
Race/Ethnicity												
American Indian or Alaska Native	1063	485	46%	578	54%	344	67%	60%	61%	52%	55%	1.6
Asian	8290	3228	39%	5062	61%	344	62%	59%	58%	52%	60%	1.6
Pacific Islander	977	414	42%	563	58%	345	68%	60%	59%	52%	59%	1.7
Filipino	2183	1089	50%	1094	50%	352	68%	63%	63%	57%	62%	1.8
Hispanic or Latino	63102	21449	34%	41653	66%	338	60%	57%	56%	49%	52%	1.6
African American	13692	5258	38%	8434	62%	341	66%	57%	59%	49%	53%	1.6
White (not of Hispanic origin)	19675	10920	56%	8755	44%	356	72%	66%	67%	57%	61%	1.9
Unknown	1568	734	47%	834	53%	348	68%	61%	62%	53%	56%	1.7
Language Fluency												
English Only Students	50775	24059	47%	26716	53%	349	69%	61%	63%	54%	58%	1.7
Initially Fluent English Proficient (IFEP)	5293	2755	52%	2538	48%	351	70%	63%	64%	56%	60%	1.8
Redesignated Fluent English Proficient (RFEP)	6039	3352	56%	2687	44%	351	70%	64%	64%	57%	61%	1.8
English Learner Students	44533	11205	25%	33328	75%	332	55%	54%	53%	46%	50%	1.5
Unknown	3910	2206	56%	1704	44%	355	69%	68%	68%	58%	60%	1.7
Economically Disadvantaged												
No	29482	14971	51%	14511	49%	352	69%	63%	64%	55%	60%	1.8
Yes	60606	19388	32%	41218	68%	337	60%	56%	55%	48%	52%	1.6
Unknown	20462	9218	45%	11244	55%	347	66%	61%	62%	53%	56%	1.7
Special Education Program Participation												
Students Receiving Services	24022	5029	21%	18993	79%	328	56%	49%	51%	43%	46%	1.4
Students Not Receiving Services	86528	38548	45%	47980	55%	347	65%	61%	61%	53%	57%	1.7

[1] Results for groups with less than 11 members are not reported

[2] WA — Word Analysis, RC — Reading Comprehension, LR/A — Literary Responses/Analysis, WS — Writing Strategies, WC — Writing Conventions

Table 5.B.2: Demographic Summary for All Examinees[1] Mathematics—November 2005

	N Tested	N Pass	% Pass	N Fail	% Fail	Mean Scale Score	Strands for Mathematics [2] Average Percent Correct				
							PS	NS	AF	MG	Alg1
Total Examinees	118373	41101	35%	77272	65%	343	54%	53%	52%	47%	39%
Grade											
Tenth											
Eleventh	79262	27103	34%	52159	66%	343	53%	53%	52%	46%	39%
Twelfth	34217	11651	34%	22566	66%	343	54%	53%	51%	47%	38%
Adult Education	4588	2211	48%	2377	52%	352	59%	60%	57%	55%	39%
Unknown	306	136	44%	170	56%	350	60%	57%	55%	51%	41%
Gender											
Male	59308	21199	36%	38109	64%	343	53%	54%	52%	47%	37%
Female	58902	19858	34%	39044	66%	343	54%	52%	52%	46%	40%
Unknown	163	44	27%	119	73%	335	48%	50%	46%	41%	33%
Race/Ethnicity											
American Indian or Alaska Native	1202	406	34%	796	66%	342	54%	54%	50%	46%	34%
Asian	5402	2917	54%	2485	46%	362	59%	63%	62%	57%	53%
Pacific Islander	1050	385	37%	665	63%	343	53%	54%	52%	46%	40%
Filipino	2354	1092	46%	1262	54%	352	59%	58%	58%	51%	44%
Hispanic or Latino	66947	20356	30%	46591	70%	340	51%	51%	50%	45%	37%
African American	17336	4471	26%	12865	74%	337	51%	49%	48%	42%	35%
White (not of Hispanic origin)	22344	10763	48%	11581	52%	353	62%	60%	58%	52%	40%
Unknown	1738	711	41%	1027	59%	348	57%	57%	54%	49%	39%
Language Fluency											
English Only Students	61096	22648	37%	38448	63%	345	57%	55%	53%	47%	38%
Initially Fluent English Proficient (IFEP)	6671	2791	42%	3880	58%	348	58%	57%	55%	49%	40%
Redesignated Fluent English Proficient (RFEP)	8323	3547	43%	4776	57%	347	58%	56%	55%	49%	41%
English Learner Students	37958	10125	27%	27833	73%	338	47%	49%	49%	44%	39%
Unknown	4325	1990	46%	2335	54%	351	58%	59%	56%	53%	39%
Economically Disadvantaged											
No	33861	14614	43%	19247	57%	350	59%	58%	56%	50%	41%
Yes	61921	17726	29%	44195	71%	339	50%	50%	49%	44%	37%
Unknown	22591	8761	39%	13830	61%	346	56%	55%	53%	49%	39%
Special Education Program Participation											
Students Receiving Services	22587	3577	16%	19010	84%	328	44%	44%	42%	37%	31%
Students Not Receiving Services	95786	37524	39%	58262	61%	347	56%	55%	54%	49%	40%

[1] Results for groups with less than 11 members are not reported

[2] PS — Probability/ Statistics, NS — Number Sense, AF — Algebra & Functions, MG — Measurement/Geometry, Alg1 — Algebra 1

Table 5.B.3: NCLB Demographic Summary for All CAHSEE Examinees ELA—November 2005

Subgroup	Value	N Tested	N Below Proficient	% Below Proficient	N Proficient	% Proficient	N Advanced	% Advanced	N Above Proficient	% Above Proficient
Total Examinees		110550	99233	90	6976	6	4341	4	11317	10
Grade	Tenth	0	0	0	0	0	0	0	0	0
	Eleventh	73346	66220	90	4445	6	2681	4	7126	10
	Twelfth	32733	29560	90	1846	6	1327	4	3173	10
	Adult Education	4155	3186	77	658	16	311	7	969	23
	Unknown	316	267	84	27	9	22	7	49	16
Gender	Male	63107	57371	91	3754	6	1982	3	5736	9
	Female	47319	41751	88	3211	7	2357	5	5568	12
	Unknown	124	111	90	11	9	2	2	13	10
Race/Ethnicity	American Indian or Alaskan Native	1063	943	89	90	8	30	3	120	11
	Asian	8290	7438	90	445	5	407	5	852	10
	Pacific Islander	977	887	91	60	6	30	3	90	9
	Filipino	2183	1832	84	197	9	154	7	351	16
	Hispanic or Latino	63102	59470	94	2706	4	926	1	3632	6
	African American	13692	12532	92	817	6	343	3	1160	8
	White (not of Hispanic origin)	19675	14876	76	2489	13	2310	12	4799	24
	Unknown	1568	1255	80	172	11	141	9	313	20
Language Fluency	English Only Students	50775	42599	84	4678	9	3498	7	8176	16
	Initially Fluent English Proficient (IFEP)	5293	4499	85	530	10	264	5	794	15
	Redesignated Fluent English Proficient (RFEP)	6039	5429	90	480	8	130	2	610	10
	English Learner Students	44533	43606	98	737	2	190	0	927	2
	Unknown	3910	3100	79	551	14	259	7	810	21
Economically Disadvantaged	No	29482	24038	82	2971	10	2473	8	5444	18
	Yes	60606	57772	95	2150	4	684	1	2834	5
	Unknown	20462	17423	85	1855	9	1184	6	3039	15
Special Education Program Participation	Receiving Services	24022	23442	98	448	2	132	1	580	2
	Not Receiving Services	86528	75791	88	6528	8	4209	5	10737	12

Table 5.B.4: NCLB Demographic Summary for All CAHSEE Examinees Mathematics—November 2005

Subgroup	Value	N Tested	N Below Proficient	% Below Proficient	N Proficient	% Proficient	N Advanced	% Advanced	N Above Proficient	% Above Proficient
Total Examinees		118373	108316	92	7934	7	2123	2	10057	8
Grade	Tenth	0	0	0	0	0	0	0	0	0
	Eleventh	79262	72883	92	5043	6	1336	2	6379	8
	Twelfth	34217	31328	92	2233	7	656	2	2889	8
	Adult Education	4588	3841	84	621	14	126	3	747	16
	Unknown	306	264	86	37	12	5	2	42	14
Gender	Male	59308	53823	91	4317	7	1168	2	5485	9
	Female	58902	54339	92	3609	6	954	2	4563	8
	Unknown	163	154	94	8	5	1	1	9	6
Race/Ethnicity	American Indian or Alaskan Native	1202	1111	92	81	7	10	1	91	8
	Asian	5402	3944	73	829	15	629	12	1458	27
	Pacific Islander	1050	958	91	81	8	11	1	92	9
	Filipino	2354	2024	86	258	11	72	3	330	14
	Hispanic or Latino	66947	63809	95	2832	4	306	0	3138	5
	African American	17336	16575	96	679	4	82	0	761	4
	White (not of Hispanic origin)	22344	18417	82	2985	13	942	4	3927	18
	Unknown	1738	1478	85	189	11	71	4	260	15
Language Fluency	English Only Students	61096	54641	89	5029	8	1426	2	6455	11
	Initially Fluent English Proficient (IFEP)	6671	5947	89	532	8	192	3	724	11
	Redesignated Fluent English Proficient (RFEP)	8323	7825	94	451	5	47	1	498	6
	English Learner Students	37958	36247	95	1379	4	332	1	1711	5
	Unknown	4325	3656	85	543	13	126	3	669	15
Economically Disadvantaged	No	33861	29114	86	3522	10	1225	4	4747	14
	Yes	61921	59363	96	2262	4	296	0	2558	4
	Unknown	22591	19839	88	2150	10	602	3	2752	12
Special Education Program Participation	Receiving Services	22587	22139	98	415	2	33	0	448	2
	Not Receiving Services	95786	86177	90	7519	8	2090	2	9609	10

Table 5.B.5: Demographic Summary for All Examinees[1] ELA—November 2005

	Percentiles[2]									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD[3]	N Tested
Total Examinees	275	291	322	343	360	399	431	343	31	110550
Grade										
Tenth	0	0	0	0	0	0	0	0	0	0
Eleventh	275	291	322	341	360	396	431	342	31	73346
Twelfth	275	294	323	343	358	399	431	342	31	32733
Adult Education	282	306	336	356	379	413	436	357	32	4155
Unknown	279	291	330	348	369	413	436	350	34	316
Gender										
Male	275	289	320	341	358	393	426	340	31	63107
Female	277	296	325	345	362	402	436	346	31	47319
Unknown	275	279	307	333	358	390	426	334	35	124
Race/Ethnicity										
American Indian or Alaska Native	275	291	323	345	365	396	417	344	31	1063
Asian	277	296	323	343	360	402	442	344	32	8290
Pacific Islander	282	300	329	345	362	393	426	345	28	977
Filipino	284	302	332	348	367	409	436	352	31	2183
Hispanic or Latino	275	291	320	339	356	381	409	338	28	63102
African American	275	289	322	341	358	390	421	341	30	13692
White (not of Hispanic origin)	275	298	332	354	379	426	449	356	37	19675
Unknown	275	287	320	346	373	417	449	348	39	1568
Language Fluency										
English Only Students	275	294	327	346	367	413	442	349	34	50775
Initially Fluent English Proficient (IFEP)	277	302	332	350	369	402	436	351	30	5293
Redesignated Fluent English Proficient (RFEP)	287	307	337	352	365	390	413	351	25	6039
English Learner Students	275	289	315	334	350	369	390	332	25	44533
Unknown	282	302	334	354	376	409	436	355	32	3910
Economically Disadvantaged										
No	277	298	330	350	371	417	449	352	34	29482
Yes	275	291	318	337	354	379	406	337	27	60606
Unknown	275	291	323	345	367	406	436	347	34	20462
Special Education Program Participation										
Students Receiving Services	275	284	309	329	346	369	393	328	27	24022
Students Not Receiving Services	277	298	327	346	365	402	436	347	31	86528

[1] Results for groups with less than 11 members are not reported

[2] Mean scale scores are reported at each percentile

[3] SD - Standard Deviation

Table 5.B.6: Demographic Summary for All Examinees[1] Mathematics—November 2005

	Percentiles[2]									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD[3]	N Tested
Total Examinees	291	304	325	342	356	393	438	343	27	118373
Grade										
Tenth	0	0	0	0	0	0	0	0	0	0
Eleventh	291	304	325	340	356	393	438	343	27	79262
Twelfth	291	304	325	340	356	395	438	343	28	34217
Adult Education	294	309	331	349	370	408	445	352	30	4588
Unknown	297	307	331	347	366	405	438	350	28	306
Gender										
Male	289	302	323	340	358	395	438	343	29	59308
Female	294	307	327	342	356	390	438	343	26	58902
Unknown	282	294	313	333	351	380	416	335	29	163
Race/Ethnicity										
American Indian or Alaska Native	291	304	323	340	356	387	416	342	26	1202
Asian	297	311	335	353	383	445	450	362	40	5402
Pacific Islander	285	304	325	342	358	393	425	343	27	1050
Filipino	300	311	333	347	366	408	438	352	29	2354
Hispanic or Latino	291	304	323	340	353	378	408	340	23	66947
African American	289	302	320	337	351	376	408	337	24	17336
White (not of Hispanic origin)	294	309	331	349	368	420	450	353	32	22344
Unknown	282	302	325	344	364	416	450	348	34	1738
Language Fluency										
English Only Students	291	304	325	342	358	401	445	345	29	61096
Initially Fluent English Proficient (IFEP)	294	309	331	345	360	405	450	348	28	6671
Redesignated Fluent English Proficient (RFEP)	302	315	335	347	358	383	412	347	21	8323
English Learner Students	291	302	322	337	351	378	420	338	24	37958
Unknown	289	307	329	347	368	408	445	351	31	4325
Economically Disadvantaged										
No	294	309	329	345	364	412	450	350	31	33861
Yes	291	302	323	338	353	376	408	339	23	61921
Unknown	289	304	325	344	360	405	445	346	30	22591
Special Education Program Participation										
Students Receiving Services	282	297	313	327	342	366	390	328	22	22587
Students Not Receiving Services	297	309	329	344	360	398	445	347	27	95786

[1] Results for groups with less than 11 members are not reported

[2] Mean scale scores are reported at each percentile

[3] SD - Standard Deviation

Table 5.B.7: Frequency Distributions ELA—November 2005

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	312	0	312	99
440-449	422	0	734	99
430-439	631	1	1365	99
420-429	842	1	2207	98
410-419	990	1	3197	97
400-409	1766	2	4963	96
390-399	3120	3	8083	93
380-389	3234	3	11317	90
370-379	6050	5	17367	84
360-369	11335	10	28702	74
350-359[1]	14875	13	43577	61
340-349	15031	14	58608	47
330-339	15697	14	74305	33
320-329	12120	11	86425	22
310-319	7993	7	94418	15
300-309	7570	7	101988	8
290-299	3780	3	105768	4
280-289	2670	2	108438	2
270-279	2112	2	110550	0
260-269	0	0	110550	0
250-259	0	0	110550	0

[1]Passing Line

Table 5.B.8: Frequency Distributions Mathematics—November 2005

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	727	1	727	99
440-449	300	0	1027	99
430-439	725	1	1752	99
420-429	800	1	2552	98
410-419	820	1	3372	97
400-409	1382	1	4754	96
390-399	2247	2	7001	94
380-389	3056	3	10057	92
370-379	5891	5	15948	87
360-369	10069	9	26017	78
350-359[1]	15084	13	41101	65
340-349	21924	19	63025	47
330-339	17633	15	80658	32
320-329	18045	15	98703	17
310-319	9418	8	108121	9
300-309	7484	6	115605	2
290-299	1781	2	117386	1
280-289	594	1	117980	0
270-279	393	0	118373	0
260-269	0	0	118373	0
250-259	0	0	118373	0

[1]Passing Line

Table 5.B.9: Frequency Distributions ELA—November 2005

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	312	0	312	99
440-449	422	0	734	99
430-439	631	1	1365	99
420-429	842	1	2207	98
410-419	990	1	3197	97
403-409[1]	1144	1	4341	96
390-402	3742	3	8083	93
380-389[2]	3234	3	11317	90
370-379	6050	5	17367	84
360-369	11335	10	28702	74
350-359	14875	13	43577	61
340-349	15031	14	58608	47
330-339	15697	14	74305	33
320-329	12120	11	86425	22
310-319	7993	7	94418	15
300-309	7570	7	101988	8
290-299	3780	3	105768	4
280-289	2670	2	108438	2
270-279	2112	2	110550	0
260-269	0	0	110550	0
250-259	0	0	110550	0

[1]Advanced Level Cut
[2]Proficient Level Cut

Table 5.B.10: Frequency Distributions Mathematics—November 2005

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	727	1	727	99
440-449	300	0	1027	99
430-439	725	1	1752	99
422-429[1]	371	0	2123	98
410-421	1249	1	3372	97
400-409	1382	1	4754	96
390-399	2247	2	7001	94
380-389[2]	3056	3	10057	92
370-379	5891	5	15948	87
360-369	10069	9	26017	78
350-359	15084	13	41101	65
340-349	21924	19	63025	47
330-339	17633	15	80658	32
320-329	18045	15	98703	17
310-319	9418	8	108121	9
300-309	7484	6	115605	2
290-299	1781	2	117386	1
280-289	594	1	117980	0
270-279	393	0	118373	0
260-269	0	0	118373	0
250-259	0	0	118373	0

[1]Advanced Level Cut
[2]Proficient Level Cut

Table 5.B.11: Intercorrelations[1] and Reliability Estimates by Section—November 2005

	ELA[4]	Essay	Word Anal.	Read. Comp.	Lit. Resp. & Anal.	Writing Strat.	Writing Conv.	Math	Prob. & Stat.	Number Sense	Alg. & Func.	Meas. & Geom.	Alg1
ELA[2]	1.00	0.74	0.73	0.86	0.87	0.78	0.80	0.65	0.62	0.57	0.59	0.54	0.37
Essay	0.74	1.00	0.47	0.53	0.54	0.47	0.50	0.49	0.46	0.43	0.45	0.40	0.30
Word Analysis	0.73	0.47	1.00	0.60	0.63	0.48	0.52	0.45	0.46	0.42	0.41	0.36	0.21
Reading Comprehension	0.86	0.53	0.60	1.00	0.72	0.62	0.60	0.58	0.55	0.51	0.53	0.48	0.32
Literary Responses & Analysis	0.87	0.54	0.63	0.72	1.00	0.60	0.60	0.57	0.55	0.51	0.51	0.46	0.30
Writing Strategies	0.78	0.47	0.48	0.62	0.60	1.00	0.61	0.51	0.48	0.42	0.46	0.43	0.31
Writing Conventions	0.80	0.50	0.52	0.60	0.60	0.61	1.00	0.55	0.51	0.47	0.50	0.46	0.34
Math[3]	0.65	0.49	0.45	0.58	0.57	0.51	0.55	1.00	0.80	0.83	0.89	0.84	0.66
Probability and Statistics	0.62	0.46	0.46	0.55	0.55	0.48	0.51	0.80	1.00	0.63	0.65	0.58	0.38
Number Sense	0.57	0.43	0.42	0.51	0.51	0.42	0.47	0.83	0.63	1.00	0.67	0.60	0.42
Algebra & Functions	0.59	0.45	0.41	0.53	0.51	0.46	0.50	0.89	0.65	0.67	1.00	0.67	0.52
Measurement & Geometry	0.54	0.40	0.36	0.48	0.46	0.43	0.46	0.84	0.58	0.60	0.67	1.00	0.48
Algebra 1	0.37	0.30	0.21	0.32	0.30	0.31	0.34	0.66	0.38	0.42	0.52	0.48	1.00
Number of Items	73	1	7	18	20	12	15	80	13	17	20	18	12
Mean	48.56	1.64	4.44	10.60	11.80	6.13	8.21	39.45	7.00	9.06	10.36	8.40	4.63
SD	15.25	0.76	1.71	3.71	4.02	2.74	3.32	13.11	2.87	3.44	3.83	3.49	2.45
Reliability	0.91	0.41	0.57	0.76	0.75	0.67	0.73	0.90	0.68	0.71	0.74	0.69	0.58
SEM	4.61	0.58	1.13	1.83	2.01	1.57	1.72	4.05	1.62	1.87	1.94	1.93	1.58

[1] All correlations are for raw scores.

[2] Correlations for ELA section are reported for examinees completing ELA section. Number of examinees: 110266

[3] Correlations for Math section are reported for examinees completing Math section. Number of examinees: 118080

[4] Correlations between ELA and Math are reported for examinees taking both sections. Number of examinees: 73648

Table 5.B.12: Agreement of First and Second Ratings on CR item

(Cell Entry = Number of Examinee Responses)

First Rating	Second Rating					Overall	
	0	1	2	3	4	Total	Percent
0	10011	0	0	0	0	10011	9
1	0	21221	10287	201	1	31710	29
2	0	10022	42704	4613	71	57410	52
3	0	209	4759	4639	513	10120	9
4	0	1	77	513	424	1015	1
Total	10011	31453	57827	9966	1009	110266	100
Percent	9	29	52	9	1	100	

Differences Between First and Second Ratings on Essay

Difference	Frequency	Percent	Cumulative Percent
0	78999	72	72
1	30707	28	99
2	558	1	100
3	2	0	100
4	0	0	100

Table 5.B.13: Summary Statistics for CR item

	Mean	Standard Deviation
First Rating	1.64	0.81
Second Rating	164	0.80
Mean Absolute Difference Between First and Second Ratings		0.29
Correlation of First and Second Ratings		0.77

Summary of Essays Receiving Score of Zero

Essay	
Blank	3284
Illegible	0
Off Topic	6397
Cartoon / Inappropriate	321
Not in English	12
Total	10014

Appendix 5.C: Demographic Summaries, Frequency Distributions, Intercorrelations, and Reliability and SEMS of Sub Groups—February 2006

Table 5.C.1: Demographic Summary for All Examinees[1] ELA—February 2006

							Reading [2] Avg. % Correct			Writing [2] Avg. % Correct		Writing Application Avg. Score
	N Tested	N Pass	% Pass	N Fail	% Fail	Mean Scale Score	WA	RC	LR/A	WS	WC	Essay
Total Examinees	216323	146133	68%	70190	32%	369	71%	73%	73%	62%	68%	2.2
Grade												
Tenth	172484	132202	77%	40282	23%	377	75%	77%	77%	66%	73%	2.4
Eleventh	16214	5147	32%	11067	68%	336	56%	57%	58%	44%	51%	1.8
Twelfth	25558	7617	30%	17941	70%	336	55%	57%	57%	44%	50%	1.8
Adult Education	2053	1160	57%	893	43%	356	66%	71%	69%	57%	60%	2
Unknown	14	7	50%	7	50%	354	67%	70%	68%	54%	65%	1.9
Gender												
Male	114078	71215	62%	42863	38%	362	69%	71%	70%	58%	65%	2.1
Female	102151	74879	73%	27272	27%	375	73%	75%	76%	66%	72%	2.4
Unknown	94	39	41%	55	59%	343	59%	62%	61%	48%	54%	1.7
Race/Ethnicity												
American Indian or Alaska Native	2389	1685	71%	704	29%	369	74%	73%	74%	62%	69%	2.2
Asian	16984	12828	76%	4156	24%	380	74%	76%	78%	68%	75%	2.4
Pacific Islander	1751	1165	67%	586	33%	365	70%	71%	72%	60%	68%	2.2
Filipino	5557	4654	84%	903	16%	385	77%	79%	81%	71%	78%	2.6
Hispanic or Latino	95387	52082	55%	43305	45%	354	64%	67%	68%	55%	60%	2.1
African American	21543	12303	57%	9240	43%	355	67%	68%	67%	54%	62%	2
White (not of Hispanic origin)	70059	59603	85%	10456	15%	388	81%	81%	81%	72%	79%	2.5
Unknown	2653	1813	68%	840	32%	370	73%	73%	74%	62%	68%	2.2
Language Fluency												
English Only Students	129527	98535	76%	30992	24%	377	76%	77%	77%	66%	73%	2.4
Initially Fluent English Proficient (IFEP)	15068	11910	79%	3158	21%	380	76%	78%	79%	68%	74%	2.4
Redesignated Fluent English Proficient (RFEP)	24306	20698	85%	3608	15%	379	76%	80%	80%	68%	74%	2.4
English Learner Students	45229	13844	31%	31385	69%	335	53%	57%	58%	45%	50%	1.8
Unknown	2193	1146	52%	1047	48%	352	65%	68%	67%	54%	58%	1.9
Economically Disadvantaged												
No	88378	73387	83%	14991	17%	386	79%	80%	80%	70%	77%	2.5
Yes	100421	54659	54%	45762	46%	354	64%	67%	67%	54%	61%	2
Unknown	27524	18087	66%	9437	34%	367	71%	72%	72%	61%	67%	2.2
Special Education Program Participation												
Students Receiving Services	24840	6225	25%	18615	75%	329	52%	52%	53%	41%	47%	1.6
Students Not Receiving Services	191483	139908	73%	51575	27%	374	74%	76%	76%	64%	71%	2.3

[1] Results for groups with less than 11 members are not reported

[2] WA — Word Analysis, RC — Reading Comprehension, LR/A — Literary Responses/Analysis, WS — Writing Strategies, WC — Writing Conventions

Table 5.C.2: Demographic Summary for All Examinees[1] Mathematics—February 2006

	N Tested	N Pass	% Pass	N Fail	% Fail	Mean Scale Score	Strands for Mathematics [2] Average Percent Correct				
							PS	NS	AF	MG	Alg1
Total Examinees	218209	139991	64%	78218	36%	368	69%	64%	65%	59%	53%
Grade											
Tenth	172180	126023	73%	46157	27%	376	73%	68%	69%	64%	57%
Eleventh	17228	4927	29%	12301	71%	339	55%	47%	49%	41%	36%
Twelfth	26601	8015	30%	18586	70%	340	56%	48%	49%	41%	36%
Adult Education	2182	1018	47%	1164	53%	350	62%	55%	55%	50%	39%
Unknown	18	8	44%	10	56%	350	61%	55%	54%	51%	36%
Gender											
Male	111515	71158	64%	40357	36%	368	69%	65%	65%	59%	52%
Female	106597	68794	65%	37803	35%	368	70%	63%	66%	59%	54%
Unknown	97	39	40%	58	60%	348	60%	54%	54%	46%	40%
Race/Ethnicity											
American Indian or Alaska Native	2442	1602	66%	840	34%	366	70%	64%	64%	58%	50%
Asian	15635	13243	85%	2392	15%	397	78%	77%	78%	76%	71%
Pacific Islander	1734	1088	63%	646	37%	364	66%	62%	63%	57%	51%
Filipino	5611	4534	81%	1077	19%	383	75%	71%	73%	69%	62%
Hispanic or Latino	96034	49562	52%	46472	48%	355	62%	57%	59%	51%	46%
African American	22885	10409	45%	12476	55%	350	61%	55%	56%	46%	43%
White (not of Hispanic origin)	71104	57819	81%	13285	19%	385	78%	74%	74%	69%	61%
Unknown	2764	1734	63%	1030	37%	367	69%	64%	64%	58%	50%
Language Fluency											
English Only Students	133907	92687	69%	41220	31%	373	72%	67%	67%	62%	55%
Initially Fluent English Proficient (IFEP)	15669	11333	72%	4336	28%	378	74%	69%	70%	64%	58%
Redesignated Fluent English Proficient (RFEP)	25268	19823	78%	5445	22%	378	74%	69%	71%	65%	59%
English Learner Students	41056	15140	37%	25916	63%	345	54%	50%	53%	45%	41%
Unknown	2309	1008	44%	1301	56%	348	60%	54%	53%	48%	39%
Economically Disadvantaged											
No	90179	70452	78%	19727	22%	383	76%	72%	72%	67%	60%
Yes	99959	52473	52%	47486	48%	356	63%	57%	59%	52%	47%
Unknown	28071	17066	61%	11005	39%	366	68%	63%	63%	57%	51%
Special Education Program Participation											
Students Receiving Services	23377	5399	23%	17978	77%	334	49%	45%	45%	37%	34%
Students Not Receiving Services	194832	134592	69%	60240	31%	373	71%	66%	68%	61%	55%

[1] Results for groups with less than 11 members are not reported

[2] PS — Probability/ Statistics, NS — Number Sense, AF — Algebra & Functions, MG — Measurement/Geometry, Alg1 — Algebra 1

Table 5.C.3: NCLB Demographic Summary for All CAHSEE Examinees ELA—February 2006

Subgroup	Value	N Tested	N Below Proficient	% Below Proficient	N Proficient	% Proficient	N Advanced	% Advanced	N Above Proficient	% Above Proficient
Total Examinees		216323	125793	58	44163	20	46367	21	90530	42
Grade	Tenth	172484	85328	49	41875	24	45281	26	87156	51
	Eleventh	16214	14945	92	889	5	380	2	1269	8
	Twelfth	25558	23961	94	1064	4	533	2	1597	6
	Adult Education	2053	1549	75	332	16	172	8	504	25
	Unknown	14	10	71	3	21	1	7	4	29
Gender	Male	114078	73132	64	21883	19	19063	17	40946	36
	Female	102151	52585	51	22269	22	27297	27	49566	49
	Unknown	94	76	81	11	12	7	7	18	19
Race/Ethnicity	American Indian or Alaskan Native	2389	1377	58	542	23	470	20	1012	42
	Asian	16984	7776	46	3507	21	5701	34	9208	54
	Pacific Islander	1751	1114	64	375	21	262	15	637	36
	Filipino	5557	2221	40	1457	26	1879	34	3336	60
	Hispanic or Latino	95387	70923	74	15263	16	9201	10	24464	26
	African American	21543	15678	73	3706	17	2159	10	5865	27
	White (not of Hispanic origin)	70059	25215	36	18794	27	26050	37	44844	64
	Unknown	2653	1489	56	519	20	645	24	1164	44
Language Fluency	English Only Students	129527	62604	48	30750	24	36173	28	66923	52
	Initially Fluent English Proficient (IFEP)	15068	7010	47	3703	25	4355	29	8058	53
	Redesignated Fluent English Proficient (RFEP)	24306	11886	49	7258	30	5162	21	12420	51
	English Learner Students	45229	42615	94	2123	5	491	1	2614	6
	Unknown	2193	1678	77	329	15	186	8	515	23
Economically Disadvantaged	No	88378	34566	39	22820	26	30992	35	53812	61
	Yes	100421	75018	75	15939	16	9464	9	25403	25
	Unknown	27524	16209	59	5404	20	5911	21	11315	41
Special Education Program Participation	Receiving Services	24840	23035	93	1270	5	535	2	1805	7
	Not Receiving Services	191483	102758	54	42893	22	45832	24	88725	46

Table 5.C.4: NCLB Demographic Summary for All CAHSEE Examinees Mathematics—February 2006

Subgroup	Value	N Tested	N Below Proficient	% Below Proficient	N Proficient	% Proficient	N Advanced	% Advanced	N Above Proficient	% Above Proficient
Total Examinees		218209	140062	64	52046	24	26101	12	78147	36
Grade	Tenth	172180	96353	56	50128	29	25699	15	75827	44
	Eleventh	17228	16386	95	684	4	158	1	842	5
	Twelfth	26601	25390	95	997	4	214	1	1211	5
	Adult Education	2182	1917	88	236	11	29	1	265	12
	Unknown	18	16	89	1	6	1	6	2	11
Gender	Male	111515	70574	63	26987	24	13954	13	40941	37
	Female	106597	69407	65	25045	23	12145	11	37190	35
	Unknown	97	81	84	14	14	2	2	16	16
Race/Ethnicity	American Indian or Alaskan Native	2442	1621	66	624	26	197	8	821	34
	Asian	15635	5454	35	4857	31	5324	34	10181	65
	Pacific Islander	1734	1207	70	407	23	120	7	527	30
	Filipino	5611	2699	48	1847	33	1065	19	2912	52
	Hispanic or Latino	96034	76222	79	15857	17	3955	4	19812	21
	African American	22885	19092	83	3132	14	661	3	3793	17
	White (not of Hispanic origin)	71104	31974	45	24674	35	14456	20	39130	55
	Unknown	2764	1793	65	648	23	323	12	971	35
Language Fluency	English Only Students	133907	78297	58	36341	27	19269	14	55610	42
	Initially Fluent English Proficient (IFEP)	15669	8648	55	4191	27	2830	18	7021	45
	Redesignated Fluent English Proficient (RFEP)	25268	14239	56	7714	31	3315	13	11029	44
	English Learner Students	41056	36855	90	3553	9	648	2	4201	10
	Unknown	2309	2023	88	247	11	39	2	286	12
Economically Disadvantaged	No	90179	43628	48	28649	32	17902	20	46551	52
	Yes	99959	77845	78	17086	17	5028	5	22114	22
	Unknown	28071	18589	66	6311	22	3171	11	9482	34
Special Education Program Participation	Receiving Services	23377	21796	93	1284	5	297	1	1581	7
	Not Receiving Services	194832	118266	61	50762	26	25804	13	76566	39

Table 5.C.5: Demographic Summary for All Examinees[1] ELA—February 2006

	Percentiles[2]									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD[3]	N Tested
Total Examinees	282	301	341	370	397	437	450	369	40	216323
Grade										
Tenth	285	308	352	380	404	437	450	377	38	172484
Eleventh	275	289	315	337	354	388	416	336	30	16214
Twelfth	275	291	317	337	352	382	416	336	28	25558
Adult Education	285	305	335	354	377	412	443	356	33	2053
Unknown	308	308	337	348	382	404	404	354	27	14
Gender										
Male	278	297	333	363	391	425	450	362	40	114078
Female	289	308	346	377	404	443	450	375	39	102151
Unknown	275	282	315	339	367	420	450	343	39	94
Race/Ethnicity										
American Indian or Alaska Native	275	299	344	372	397	431	450	369	39	2389
Asian	282	306	350	382	412	450	450	380	42	16984
Pacific Islander	287	305	339	365	391	425	450	365	36	1751
Filipino	297	324	361	388	412	443	450	385	35	5557
Hispanic or Latino	280	297	330	354	380	416	437	354	36	95387
African American	275	293	330	356	380	416	437	355	37	21543
White (not of Hispanic origin)	291	319	365	391	412	443	450	388	37	70059
Unknown	275	295	339	372	400	437	450	370	43	2653
Language Fluency										
English Only Students	282	306	350	380	404	443	450	377	39	129527
Initially Fluent English Proficient (IFEP)	291	315	354	382	408	443	450	380	37	15068
Redesignated Fluent English Proficient (RFEP)	301	330	361	380	397	431	450	379	30	24306
English Learner Students	275	291	315	335	354	380	404	335	27	45229
Unknown	275	295	326	352	377	412	443	352	36	2193
Economically Disadvantaged										
No	291	317	363	388	412	443	450	386	37	88378
Yes	278	295	330	354	380	416	437	354	36	100421
Unknown	275	297	337	367	397	437	450	367	41	27524
Special Education Program Participation										
Students Receiving Services	275	285	306	326	350	385	416	329	31	24840
Students Not Receiving Services	287	308	346	375	400	437	450	374	38	191483

[1] Results for groups with less than 11 members are not reported

[2] Mean scale scores are reported at each percentile

[3] SD - Standard Deviation

Table 5.C.6: Demographic Summary for All Examinees[1] Mathematics—February 2006

	Percentiles[2]									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD[3]	N Tested
Total Examinees	299	313	340	364	395	447	450	368	38	218209
Grade										
Tenth	301	317	347	374	403	450	450	376	38	172180
Eleventh	290	304	323	338	353	378	418	339	24	17228
Twelfth	293	306	325	340	353	378	414	340	23	26601
Adult Education	301	313	333	347	366	397	422	350	26	2182
Unknown	317	317	329	348	358	450	450	350	31	18
Gender										
Male	296	311	338	364	395	447	450	368	40	111515
Female	301	315	340	364	392	447	450	368	37	106597
Unknown	275	306	325	344	370	397	450	348	31	97
Race/Ethnicity										
American Indian or Alaska Native	296	313	340	364	389	433	450	366	36	2442
Asian	306	327	366	397	433	450	450	397	41	15635
Pacific Islander	299	313	338	360	385	427	450	364	34	1734
Filipino	306	325	356	380	410	450	450	383	37	5611
Hispanic or Latino	296	311	333	351	374	414	450	355	32	96034
African American	290	306	327	347	368	407	447	350	31	22885
White (not of Hispanic origin)	306	323	358	385	414	450	450	385	38	71104
Unknown	293	311	338	362	392	447	450	367	40	2764
Language Fluency										
English Only Students	299	313	344	370	400	447	450	373	39	133907
Initially Fluent English Proficient (IFEP)	304	319	347	374	407	450	450	378	40	15669
Redesignated Fluent English Proficient (RFEP)	311	327	353	374	400	447	450	378	34	25268
English Learner Students	296	306	325	342	360	395	433	345	27	41056
Unknown	296	309	329	346	364	397	433	348	28	2309
Economically Disadvantaged										
No	304	321	355	380	410	450	450	383	39	90179
Yes	296	309	333	353	376	422	450	356	33	99959
Unknown	296	311	336	360	392	447	450	366	39	28071
Special Education Program Participation										
Students Receiving Services	284	299	315	329	347	387	427	334	28	23377
Students Not Receiving Services	304	317	344	368	397	447	450	373	37	194832

[1] Results for groups with less than 11 members are not reported

[2] Mean scale scores are reported at each percentile

[3] SD - Standard Deviation

Table 5.C.7: Frequency Distributions ELA—February 2006

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	5243	2	5243	98
440-449	2803	1	8046	96
430-439	7422	3	15468	93
420-429	9352	4	24820	89
410-419	10457	5	35277	84
400-409	16851	8	52128	76
390-399	17181	8	69309	68
380-389	21221	10	90530	58
370-379	19145	9	109675	49
360-369	17114	8	126789	41
350-359[1]	19344	9	146133	32
340-349	16492	8	162625	25
330-339	16180	7	178805	17
320-329	10395	5	189200	13
310-319	10186	5	199386	8
300-309	6990	3	206376	5
290-299	5259	2	211635	2
280-289	2972	1	214607	1
270-279	1716	1	216323	0
260-269	0	0	216323	0
250-259	0	0	216323	0

[1]Passing Line

Table 5.C.8: Frequency Distributions Mathematics—February 2006

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	9130	4	9130	96
440-449	3241	1	12371	94
430-439	6673	3	19044	91
420-429	7057	3	26101	88
410-419	10484	5	36585	83
400-409	10922	5	47507	78
390-399	11371	5	58878	73
380-389	19269	9	78147	64
370-379	19821	9	97968	55
360-369	20812	10	118780	46
350-359[1]	21211	10	139991	36
340-349	24688	11	164679	25
330-339	18071	8	182750	16
320-329	15273	7	198023	9
310-319	11990	5	210013	4
300-309	5593	3	215606	1
290-299	1898	1	217504	0
280-289	386	0	217890	0
270-279	319	0	218209	0
260-269	0	0	218209	0
250-259	0	0	218209	0

[1]Passing Line

Table 5.C.9: Frequency Distributions ELA—February 2006

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	5243	2	5243	98
440-449	2803	1	8046	96
430-439	7422	3	15468	93
420-429	9352	4	24820	89
410-419	10457	5	35277	84
403-409[1]	11090	5	46367	79
390-402	22942	11	69309	68
380-389[2]	21221	10	90530	58
370-379	19145	9	109675	49
360-369	17114	8	126789	41
350-359	19344	9	146133	32
340-349	16492	8	162625	25
330-339	16180	7	178805	17
320-329	10395	5	189200	13
310-319	10186	5	199386	8
300-309	6990	3	206376	5
290-299	5259	2	211635	2
280-289	2972	1	214607	1
270-279	1716	1	216323	0
260-269	0	0	216323	0
250-259	0	0	216323	0

[1]Advanced Level Cut
[2]Proficient Level Cut

Table 5.C.10: Frequency Distributions Mathematics—February 2006

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	9130	4	9130	96
440-449	3241	1	12371	94
430-439	6673	3	19044	91
422-429[1]	7057	3	26101	88
410-421	10484	5	36585	83
400-409	10922	5	47507	78
390-399	11371	5	58878	73
380-389[2]	19269	9	78147	64
370-379	19821	9	97968	55
360-369	20812	10	118780	46
350-359	21211	10	139991	36
340-349	24688	11	164679	25
330-339	18071	8	182750	16
320-329	15273	7	198023	9
310-319	11990	5	210013	4
300-309	5593	3	215606	1
290-299	1898	1	217504	0
280-289	386	0	217890	0
270-279	319	0	218209	0
260-269	0	0	218209	0
250-259	0	0	218209	0

[1]Advanced Level Cut
[2]Proficient Level Cut

Table 5.C.11: Intercorrelations[1] and Reliability Estimates by Section—February 2006

	ELA[4]	Essay	Word Anal.	Read. Comp.	Lit. Resp. & Anal.	Writing Strat.	Writing Conv.	Math	Prob. & Stat.	Number Sense	Alg. & Func.	Meas. & Geom.	Alg1
ELA[2]	1.00	0.79	0.77	0.90	0.91	0.85	0.87	0.79	0.72	0.70	0.73	0.70	0.64
Essay	0.79	1.00	0.53	0.62	0.63	0.59	0.62	0.62	0.55	0.55	0.57	0.55	0.52
Word Analysis	0.77	0.53	1.00	0.68	0.70	0.60	0.63	0.58	0.56	0.54	0.55	0.51	0.45
Reading Comprehension	0.90	0.62	0.68	1.00	0.81	0.72	0.72	0.70	0.66	0.63	0.65	0.61	0.55
Literary Responses & Analysis	0.91	0.63	0.70	0.81	1.00	0.72	0.73	0.70	0.66	0.63	0.66	0.62	0.56
Writing Strategies	0.85	0.59	0.60	0.72	0.72	1.00	0.72	0.68	0.61	0.60	0.63	0.61	0.57
Writing Conventions	0.87	0.62	0.63	0.72	0.73	0.72	1.00	0.72	0.65	0.65	0.66	0.64	0.59
Math[3]	0.79	0.62	0.58	0.70	0.70	0.68	0.72	1.00	0.83	0.90	0.92	0.92	0.84
Probability and Statistics	0.72	0.55	0.56	0.66	0.66	0.61	0.65	0.83	1.00	0.71	0.73	0.70	0.61
Number Sense	0.70	0.55	0.54	0.63	0.63	0.60	0.65	0.90	0.71	1.00	0.78	0.77	0.69
Algebra & Functions	0.73	0.57	0.55	0.65	0.66	0.63	0.66	0.92	0.73	0.78	1.00	0.80	0.73
Measurement & Geometry	0.70	0.55	0.51	0.61	0.62	0.61	0.64	0.92	0.70	0.77	0.80	1.00	0.74
Algebra 1	0.64	0.52	0.45	0.55	0.56	0.57	0.59	0.84	0.61	0.69	0.73	0.74	1.00
Number of Items	73	1	7	18	20	12	15	80	13	17	20	18	12
Mean	60.56	2.25	4.99	13.15	14.66	7.41	10.24	49.86	8.98	10.89	13.05	10.61	6.34
SD	16.84	0.77	1.67	3.83	4.16	2.96	3.53	16.63	2.95	3.83	4.34	4.56	3.03
Reliability	0.94	0.50	0.60	0.81	0.83	0.75	0.81	0.95	0.75	0.80	0.81	0.85	0.75
SEM	4.18	0.54	1.05	1.66	1.73	1.47	1.52	3.78	1.49	1.71	1.87	1.77	1.51

[1] All correlations are for raw scores.

[2] Correlations for ELA section are reported for examinees completing ELA section. Number of examinees: 216142

[3] Correlations for Math section are reported for examinees completing Math section. Number of examinees: 217948

[4] Correlations between ELA and Math are reported for examinees taking both sections. Number of examinees: 194473

Table 5.C.12: Agreement of First and Second Ratings on CR item

(Cell Entry = Number of Examinee Responses)

First Rating	Second Rating					Overall	
	0	1	2	3	4	Total	Percent
0	7411	0	0	0	0	7411	3
1	0	12775	7425	202	6	20408	9
2	0	7210	81135	21091	713	110149	51
3	0	191	21319	40928	5444	67882	31
4	0	7	684	5667	3934	10292	5
Total	7411	20183	110563	67888	10097	216142	100
Percent	3	9	51	31	5	100	

Differences Between First and Second Ratings on Essay

Difference	Frequency	Percent	Cumulative Percent
0	146183	68	68
1	68156	32	99
2	1790	1	100
3	13	0	100
4	0	0	100

Table 5.C.13: Summary Statistics for CR item

	Mean	Standard Deviation
First Rating	2.25	0.82
Second Rating	2.25	0.82
Mean Absolute Difference Between First and Second Ratings		0.33
Correlation of First and Second Ratings		0.74

Summary of Essays Receiving Score of Zero

Essay	
Blank	4422
Illegible	0
Off Topic	2564
Cartoon / Inappropriate	372
Not in English	53
Total	7411

Table 5.C.14: Reliabilities (REL) and Standard Errors of Measurement (SEM) of Sub groups for the English-Language Arts—February 2006

	Total MC N=216,526		Composite (MC + CR) N=216,526	
	REL	SEM	REL	SEM
Gender				
Male	0.94	3.47	0.94	4.30
Female	0.94	3.30	0.94	4.02
Race/Ethnicity				
American Indian or Alaska Native	0.94	3.35	0.94	4.20
Asian	0.95	3.21	0.94	4.01
Pacific Islander	0.93	3.49	0.92	4.25
Filipino	0.92	3.16	0.92	3.93
Hispanic or Latino	0.93	3.62	0.93	4.34
African American	0.94	3.57	0.93	4.41
White (not of Hispanic origin)	0.93	3.04	0.92	3.88
Language Fluency				
English Proficient Students	0.94	3.24	0.93	4.04
English Learner Students	0.90	3.87	0.89	4.60
Special Education Program Participation				
Students Receiving Services	0.92	3.83	0.91	4.69
Students Not Receiving Services	0.94	3.33	0.93	4.10

Table 5.C.15: Reliabilities (REL) and Standard Errors of Measurement (SEM) of Sub groups for Mathematics – February 2006

	Total N=218,209	
	REL	SEM
Gender		
Male	0.95	3.75
Female	0.94	3.79
Race/Ethnicity		
American Indian or Alaska Native	0.94	3.81
Asian	0.96	3.29
Pacific Islander	0.94	3.87
Filipino	0.94	3.58
Hispanic or Latino	0.93	3.96
African American	0.93	3.99
White (not of Hispanic origin)	0.95	3.52
Language Fluency		
English Proficient Students	0.95	3.69
English Learner Students	0.91	4.07
Special Education Program Participation		
Students Receiving Services	0.91	4.05
Students Not Receiving Services	0.94	3.74

Appendix 5.D: Demographic Summaries, Frequency Distributions, Intercorrelations, and Reliability and SEMS of Sub Groups—March 2006

Table 5.D.1: Demographic Summary for All Examinees[1] ELA—March 2006

	N Tested	N Pass	% Pass	N Fail	% Fail	Mean Scale Score	Reading [2] Avg. % Correct			Writing [2] Avg. % Correct		Writing Application Avg. Score
							WA	RC	LR/A	WS	WC	Essay
Total Examinees	355526	253627	71%	101899	29%	374	76%	71%	73%	69%	70%	2.5
Grade												
Tenth	297411	233670	79%	63741	21%	380	78%	74%	77%	72%	74%	2.6
Eleventh	36589	11720	32%	24869	68%	338	61%	52%	55%	51%	53%	2
Twelfth	16410	5019	31%	11391	69%	337	60%	52%	54%	50%	52%	2
Adult Education	4839	3042	63%	1797	37%	361	70%	68%	69%	65%	63%	2.2
Unknown	277	176	64%	101	36%	362	72%	66%	68%	62%	64%	2.3
Gender												
Male	183537	122906	67%	60631	33%	368	74%	69%	71%	65%	68%	2.4
Female	171847	130665	76%	41182	24%	379	77%	72%	75%	72%	73%	2.6
Unknown	142	56	39%	86	61%	341	63%	56%	58%	53%	53%	1.9
Race/Ethnicity												
American Indian or Alaska Native	2743	1972	72%	771	28%	371	75%	70%	73%	67%	69%	2.4
Asian	32215	26392	82%	5823	18%	392	81%	77%	80%	76%	80%	2.8
Pacific Islander	2334	1620	69%	714	31%	368	75%	67%	71%	66%	69%	2.5
Filipino	9862	8428	85%	1434	15%	388	80%	76%	80%	76%	79%	2.7
Hispanic or Latino	168590	102041	61%	66549	39%	360	71%	64%	67%	63%	64%	2.3
African American	29608	17343	59%	12265	41%	358	71%	64%	66%	61%	62%	2.3
White (not of Hispanic origin)	106980	93561	87%	13419	13%	393	83%	80%	83%	77%	79%	2.7
Unknown	3194	2270	71%	924	29%	373	76%	70%	73%	67%	69%	2.5
Language Fluency												
English Only Students	194738	154180	79%	40558	21%	382	79%	75%	78%	72%	74%	2.6
Initially Fluent English Proficient (IFEP)	31413	26748	85%	4665	15%	389	82%	78%	80%	76%	78%	2.7
Redesignated Fluent English Proficient (RFEP)	50417	44181	88%	6236	12%	383	81%	77%	78%	75%	76%	2.6
English Learner Students	73355	25113	34%	48242	66%	338	60%	52%	55%	52%	54%	2
Unknown	5603	3405	61%	2198	39%	359	70%	67%	68%	64%	63%	2.2
Economically Disadvantaged												
No	146826	125189	85%	21637	15%	390	82%	78%	81%	76%	78%	2.7
Yes	161743	94506	58%	67237	42%	358	70%	63%	66%	62%	63%	2.3
Unknown	46957	33932	72%	13025	28%	375	76%	72%	74%	69%	71%	2.5
Special Education Program Participation												
Students Receiving Services	38838	11345	29%	27492	71%	333	59%	50%	54%	47%	49%	1.9
Students Not Receiving Services	316688	242282	77%	74407	23%	378	78%	73%	76%	71%	73%	2.6

[1] Results for groups with less than 11 members are not reported

[2] WA — Word Analysis, RC — Reading Comprehension, LR/A — Literary Responses/Analysis, WS — Writing Strategies, WC — Writing Conventions

Table 5.D.2: Demographic Summary for All Examinees[1] Mathematics—March 2006

	N Tested	N Pass	% Pass	N Fail	% Fail	Mean Scale Score	Strands for Mathematics [2] Average Percent Correct				
							PS	NS	AF	MG	Alg1
Total Examinees	360534	255084	71%	105450	29%	374	73%	65%	68%	62%	56%
Grade											
Tenth	296614	231316	78%	65298	22%	381	76%	69%	71%	66%	60%
Eleventh	40219	14014	35%	26205	65%	342	58%	47%	50%	43%	38%
Twelfth	17889	6583	37%	11306	63%	342	58%	48%	50%	44%	38%
Adult Education	5534	2995	54%	2539	46%	355	66%	57%	56%	53%	41%
Unknown	278	176	63%	102	37%	363	67%	60%	62%	56%	49%
Gender											
Male	180996	127566	70%	53430	30%	374	73%	66%	68%	62%	55%
Female	179370	127452	71%	51918	29%	374	73%	64%	68%	62%	57%
Unknown	168	66	39%	102	61%	344	59%	48%	52%	45%	38%
Race/Ethnicity											
American Indian or Alaska Native	2836	1869	66%	967	34%	367	71%	62%	64%	58%	51%
Asian	30598	27668	90%	2930	10%	408	84%	81%	83%	80%	76%
Pacific Islander	2365	1637	69%	728	31%	369	71%	63%	66%	59%	55%
Filipino	9943	8486	85%	1457	15%	389	80%	73%	76%	71%	66%
Hispanic or Latino	170909	104456	61%	66453	39%	361	68%	58%	62%	55%	50%
African American	32541	16570	51%	15971	49%	353	64%	54%	57%	49%	45%
White (not of Hispanic origin)	108027	92209	85%	15818	15%	390	81%	74%	76%	71%	64%
Unknown	3315	2189	66%	1126	34%	369	71%	63%	65%	59%	53%
Language Fluency											
English Only Students	201388	150584	75%	50804	25%	378	76%	68%	70%	64%	58%
Initially Fluent English Proficient (IFEP)	32210	26491	82%	5719	18%	388	80%	72%	75%	69%	64%
Redesignated Fluent English Proficient (RFEP)	52507	43706	83%	8801	17%	383	78%	70%	74%	67%	62%
English Learner Students	68255	30908	45%	37347	55%	349	59%	51%	54%	48%	45%
Unknown	6174	3395	55%	2779	45%	356	66%	57%	57%	53%	42%
Economically Disadvantaged											
No	149485	124090	83%	25395	17%	388	80%	73%	75%	70%	64%
Yes	162562	97154	60%	65408	40%	361	67%	58%	61%	54%	50%
Unknown	48487	33840	70%	14647	30%	374	73%	65%	67%	62%	55%
Special Education Program Participation											
Students Receiving Services	36670	10395	28%	26274	72%	337	53%	44%	46%	40%	36%
Students Not Receiving Services	323864	244689	76%	79176	24%	378	76%	67%	70%	64%	59%

[1] Results for groups with less than 11 members are not reported

[2] PS — Probability/ Statistics, NS — Number Sense, AF — Algebra & Functions, MG — Measurement/Geometry, Alg1 — Algebra 1

Table 5.D.3: NCLB Demographic Summary for All CAHSEE Examinees ELA—March 2006

Subgroup	Value	N Tested	N Below Proficient	% Below Proficient	N Proficient	% Proficient	N Advanced	% Advanced	N Above Proficient	% Above Proficient
Total Examinees		355526	198864	56	62711	18	93951	26	156662	44
Grade	Tenth	297411	145474	49	59954	20	91983	31	151937	51
	Eleventh	36589	34232	94	1394	4	963	3	2357	6
	Twelfth	16410	15425	94	570	3	415	3	985	6
	Adult Education	4839	3566	74	739	15	534	11	1273	26
	Unknown	277	167	60	54	19	56	20	110	40
Gender	Male	183537	111960	61	31128	17	40449	22	71577	39
	Female	171847	86782	50	31568	18	53497	31	85065	50
	Unknown	142	122	86	15	11	5	4	20	14
Race/Ethnicity	American Indian or Alaskan Native	2743	1626	59	510	19	607	22	1117	41
	Asian	32215	12028	37	5524	17	14663	46	20187	63
	Pacific Islander	2334	1476	63	422	18	436	19	858	37
	Filipino	9862	3943	40	2237	23	3682	37	5919	60
	Hispanic or Latino	168590	120204	71	25968	15	22418	13	48386	29
	African American	29608	21529	73	4232	14	3847	13	8079	27
	White (not of Hispanic origin)	106980	36280	34	23286	22	47414	44	70700	66
	Unknown	3194	1778	56	532	17	884	28	1416	44
Language Fluency	English Only Students	194738	89506	46	38622	20	66610	34	105232	54
	Initially Fluent English Proficient (IFEP)	31413	12669	40	6728	21	12016	38	18744	60
	Redesignated Fluent English Proficient (RFEP)	50417	24043	48	12904	26	13470	27	26374	52
	English Learner Students	73355	68514	93	3635	5	1206	2	4841	7
	Unknown	5603	4132	74	822	15	649	12	1471	26
Economically Disadvantaged	No	146826	55629	38	30839	21	60358	41	91197	62
	Yes	161743	118122	73	23570	15	20051	12	43621	27
	Unknown	46957	25113	53	8302	18	13542	29	21844	47
Special Education Program Participation	Receiving Services	38838	35682	92	1998	5	1158	3	3156	8
	Not Receiving Services	316688	163182	52	60713	19	92793	29	153506	48

Table 5.D.4: NCLB Demographic Summary for All CAHSEE Examinees Mathematics—March 2006

Subgroup	Value	N Tested	N Below Proficient	% Below Proficient	N Proficient	% Proficient	N Advanced	% Advanced	N Above Proficient	% Above Proficient
Total Examinees		360534	211490	59	97883	27	51161	14	149044	41
Grade	Tenth	296614	151390	51	94795	32	50429	17	145224	49
	Eleventh	40219	38302	95	1542	4	375	1	1917	5
	Twelfth	17889	16937	95	783	4	169	1	952	5
	Adult Education	5534	4672	84	690	12	172	3	862	16
	Unknown	278	189	68	73	26	16	6	89	32
Gender	Male	180996	104659	58	49340	27	26997	15	76337	42
	Female	179370	106679	59	48529	27	24162	13	72691	41
	Unknown	168	152	90	14	8	2	1	16	10
Race/Ethnicity	American Indian or Alaskan Native	2836	1869	66	732	26	235	8	967	34
	Asian	30598	7585	25	9474	31	13539	44	23013	75
	Pacific Islander	2365	1510	64	615	26	240	10	855	36
	Filipino	9943	4051	41	3777	38	2115	21	5892	59
	Hispanic or Latino	170909	125311	73	36225	21	9373	5	45598	27
	African American	32541	26269	81	5110	16	1162	4	6272	19
	White (not of Hispanic origin)	108027	42807	40	41118	38	24102	22	65220	60
	Unknown	3315	2088	63	832	25	395	12	1227	37
Language Fluency	English Only Students	201388	106786	53	61823	31	32779	16	94602	47
	Initially Fluent English Proficient (IFEP)	32210	14359	45	10090	31	7761	24	17851	55
	Redesignated Fluent English Proficient (RFEP)	52507	26252	50	17624	34	8631	16	26255	50
	English Learner Students	68255	59029	86	7468	11	1758	3	9226	14
	Unknown	6174	5064	82	878	14	232	4	1110	18
Economically Disadvantaged	No	149485	64070	43	51771	35	33644	23	85415	57
	Yes	162562	119033	73	33279	20	10250	6	43529	27
	Unknown	48487	28387	59	12833	26	7267	15	20100	41
Special Education Program Participation	Receiving Services	36670	33800	92	2342	6	528	1	2870	8
	Not Receiving Services	323864	177690	55	95541	30	50633	16	146174	45

Table 5.D.5: Demographic Summary for All Examinees[1] ELA—March 2006

	Percentiles[2]									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD[3]	N Tested
Total Examinees	285	305	344	374	403	442	450	374	41	355526
Grade										
Tenth	287	311	354	382	407	450	450	380	39	297411
Eleventh	276	293	319	339	354	384	424	338	28	36589
Twelfth	275	291	318	337	354	384	419	337	29	16410
Adult Education	293	309	339	359	382	415	436	361	32	4839
Unknown	275	285	329	365	393	430	450	362	44	277
Gender										
Male	281	301	339	369	396	436	450	368	41	183537
Female	291	311	350	379	410	450	450	379	40	171847
Unknown	275	278	318	339	365	396	424	341	35	142
Race/Ethnicity										
American Indian or Alaska Native	287	305	344	372	396	436	450	371	39	2743
Asian	291	316	361	396	424	450	450	392	42	32215
Pacific Islander	287	309	343	367	393	436	450	368	37	2334
Filipino	301	325	365	390	415	450	450	388	36	9862
Hispanic or Latino	283	299	335	359	384	419	450	360	37	168590
African American	278	297	333	356	384	419	450	358	37	29608
White (not of Hispanic origin)	295	324	369	396	419	450	450	393	37	106980
Unknown	276	299	343	374	403	442	450	373	43	3194
Language Fluency										
English Only Students	287	311	356	384	410	450	450	382	40	194738
Initially Fluent English Proficient (IFEP)	297	325	365	390	415	450	450	389	37	31413
Redesignated Fluent English Proficient (RFEP)	307	335	363	382	403	436	450	383	31	50417
English Learner Students	278	293	318	339	356	384	407	338	28	73355
Unknown	283	305	337	359	382	419	442	359	34	5603
Economically Disadvantaged										
No	295	322	365	393	419	450	450	390	38	146826
Yes	281	299	333	356	382	419	450	358	37	161743
Unknown	283	303	344	377	407	450	450	375	42	46957
Special Education Program Participation										
Students Receiving Services	275	287	309	331	354	390	424	333	32	38838
Students Not Receiving Services	291	312	350	379	407	450	450	378	39	316688

[1] Results for groups with less than 11 members are not reported

[2] Mean scale scores are reported at each percentile

[3] SD - Standard Deviation

Table 5.D.6: Demographic Summary for All Examinees[1] Mathematics—March 2006

	Percentiles[2]									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD[3]	N Tested
Total Examinees	301	315	344	370	401	449	450	374	39	360534
Grade										
Tenth	303	319	351	379	408	450	450	381	38	296614
Eleventh	296	308	327	340	353	379	419	342	23	40219
Twelfth	293	306	327	342	355	381	419	342	24	17889
Adult Education	303	315	337	351	368	408	449	355	28	5534
Unknown	293	306	337	363	388	424	449	363	36	278
Gender										
Male	298	313	344	370	401	450	450	374	40	180996
Female	303	319	344	368	401	449	450	374	38	179370
Unknown	298	308	326	340	357	390	424	344	24	168
Race/Ethnicity										
American Indian or Alaska Native	301	313	339	365	390	434	450	367	36	2836
Asian	313	335	381	415	449	450	450	408	39	30598
Pacific Islander	298	315	344	365	393	441	450	369	36	2365
Filipino	311	329	363	388	415	450	450	389	36	9943
Hispanic or Latino	298	313	337	357	381	424	450	361	33	170909
African American	296	308	331	350	372	415	449	353	32	32541
White (not of Hispanic origin)	306	327	363	390	419	450	450	390	37	108027
Unknown	293	311	340	365	396	449	450	369	39	3315
Language Fluency										
English Only Students	301	317	348	377	408	450	450	378	39	201388
Initially Fluent English Proficient (IFEP)	308	327	357	386	419	450	450	388	39	32210
Redesignated Fluent English Proficient (RFEP)	313	331	357	381	408	450	450	383	35	52507
English Learner Students	296	308	329	346	365	404	441	349	29	68255
Unknown	298	313	335	351	370	415	449	356	30	6174
Economically Disadvantaged										
No	306	325	359	388	419	450	450	388	38	149485
Yes	298	311	337	357	381	429	450	361	34	162562
Unknown	298	315	344	370	401	450	450	374	40	48487
Special Education Program Participation										
Students Receiving Services	287	301	317	333	351	390	429	337	29	36670
Students Not Receiving Services	306	321	350	375	404	450	450	378	38	323864

[1] Results for groups with less than 11 members are not reported

[2] Mean scale scores are reported at each percentile

[3] SD - Standard Deviation

Table 5.D.7: Frequency Distributions ELA—March 2006

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	16872	5	16872	95
440-449	6427	2	23299	93
430-439	15254	4	38553	89
420-429	8480	2	47033	87
410-419	27685	8	74718	79
400-409	19233	5	93951	74
390-399	36990	10	130941	63
380-389	25721	7	156662	56
370-379	31813	9	188475	47
360-369	34775	10	223250	37
350-359[1]	30377	9	253627	29
340-349	25448	7	279075	22
330-339	20875	6	299950	16
320-329	19394	5	319344	10
310-319	12629	4	331973	7
300-309	10397	3	342370	4
290-299	7351	2	349721	2
280-289	3780	1	353501	1
270-279	2025	1	355526	0
260-269	0	0	355526	0
250-259	0	0	355526	0

[1]Passing Line

Table 5.D.8: Frequency Distributions Mathematics—March 2006

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	17218	5	17218	95
440-449	13349	4	30567	92
430-439	6774	2	37341	90
420-429	13820	4	51161	86
410-419	21135	6	72296	80
400-409	21387	6	93683	74
390-399	28005	8	121688	66
380-389	27356	8	149044	59
370-379	33183	9	182227	49
360-369	32864	9	215091	40
350-359[1]	39993	11	255084	29
340-349	31386	9	286470	21
330-339	27355	8	313825	13
320-329	21145	6	334970	7
310-319	15374	4	350344	3
300-309	7112	2	357456	1
290-299	2368	1	359824	0
280-289	444	0	360268	0
270-279	266	0	360534	0
260-269	0	0	360534	0
250-259	0	0	360534	0

[1]Passing Line

Table 5.D.9: Frequency Distributions ELA—March 2006

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	16872	5	16872	95
440-449	6427	2	23299	93
430-439	15254	4	38553	89
420-429	8480	2	47033	87
410-419	27685	8	74718	79
403-409[1]	19233	5	93951	74
390-402	36990	10	130941	63
380-389[2]	25721	7	156662	56
370-379	31813	9	188475	47
360-369	34775	10	223250	37
350-359	30377	9	253627	29
340-349	25448	7	279075	22
330-339	20875	6	299950	16
320-329	19394	5	319344	10
310-319	12629	4	331973	7
300-309	10397	3	342370	4
290-299	7351	2	349721	2
280-289	3780	1	353501	1
270-279	2025	1	355526	0
260-269	0	0	355526	0
250-259	0	0	355526	0

[1]Advanced Level Cut
[2]Proficient Level Cut

Table 5.D.10: Frequency Distributions Mathematics—March 2006

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	17218	5	17218	95
440-449	13349	4	30567	92
430-439	6774	2	37341	90
422-429[1]	13820	4	51161	86
410-421	21135	6	72296	80
400-409	21387	6	93683	74
390-399	28005	8	121688	66
380-389[2]	27356	8	149044	59
370-379	33183	9	182227	49
360-369	32864	9	215091	40
350-359	39993	11	255084	29
340-349	31386	9	286470	21
330-339	27355	8	313825	13
320-329	21145	6	334970	7
310-319	15374	4	350344	3
300-309	7112	2	357456	1
290-299	2368	1	359824	0
280-289	444	0	360268	0
270-279	266	0	360534	0
260-269	0	0	360534	0
250-259	0	0	360534	0

[1]Advanced Level Cut
[2]Proficient Level Cut

Table 5.D.11: Intercorrelations[1] and Reliability Estimates by Section—March 2006

	ELA[4]	Essay	Word Anal.	Read. Comp.	Lit. Resp. & Anal.	Writing Strat.	Writing Conv.	Math	Prob. & Stat.	Number Sense	Alg. & Func.	Meas. & Geom.	Alg1
ELA[2]	1.00	0.78	0.75	0.90	0.92	0.85	0.87	0.79	0.72	0.71	0.74	0.71	0.63
Essay	0.78	1.00	0.52	0.61	0.63	0.59	0.62	0.61	0.54	0.54	0.57	0.55	0.50
Word Analysis	0.75	0.52	1.00	0.65	0.68	0.59	0.61	0.58	0.54	0.53	0.55	0.52	0.45
Reading Comprehension	0.90	0.61	0.65	1.00	0.81	0.71	0.71	0.72	0.66	0.65	0.67	0.64	0.56
Literary Responses & Analysis	0.92	0.63	0.68	0.81	1.00	0.74	0.74	0.71	0.66	0.64	0.67	0.64	0.56
Writing Strategies	0.85	0.59	0.59	0.71	0.74	1.00	0.72	0.66	0.60	0.58	0.62	0.59	0.53
Writing Conventions	0.87	0.62	0.61	0.71	0.74	0.72	1.00	0.72	0.65	0.64	0.68	0.65	0.58
Math[3]	0.79	0.61	0.58	0.72	0.71	0.66	0.72	1.00	0.84	0.90	0.93	0.92	0.84
Probability and Statistics	0.72	0.54	0.54	0.66	0.66	0.60	0.65	0.84	1.00	0.72	0.75	0.71	0.61
Number Sense	0.71	0.54	0.53	0.65	0.64	0.58	0.64	0.90	0.72	1.00	0.79	0.78	0.70
Algebra & Functions	0.74	0.57	0.55	0.67	0.67	0.62	0.68	0.93	0.75	0.79	1.00	0.80	0.74
Measurement & Geometry	0.71	0.55	0.52	0.64	0.64	0.59	0.65	0.92	0.71	0.78	0.80	1.00	0.74
Algebra 1	0.63	0.50	0.45	0.56	0.56	0.53	0.58	0.84	0.61	0.70	0.74	0.74	1.00
Number of Items	73	1	7	18	20	12	15	80	13	17	20	18	12
Mean	62.69	2.49	5.30	12.72	14.64	8.25	10.58	52.04	9.53	11.05	13.56	11.13	6.76
SD	16.43	0.71	1.52	3.97	4.23	2.86	3.34	16.40	2.80	3.88	4.38	4.30	3.03
Reliability	0.94	0.50	0.55	0.82	0.83	0.76	0.79	0.95	0.75	0.81	0.83	0.83	0.75
SEM	4.04	0.50	1.02	1.67	1.72	1.39	1.52	3.70	1.40	1.70	1.79	1.76	1.51

[1] All correlations are for raw scores.

[2] Correlations for ELA section are reported for examinees completing ELA section. Number of examinees: 355039

[3] Correlations for Math section are reported for examinees completing Math section. Number of examinees: 360106

[4] Correlations between ELA and Math are reported for examinees taking both sections. Number of examinees: 324295

Table 5.D.12: Agreement of First and Second Ratings on CR item

(Cell Entry = Number of Examinee Responses)

First Rating	Second Rating					Overall	
	0	1	2	3	4	Total	Percent
0	5733	0	0	0	0	5733	2
1	0	10355	5745	72	3	16175	5
2	0	5491	116511	35424	936	158362	45
3	0	76	35796	97003	14014	146889	41
4	0	4	976	14408	12492	27880	8
Total	5733	15926	159028	146907	27445	355039	100
Percent	2	4	45	41	8	100	

Differences Between First and Second Ratings on Essay

Difference	Frequency	Percent	Cumulative Percent
0	242094	68	68
1	110878	31	99
2	2060	1	100
3	7	0	100
4	0	0	100

Table 5.D.13: Summary Statistics for CR item

	Mean	Standard Deviation
First Rating	2.49	0.77
Second Rating	2.49	0.77
Mean Absolute Difference Between First and Second Ratings		0.32
Correlation of First and Second Ratings		0.72

Summary of Essays Receiving Score of Zero

Essay	
Blank	4929
Illegible	0
Off Topic	513
Cartoon / Inappropriate	198
Not in English	93
Total	5733

Table 5.D.14: Reliabilities (REL) and Standard Errors of Measurement (SEM) of Sub groups for the English-Language Arts—March 2006

	Total MC N=355,526		Composite (MC + CR) N=355,526	
	REL	SEM	REL	SEM
Gender				
Male	0.94	3.42	0.94	4.16
Female	0.94	3.26	0.94	3.89
Race/Ethnicity				
American Indian or Alaska Native	0.94	3.40	0.93	4.23
Asian	0.95	3.01	0.94	3.76
Pacific Islander	0.93	3.45	0.93	4.11
Filipino	0.92	3.13	0.92	3.83
Hispanic or Latino	0.93	3.56	0.93	4.18
African American	0.94	3.58	0.93	4.28
White (not of Hispanic origin)	0.93	3.00	0.92	3.79
Language Fluency				
English Proficient Students	0.93	3.20	0.93	3.92
English Learner Students	0.90	3.82	0.90	4.42
Special Education Program Participation				
Students Receiving Services	0.92	3.81	0.91	4.57
Students Not Receiving Services	0.94	3.28	0.93	3.97

Table 5.D.15: Reliabilities (REL) and Standard Errors of Measurement (SEM) of Sub groups for Mathematics – March 2006

	Total N=360,534	
	REL	SEM
Gender		
Male	0.95	3.68
Female	0.95	3.71
Race/Ethnicity		
American Indian or Alaska Native	0.94	3.80
Asian	0.95	3.05
Pacific Islander	0.94	3.78
Filipino	0.94	3.48
Hispanic or Latino	0.93	3.90
African American	0.93	3.95
White (not of Hispanic origin)	0.95	3.43
Language Fluency		
English Proficient Students	0.95	3.60
English Learner Students	0.91	4.04
Special Education Program Participation		
Students Receiving Services	0.91	4.05
Students Not Receiving Services	0.95	3.65

Appendix 5.E: Demographic Summaries, Frequency Distributions, Intercorrelations, and Reliability and SEMS of Sub Groups—May 2006

Table 5.E.1: Demographic Summary for All Examinees[1] ELA May 2006

	N Tested	N Pass	% Pass	N Fail	% Fail	Mean Scale Score	Reading [2] Avg. % Correct			Writing [2] Avg. % Correct		Writing Application Avg. Score
							WA	RC	LR/A	WS	WC	Essay
Total Examinees	49265	15244	31%	34021	69%	336	60%	57%	56%	47%	55%	2.1
Grade												
Tenth	13121	6592	50%	6529	50%	349	66%	63%	63%	53%	61%	2.4
Eleventh	19735	4829	24%	14906	76%	331	57%	55%	53%	44%	53%	2.1
Twelfth	14208	2735	19%	11473	81%	328	55%	54%	51%	44%	51%	2
Adult Education	1913	1018	53%	895	47%	353	71%	69%	67%	61%	61%	2.3
Unknown	288	70	24%	218	76%	331	59%	55%	53%	44%	53%	2
Gender												
Male	28204	7685	27%	20519	73%	332	59%	55%	53%	44%	52%	2.1
Female	20984	7543	36%	13441	64%	342	60%	60%	59%	52%	59%	2.2
Unknown	77	16	21%	61	79%	323	53%	49%	49%	42%	46%	1.8
Race/Ethnicity												
American Indian or Alaska Native	511	176	34%	335	66%	336	60%	56%	56%	47%	54%	2.2
Asian	3013	838	28%	2175	72%	335	51%	56%	53%	51%	60%	2.1
Pacific Islander	431	152	35%	279	65%	338	59%	59%	56%	47%	57%	2.2
Filipino	785	318	41%	467	59%	346	62%	62%	60%	53%	62%	2.4
Hispanic or Latino	28510	7249	25%	21261	75%	332	59%	55%	54%	45%	52%	2
African American	5517	1382	25%	4135	75%	329	54%	54%	51%	42%	50%	2
White (not of Hispanic origin)	9577	4821	50%	4756	50%	352	68%	65%	64%	54%	63%	2.4
Unknown	921	308	33%	613	67%	336	59%	57%	56%	46%	53%	2.1
Language Fluency												
English Only Students	23598	8954	38%	14644	62%	340	62%	59%	58%	48%	56%	2.3
Initially Fluent English Proficient (IFEP)	2482	1003	40%	1479	60%	343	64%	61%	60%	50%	59%	2.3
Redesignated Fluent English Proficient (RFEP)	2733	1303	48%	1430	52%	348	67%	65%	63%	53%	63%	2.3
English Learner Students	18586	3086	17%	15500	83%	326	54%	52%	50%	44%	51%	1.9
Unknown	1866	898	48%	968	52%	349	68%	66%	64%	57%	60%	2.3
Economically Disadvantaged												
No	12997	5704	44%	7293	56%	347	65%	62%	62%	52%	61%	2.4
Yes	27623	6540	24%	21083	76%	330	57%	54%	52%	44%	52%	2
Unknown	8645	3000	35%	5645	65%	338	61%	59%	57%	48%	54%	2.1
Special Education Program Participation												
Students Receiving Services	9933	1027	10%	8906	90%	315	47%	45%	43%	35%	43%	1.8
Students Not Receiving Services	39332	14217	36%	25115	64%	341	63%	61%	59%	50%	58%	2.2

[1] Results for groups with less than 11 members are not reported

[2] WA — Word Analysis, RC — Reading Comprehension, LR/A — Literary Responses/Analysis, WS — Writing Strategies, WC — Writing Conventions

Table 5.E.2: Demographic Summary for All Examinees[1] Mathematics—May 2006

	N Tested	N Pass	% Pass	N Fail	% Fail	Mean Scale Score	Strands for Mathematics [2] Average Percent Correct				
							PS	NS	AF	MG	Alg1
Total Examinees	49955	16160	32%	33795	68%	342	54%	49%	51%	43%	37%
Grade											
Tenth	12480	6204	50%	6276	50%	354	60%	57%	58%	51%	44%
Eleventh	20489	5782	28%	14707	72%	339	52%	47%	49%	41%	36%
Twelfth	14499	3129	22%	11370	78%	335	51%	45%	46%	39%	33%
Adult Education	2194	970	44%	1224	56%	348	61%	52%	55%	50%	38%
Unknown	293	75	26%	218	74%	338	52%	47%	48%	41%	33%
Gender											
Male	25396	8093	32%	17303	68%	341	54%	49%	49%	43%	36%
Female	24464	8039	33%	16425	67%	343	55%	49%	52%	43%	39%
Unknown	95	28	29%	67	71%	339	52%	49%	48%	40%	36%
Race/Ethnicity											
American Indian or Alaska Native	629	203	32%	426	68%	341	56%	49%	50%	43%	35%
Asian	1745	862	49%	883	51%	358	58%	59%	59%	53%	49%
Pacific Islander	442	163	37%	279	63%	343	54%	51%	52%	44%	38%
Filipino	819	389	47%	430	53%	353	60%	54%	58%	51%	44%
Hispanic or Latino	28419	7601	27%	20818	73%	338	52%	47%	48%	41%	35%
African American	6628	1545	23%	5083	77%	334	51%	44%	46%	38%	34%
White (not of Hispanic origin)	10290	5071	49%	5219	51%	355	63%	57%	58%	52%	43%
Unknown	983	326	33%	657	67%	341	54%	49%	50%	43%	37%
Language Fluency											
English Only Students	27041	9725	36%	17316	64%	344	57%	51%	52%	44%	38%
Initially Fluent English Proficient (IFEP)	2940	1092	37%	1848	63%	346	58%	52%	53%	45%	39%
Redesignated Fluent English Proficient (RFEP)	3489	1441	41%	2048	59%	348	60%	53%	56%	47%	40%
English Learner Students	14381	3004	21%	11377	79%	334	48%	44%	46%	39%	35%
Unknown	2104	898	43%	1206	57%	347	60%	52%	54%	49%	38%
Economically Disadvantaged											
No	14144	6153	44%	7991	56%	351	60%	54%	56%	48%	41%
Yes	26491	6801	26%	19690	74%	337	51%	46%	48%	40%	35%
Unknown	9320	3206	34%	6114	66%	343	55%	50%	51%	44%	37%
Special Education Program Participation											
Students Receiving Services	9156	1122	12%	8034	88%	325	43%	39%	38%	33%	30%
Students Not Receiving Services	40799	15038	37%	25761	63%	346	57%	51%	53%	45%	39%

[1] Results for groups with less than 11 members are not reported

[2] PS — Probability/ Statistics, NS — Number Sense, AF — Algebra & Functions, MG — Measurement/Geometry, Alg1 — Algebra 1

Table 5.E.3: NCLB Demographic Summary for All CAHSEE Examinees ELA—May 2006

Subgroup	Value	N Tested	N Below Proficient	% Below Proficient	N Proficient	% Proficient	N Advanced	% Advanced	N Above Proficient	% Above Proficient
Total Examinees		49265	44229	90	3071	6	1965	4	5036	10
Grade	Tenth	13121	9891	75	1855	14	1375	10	3230	25
	Eleventh	19735	18711	95	693	4	331	2	1024	5
	Twelfth	14208	13812	97	272	2	124	1	396	3
	Adult Education	1913	1547	81	242	13	124	6	366	19
	Unknown	288	268	93	9	3	11	4	20	7
Gender	Male	28204	25929	92	1443	5	832	3	2275	8
	Female	20984	18229	87	1622	8	1133	5	2755	13
	Unknown	77	71	92	6	8			6	8
Race/Ethnicity	American Indian or Alaskan Native	511	459	90	36	7	16	3	52	10
	Asian	3013	2761	92	124	4	128	4	252	8
	Pacific Islander	431	381	88	39	9	11	3	50	12
	Filipino	785	652	83	79	10	54	7	133	17
	Hispanic or Latino	28510	26988	95	1089	4	433	2	1522	5
	African American	5517	5152	93	264	5	101	2	365	7
	White (not of Hispanic origin)	9577	7048	74	1356	14	1173	12	2529	26
	Unknown	921	788	86	84	9	49	5	133	14
Language Fluency	English Only Students	23598	19842	84	2197	9	1559	7	3756	16
	Initially Fluent English Proficient (IFEP)	2482	2121	85	215	9	146	6	361	15
	Redesignated Fluent English Proficient (RFEP)	2733	2351	86	273	10	109	4	382	14
	English Learner Students	18586	18395	99	164	1	27	0	191	1
	Unknown	1866	1520	81	222	12	124	7	346	19
Economically Disadvantaged	No	12997	10318	79	1440	11	1239	10	2679	21
	Yes	27623	26349	95	951	3	323	1	1274	5
	Unknown	8645	7562	87	680	8	403	5	1083	13
Special Education Program Participation	Receiving Services	9933	9770	98	127	1	36	0	163	2
	Not Receiving Services	39332	34459	88	2944	7	1929	5	4873	12

Table 5.E.4: NCLB Demographic Summary for All CAHSEE Examinees Mathematics—May 2006

Subgroup	Value	N Tested	N Below Proficient	% Below Proficient	N Proficient	% Proficient	N Advanced	% Advanced	N Above Proficient	% Above Proficient
Total Examinees		49955	45162	90	3835	8	958	2	4793	10
Grade	Tenth	12480	9476	76	2306	18	698	6	3004	24
	Eleventh	20489	19457	95	843	4	189	1	1032	5
	Twelfth	14499	14000	97	446	3	53	0	499	3
	Adult Education	2194	1958	89	220	10	16	1	236	11
	Unknown	293	271	92	20	7	2	1	22	8
Gender	Male	25396	22826	90	2028	8	542	2	2570	10
	Female	24464	22251	91	1798	7	415	2	2213	9
	Unknown	95	85	89	9	9	1	1	10	11
Race/Ethnicity	American Indian or Alaskan Native	629	575	91	47	7	7	1	54	9
	Asian	1745	1304	75	281	16	160	9	441	25
	Pacific Islander	442	395	89	40	9	7	2	47	11
	Filipino	819	673	82	113	14	33	4	146	18
	Hispanic or Latino	28419	26970	95	1298	5	151	1	1449	5
	African American	6628	6336	96	261	4	31	0	292	4
	White (not of Hispanic origin)	10290	8025	78	1713	17	552	5	2265	22
	Unknown	983	884	90	82	8	17	2	99	10
Language Fluency	English Only Students	27041	23689	88	2623	10	729	3	3352	12
	Initially Fluent English Proficient (IFEP)	2940	2597	88	266	9	77	3	343	12
	Redesignated Fluent English Proficient (RFEP)	3489	3115	89	311	9	63	2	374	11
	English Learner Students	14381	13903	97	413	3	65	0	478	3
	Unknown	2104	1858	88	222	11	24	1	246	12
Economically Disadvantaged	No	14144	11694	83	1833	13	617	4	2450	17
	Yes	26491	25115	95	1216	5	160	1	1376	5
	Unknown	9320	8353	90	786	8	181	2	967	10
Special Education Program Participation	Receiving Services	9156	8959	98	177	2	20	0	197	2
	Not Receiving Services	40799	36203	89	3658	9	938	2	4596	11

Table 5.E.5: Demographic Summary for All Examinees[1] ELA—May 2006

	Percentiles[2]									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD[3]	N Tested
Total Examinees	275	283	311	333	356	397	428	336	34	49265
Grade										
Tenth	275	283	315	350	379	418	443	349	41	13121
Eleventh	275	285	311	331	348	382	413	331	29	19735
Twelfth	275	283	308	328	345	370	401	328	27	14208
Adult Education	281	300	331	352	374	409	428	353	32	1913
Unknown	275	287	308	331	348	394	413	331	31	288
Gender										
Male	275	281	306	330	352	391	423	332	33	28204
Female	275	291	319	339	361	404	435	342	34	20984
Unknown	275	275	300	322	345	394	401	323	33	77
Race/Ethnicity										
American Indian or Alaska Native	275	283	309	335	361	397	413	336	33	511
Asian	275	283	313	333	352	397	435	335	33	3013
Pacific Islander	275	287	315	337	359	391	428	338	33	431
Filipino	275	293	322	341	367	409	435	346	35	785
Hispanic or Latino	275	285	311	331	350	382	409	332	29	28510
African American	275	279	304	326	350	388	413	329	33	5517
White (not of Hispanic origin)	275	289	320	350	382	423	443	352	41	9577
Unknown	275	275	306	333	363	404	428	336	38	921
Language Fluency										
English Only Students	275	283	311	337	365	409	435	340	38	23598
Initially Fluent English Proficient (IFEP)	275	289	319	341	365	404	435	343	35	2482
Redesignated Fluent English Proficient (RFEP)	279	295	330	348	367	401	418	348	30	2733
English Learner Students	275	283	309	328	343	363	382	326	25	18586
Unknown	275	293	326	348	372	409	428	349	35	1866
Economically Disadvantaged										
No	275	287	319	343	374	418	443	347	39	12997
Yes	275	283	309	330	348	379	404	330	29	27623
Unknown	275	281	311	337	361	401	428	338	36	8645
Special Education Program Participation										
Students Receiving Services	275	275	295	311	331	361	388	315	26	9933
Students Not Receiving Services	275	289	319	339	361	401	428	341	33	39332

[1] Results for groups with less than 11 members are not reported

[2] Mean scale scores are reported at each percentile

[3] SD - Standard Deviation

Table 5.E.6: Demographic Summary for All Examinees[1] Mathematics—May 2006

	Percentiles[2]									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD[3]	N Tested
Total Examinees	291	302	322	338	356	399	438	342	29	49955
Grade										
Tenth	288	302	323	349	379	425	450	354	38	12480
Eleventh	291	304	322	336	352	381	421	339	25	20489
Twelfth	291	302	320	335	347	373	405	335	22	14499
Adult Education	294	311	331	345	363	396	421	348	26	2194
Unknown	294	304	320	335	350	386	416	338	26	293
Gender										
Male	288	302	320	336	356	399	445	341	30	25396
Female	294	307	325	340	356	396	438	343	27	24464
Unknown	285	300	316	333	352	393	431	339	28	95
Race/Ethnicity										
American Indian or Alaska Native	282	302	323	338	356	393	425	341	27	629
Asian	294	307	329	349	381	445	450	358	39	1745
Pacific Islander	291	304	322	340	358	399	431	343	29	442
Filipino	294	311	331	347	367	416	450	353	32	819
Hispanic or Latino	291	302	322	336	350	381	412	338	24	28419
African American	285	300	318	333	349	377	408	334	25	6628
White (not of Hispanic origin)	294	307	329	349	375	425	450	355	36	10290
Unknown	282	302	320	338	358	396	438	341	30	983
Language Fluency										
English Only Students	288	302	322	340	359	405	445	344	31	27041
Initially Fluent English Proficient (IFEP)	291	307	325	342	359	405	445	346	30	2940
Redesignated Fluent English Proficient (RFEP)	297	311	333	345	359	396	438	348	26	3489
English Learner Students	291	302	318	333	347	373	405	334	23	14381
Unknown	294	309	329	345	363	399	425	347	27	2104
Economically Disadvantaged										
No	291	304	327	345	367	421	450	351	34	14144
Yes	291	302	320	335	350	381	412	337	25	26491
Unknown	288	302	322	340	358	399	438	343	30	9320
Special Education Program Participation										
Students Receiving Services	282	297	311	322	336	363	393	325	22	9156
Students Not Receiving Services	294	307	325	342	359	402	445	346	29	40799

[1] Results for groups with less than 11 members are not reported

[2] Mean scale scores are reported at each percentile

[3] SD - Standard Deviation

Table 5.E.7: Frequency Distributions ELA—May 2006

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	124	0	124	99
440-449	116	0	240	99
430-439	153	0	393	99
420-429	373	1	766	98
410-419	533	1	1299	97
400-409	1082	2	2381	95
390-399	1258	3	3639	93
380-389	1397	3	5036	90
370-379	2779	6	7815	84
360-369	2816	6	10631	78
350-359[1]	4613	9	15244	69
340-349	5680	12	20924	58
330-339	6979	14	27903	43
320-329	5138	10	33041	33
310-319	4458	9	37499	24
300-309	4659	9	42158	14
290-299	3189	6	45347	8
280-289	2139	4	47486	4
270-279	1779	4	49265	0

[1]Passing Line

Table 5.E.8: Frequency Distributions Mathematics—May 2006

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	316	1	316	99
440-449	146	0	462	99
430-439	319	1	781	98
420-429	367	1	1148	98
410-419	439	1	1587	97
400-409	719	1	2306	95
390-399	1120	2	3426	93
380-389	1367	3	4793	90
370-379	2098	4	6891	86
360-369	3233	6	10124	80
350-359[1]	6036	12	16160	68
340-349	8129	16	24289	51
330-339	7274	15	31563	37
320-329	8160	16	39723	20
310-319	4920	10	44643	11
300-309	4040	8	48683	3
290-299	801	2	49484	1
280-289	284	1	49768	0
270-279	187	0	49955	0

[1]Passing Line

Table 5.E.9: Frequency Distributions ELA—May 2006

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	124	0	124	99
440-449	116	0	240	99
430-439	153	0	393	99
420-429	373	1	766	98
410-419	533	1	1299	97
403-409[1]	666	1	1965	96
390-402	1674	3	3639	93
380-389[2]	1397	3	5036	90
370-379	2779	6	7815	84
360-369	2816	6	10631	78
350-359	4613	9	15244	69
340-349	5680	12	20924	58
330-339	6979	14	27903	43
320-329	5138	10	33041	33
310-319	4458	9	37499	24
300-309	4659	9	42158	14
290-299	3189	6	45347	8
280-289	2139	4	47486	4
270-279	1779	4	49265	0

[1]Advanced Level Cut
[2]Proficient Level Cut

Table 5.E.10: Frequency Distributions Mathematics—May 2006

Scaled Score	Frequency	Percent	Cumulative Frequency	Percent Below
450	316	1	316	99
440-449	146	0	462	99
430-439	319	1	781	98
422-429[1]	177	0	958	98
410-421	629	1	1587	97
400-409	719	1	2306	95
390-399	1120	2	3426	93
380-389[2]	1367	3	4793	90
370-379	2098	4	6891	86
360-369	3233	6	10124	80
350-359	6036	12	16160	68
340-349	8129	16	24289	51
330-339	7274	15	31563	37
320-329	8160	16	39723	20
310-319	4920	10	44643	11
300-309	4040	8	48683	3
290-299	801	2	49484	1
280-289	284	1	49768	0
270-279	187	0	49955	0

[1]Advanced Level Cut
[2]Proficient Level Cut

Table 5.E.11: Intercorrelations[1] and Reliability Estimates by Section—May 2006

	ELA[4]	Essay	Word Anal.	Read. Comp.	Lit. Resp. & Anal.	Writing Strat.	Writing Conv.	Math	Prob. & Stat.	Number Sense	Alg. & Func.	Meas. & Geom.	Alg1
ELA[2]	1.00	0.74	0.70	0.88	0.89	0.80	0.82	0.70	0.63	0.59	0.66	0.60	0.46
Essay	0.74	1.00	0.45	0.54	0.55	0.46	0.53	0.50	0.46	0.44	0.47	0.42	0.32
Word Analysis	0.70	0.45	1.00	0.61	0.63	0.46	0.48	0.50	0.47	0.43	0.47	0.42	0.29
Reading Comprehension	0.88	0.54	0.61	1.00	0.76	0.64	0.63	0.60	0.56	0.50	0.57	0.51	0.37
Literary Responses & Analysis	0.89	0.55	0.63	0.76	1.00	0.66	0.63	0.63	0.57	0.53	0.60	0.54	0.41
Writing Strategies	0.80	0.46	0.46	0.64	0.66	1.00	0.65	0.59	0.50	0.48	0.56	0.52	0.42
Writing Conventions	0.82	0.53	0.48	0.63	0.63	0.65	1.00	0.60	0.52	0.50	0.56	0.51	0.41
Math[3]	0.70	0.50	0.50	0.60	0.63	0.59	0.60	1.00	0.79	0.84	0.91	0.86	0.71
Probability and Statistics	0.63	0.46	0.47	0.56	0.57	0.50	0.52	0.79	1.00	0.60	0.67	0.60	0.42
Number Sense	0.59	0.44	0.43	0.50	0.53	0.48	0.50	0.84	0.60	1.00	0.69	0.63	0.49
Algebra & Functions	0.66	0.47	0.47	0.57	0.60	0.56	0.56	0.91	0.67	0.69	1.00	0.72	0.57
Measurement & Geometry	0.60	0.42	0.42	0.51	0.54	0.52	0.51	0.86	0.60	0.63	0.72	1.00	0.57
Algebra 1	0.46	0.32	0.29	0.37	0.41	0.42	0.41	0.71	0.42	0.49	0.57	0.57	1.00
Number of Items	73	1	7	18	20	12	15	80	13	17	20	18	12
Mean	49.10	2.13	4.18	10.33	11.15	5.66	8.22	37.81	7.07	8.35	10.12	7.79	4.48
SD	16.47	0.77	1.74	4.01	4.49	2.94	3.49	14.07	2.88	3.53	4.28	3.74	2.43
Reliability	0.92	0.40	0.54	0.79	0.80	0.73	0.78	0.92	0.68	0.72	0.79	0.74	0.59
SEM	4.62	0.59	1.18	1.85	2.00	1.52	1.66	4.05	1.63	1.88	1.98	1.90	1.56

[1] All correlations are for raw scores.

[2] Correlations for ELA section are reported for examinees completing ELA section. Number of examinees: 49168

[3] Correlations for Math section are reported for examinees completing Math section. Number of examinees: 49826

[4] Correlations between ELA and Math are reported for examinees taking both sections. Number of examinees: 29178

Table 5.E.12: Agreement of First and Second Ratings on CR item

(Cell Entry = Number of Examinee Responses)

First Rating	Second Rating					Overall	
	0	1	2	3	4	Total	Percent
0	2592	0	0	0	0	2592	5
1	0	2631	1334	25	0	3990	8
2	0	1280	23380	4212	76	28948	59
3	0	10	4072	7051	836	11969	24
4	0	0	71	839	759	1669	3
Total	2592	3921	28857	12127	1671	49168	100
Percent	5	8	59	25	3	100	

Differences Between First and Second Ratings on Essay

Difference	Frequency	Percent	Cumulative Percent
0	36413	74	74
1	12573	26	100
2	182	0	100
3	0	0	100
4	0	0	100

Table 5.E.13: Summary Statistics for CR item

	Mean	Standard Deviation
First Rating	2.12	0.81
Second Rating	2.13	0.81
Mean Absolute Difference Between First and Second Ratings		0.26
Correlation of First and Second Ratings		0.79

Summary of Essays Receiving Score of Zero

Essay	
Blank	1497
Illegible	0
Off Topic	934
Cartoon / Inappropriate	119
Not in English	42
Total	2592

Chapter 6: Special Analyses

A number of special analyses that were conducted for the CAHSEE based on data from the September 2005, November 2005, February 2006, March 2006 and May 2006 administrations are summarized in this chapter. In particular, the chapter describes results of summary analyses of student results based on disabilities and testing variations, generalizability analyses of rater scores on the five CR items, and mark discrimination (or erasure) analyses.

Following the convention of previous chapters, the tables summarizing student results based on disabilities and testing variations are listed in Appendix 6.A to 6.E for the September 2005 through May 2006 administrations. The same table numbering system applies in Appendices 6.A to 6.E.

Disability/Testing Variations Summary Analysis

Scores for examinees who reported having a disability or who took CAHSEE with accommodation or modification were analyzed to investigate the relationships between CAHSEE scores and disability, accommodation, language fluency, and special program participation. Modifications for the CAHSEE include for the mathematics section the use of a calculator, an arithmetic table or a math dictionary. The use of a reader, an audio presentation, assisted devices, scribes, spell checker, grammar checker or an English dictionary are modifications for the ELA section. In Appendices 6.A to 6.E summary statistics are provided in Tables 1 and 2, for ELA and mathematics, respectively, for each disability type and for all accommodated students, as well as separately for accommodations versus modifications. Standard accommodations include students enrolled in an IEP/Section 504 Plan who took either a Braille or Audio CD form with no additional modifications. It is of note that the largest disability group reported is the group having a specific learning disability. The number of students with specific learning disabilities across the five administrations ranged from 8,439 to 31,587 for ELA and 8,940 to 32,884 in Mathematics. The passing rates for all students tested with accommodations and modifications ranged from 14% to 25% for ELA and from 15% to 23% for Mathematics.

Tables 3 and 4 in Appendices 6.A to 6.E present the passing rates and summary statistics for each accommodation or modification used on the exam. The largest number of students is those enrolled in an IEP or Section 504 plan. While the accommodation group with the largest percentage of students passing varied across the five administrations, students receiving an accommodation using a Braille or Large Print accommodation most often had the highest percentage passing. Tables 5 and 6 in Appendices 6.A to 6.E present scale scores at specific percentiles for each accommodation group.

Tables 7 and 8 in Appendices 6.A to 6.E present summary statistics for the breakdown of each testing variation by reported disability. Tables 9 and 10 summarize the comparison between language fluency categories within each testing variation group. The most commonly reported categories of accommodation/modification by students with Limited English Proficiency (IFEP, RFEP, ELL) were additional time, additional breaks, directions read aloud or signed, and the use of a calculator. English-Only speakers outperformed other categories in most but not all instances.

Generalizability Analyses

The ELA test features a CR item, which is rated by two raters on a scale between 1 and 4, with non-valid responses scored as zero. Generalizability analyses were performed to estimate variance for the rater and CR item facets. A person crossed with rater design, or P x R design was used for the generalizability analyses. This design assumes that the examinee could be rated by any rater in the pool of raters. Theoretically this is correct, but the practicality of producing scores in a timely manner prevents this from happening operationally. Therefore, the generalizability and dependability coefficients produced will be conservative estimates of score generalizability. The analyses were conducted using the GENOVA software group (Brennan, 2001; Crick & Brennan, 1983). A generalizability study (g-study) was performed to estimate variance components for each design facet. A decision study (d-study) was performed to estimate the generalizability and dependability coefficients for the operational design.

The results of the generalizability analyses are presented in the Tables 6.1-6.5 below. Generalizability coefficients for the CR item during the five administrations ranged from 0.85 to 0.89. The rater facet was consistently estimated across all five administrations to have no effect on score variance.

The fluctuation in generalizability coefficients across administrations can be attributed to the changes in the amount of variation resulting from differences among students. Generally, as facets other than universe variance and person variance are found to contribute to the score variance, the generalizability coefficient will decrease, indicating that score differences are a function of more than individual differences in the construct being assessed. Therefore, more of the student's score is due to error and score reliability is reduced. However, when the person variance is examined across administrations, the percentage of variance attributable to individual differences is very similar and large. The final interaction term is confounded with undifferentiated error that is not accounted for in the current design and represents the second largest source of score variance.

Table 6.1: Generalizability Results September 2005

Person x Rater: CR item Design

Facets	Degrees of Freedom	Mean Squares	Variance Components	Percent of Total Variance
Person (P)	45401	1.06	0.46287	76.54
Rater (R)	1	0.04	0.00000	0.00
PR,*e*	45401	0.14	0.13698	23.46
Generalizability Coefficient				0.87
Dependability Coefficient				0.87

Table 6.2: Generalizability Results November 2005

Person x Rater: CR item Design

Facets	Degrees of Freedom	Mean Squares	Variance Components	Percent of Total Variance
Person (P)	108834	1.15	0.49838	76.89
Rater (R)	1	0.06	0.00000	0.00
PR,*e*	108834	0.15	0.14976	23.11
Generalizability Coefficient				0.85
Dependability Coefficient				0.85

Table 6.3: Generalizability Results February 2006

Person x Rater: CR item Design

Facets	Degrees of Freedom	Mean Squares	Variance Components	Percent of Total Variance
Person (P)	214586	1.17	0.49558	74.81
Rater (R)	1	0.06	0.00000	0.00
PR,*e*	214586	0.17	0.17485	25.19
Generalizability Coefficient				0.86
Dependability Coefficient				0.86

Table 6.4: Generalizability Results March 2006

Person x Rater: CR item Design

Facets	Degrees of Freedom	Mean Squares	Variance Components	Percent of Total Variance
Person (P)	352833	1.01	0.42246	71.53
Rater (R)	1	0.53	0.00000	0.00
PR,e	352833	0.17	0.16813	28.47
Generalizability Coefficient				0.83
Dependability Coefficient				0.83

Table 6.5: Generalizability Results May 2006

Person x Rater: CR item Design

Facets	Degrees of Freedom	Mean Squares	Variance Components	Percent of Total Variance
Person (P)	48726	1.18	0.52057	79.34
Rater (R)	1	0.50	0.00001	0.00
PR,*e*	48726	0.14	0.13555	20.66
Generalizability Coefficient				0.88
Dependability Coefficient				0.88

Mark Discrimination Analyses

Background

The California High School Exit Examination (CAHSEE) has two parts: Mathematics consisting of 80 MC operational items and different sets of 12 embedded field-test items, and ELA consisting of 73 operational items, 72 MC and one CR, and different sets of 7 embedded MC field-test items. Each student record, in addition to the usual item response data, contains right, wrong, and omitted responses for the second darkest mark for each item, if such marks exist. Each student record also contains counts of total number of changed responses, and the total number of changes from wrong-to-right, right-to-wrong, and wrong-to-wrong responses. The CAHSEE contract calls for mark discrimination analysis to be conducted after each administration.

CAHSEE Answer Document Scanning [1]

The OMR (optical mark read) scanners used in processing CAHSEE answer documents are designed for mark detection. When answer documents are scanned, each marked response is assigned a density value. There are 15 levels of density, ranging from 1-9, A-F, with "1" designated as the lightest mark and "F" as the darkest. Each item on a CAHSEE has a 4-option response. Therefore, there are four potential density values for each item, one for each potential response. If an option has no mark, it has a "0" density value. The scanner determines the density level and a density less than 4 is considered "no mark."

The item with the highest density (F) is labeled in the "item out" column and the option with this density is recorded in the item area of the OMR record. The scoring program uses this option as the respondent's response to the item. The second highest density, if there is a second mark, is recorded on the “erasure out” column of the OMR record.

[1] The information in this section is proprietary to National Computer Systems, Inc.

If there are two marks of equal density, the "item out" field on the item area of the OMR is coded with an * and the response is scored as a double grid – no correct answer. If two marks are detected with adjacent density levels, the item is considered a double grid and the "item out" field is coded with an * but the option with the lighter density is carried in the "erasure out" field.

Below is a table of possible cases for item responses within items 1 through 10. In case 5, the density levels of the four responses are identified as E A 8 0. The highest density level is E (for Option 1) and the second highest density level is A (for Option 2). Therefore, a 1 is labeled under "item out" and a 2 under "erasure out". In case 8, all the four responses are detected with marks. Option 1, which has the highest density level E, is labeled in "item out". Options 2 and 3 are detected with the same density level A, which is the second highest density level. Therefore, an * is used to denote them in the "erasure out" column. In case 10, two marks with 1 level of density difference (E and D) are detected for Options 1 and 2. It is, therefore, labeled with an * in the "item out" field. As Option 2 has the second highest density level, a 2 appears in the "erasure out" column.

```
ITEM CASES with 15 level value    ITEM OUT    ERASURE OUT
   1.  0 0 0 0  ----------------------- 0 ----------- 0
   2.  E 0 0 0  ----------------------- 1 ----------- 0
   3.  E A 0 0  ----------------------- 1 ----------- 2
   4.  E A A 0  ----------------------- 1 ----------- *
   5.  E A 8 0  ----------------------- 1 ----------- 2
   6.  E E 0 0  ----------------------- * ----------- 0
   7.  E E A A  ----------------------- * ----------- *
   8.  E A A 8  ----------------------- 1 ----------- *
   9.  E E 8 0  ----------------------- * ----------- 3
  10.  E D 0 0  ----------------------- * ----------- 2
```

Purpose

The primary purpose of erasure or mark discrimination analysis is to identify individual students with an unusually high number of changed responses. The second goal is to identify schools with students whose scores changed from Not Pass to Pass as the result of erasing their original responses. From the statistical standpoint, for each test, it is necessary to establish thresholds at the individual level that can be used to identify significantly high patterns of changed responses. The thresholds used in these analyses were empirically determined after examining distributions of erasure variables from each of the CAHSEE administrations during the 2005-2006 administrations. In addition, these thresholds were established with a practical purpose of identifying schools and/or students that had a large number of changed answers as opposed to identifying a large number of students who only changed a few answers. A conservative threshold of the top one percent of students with the largest number of total erasures to be included in the final sample warranted closer scrutiny. The one percent of the total sample for ELA and mathematics ranged from 6 to 8 erasures. The average number of total erasures was slightly higher in mathematics than for ELA.

Table 6.6 is a summary of the number and percentage of schools where the scores changed from Not Pass to Pass as a result of erasures. The largest number of changes is for the March administration but it was also the administration with the largest number of test takers. For every administration percents of changes were slightly lower in 2005-2006 than for 2004-2005.

Table 6.6: Number and Percentage* of Schools Meeting the Threshold Where Scores Changed from Not Pass to Pass as a Result of Erasures

Administration	Total Number of Schools	Schools Meeting Threshold	
		ELA	Mathematics
September 2005	930	30 (3.2%)	32 (3.4%)
November 2005	1976	84 (4.3%)	71 (3.6%)
February 2006	1812	94 (5.2%)	140 (7.7%)
March 2006	2248	179 (7.9%)	227 (10.1%)
May 2006	1990	18 (0.9%)	36 (1.8%)

* Percents are based on the number of schools testing in each administration.

To simplify the presentation of these data, all tables for this section are located in Appendix 6.A to Appendix 6.E.The same numbering system applies from 6.A (September 2005) to 6.E (May 2006) and is listed below in Table 6.7.

Table 6.7: Listing of Testing Variations and Disability Tables

Table[1]	Content	Label
6.x.1	Scale Score Summary Statistics and Passing Rate Percentages for Testing Variations and Disability type—ELA	Summary Statistics by Testing Variations and Disability—ELA
6.x.2	Scale Score Summary Statistics and Passing Rate Percentages for Testing Variations and Disability type —Mathematics	Summary Statistics by Testing Variations and Disability—Mathematics
6.x.3	Demographic Summary and Passing Rate Percentages for All Examinees by Testing Variations—ELA	Demographic Summary for All Examinees by Testing Variations—ELA
6.x.4	Demographic Summary and Passing Rate Percentages for All Examinees by Testing Variations—Mathematics	Demographic Summary for All Examinees by Testing Variations—Mathematics
6.x.5	Scale Score Percentiles and Summary Statistics by Testing Variations- ELA	Percentiles of Scale Scores for Students with Testing Variations —ELA
6.x.6	Scale Score Percentiles and Summary Statistics by Testing Variations- Mathematics	Percentiles of Scale Scores for Students with Testing Variations—Mathematics
6.x.7	Scale Score Summary Statistics and Passing Rate Percentages by Disability and Testing Variations—ELA	Summary of Scale Scores and Passing Rates by Disability and Testing Variations —ELA
6.x.8	Scale Score Summary Statistics and Passing Rate Percentages by Disability and Testing Variations—Mathematics	Summary of Scale Scores and Passing Rates by Disability and Testing Variations—Mathematics
6.x.9	Scale Score Summary Statistics and Passing Rates by Language Fluency and Testing Variations—ELA	Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations—ELA
6.x.10	Scale Score Summary Statistics and Passing Rates by Language Fluency and Testing Variations—Mathematics	Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations—Mathematics

Note[1] x = Administration, where A=September, B=November, C=February, D=March, E=May.

Appendix 6.A: Results of Testing Variations and Disability Analyses—September 2005

Table 6.A.1: Summary Statistics by Testing Variations and Disability—ELA, September 2005

Testing Variations	N	Mean	SD	% (>=350)
Accommodation	517	321	26	13
Modification	1187	322	24	14
All	1704	321	25	14
Disability*	**N**	**Mean**	**SD**	**% (>=350)**
Mental Retardation	394	301	21	4
Hard of Hearing	93	326	25	16
Deaf	82	310	22	4
Speech or Language Impairment	416	325	24	15
Visual Impairment	40	319	28	20
Emotional Disturbance	653	328	36	28
Orthopedic Impairment	63	320	31	17
Other Health Impairment	353	334	31	29
Specific Learning Disability	9196	322	25	15
Deaf-Blindness	*	*	*	*
Multiple Disabilities	70	316	26	9
Autism	55	319	29	13
Traumatic Brain Injury	39	307	26	8
* Results for groups with less than 11 members are not reported				

Table 6.A.2: Summary Statistics by Testing Variations and Disability—Mathematics, September 2005

Testing Variations	N	Mean	SD	% (>=350)
Accommodation	577	326	22	13
Modification	2332	329	20	15
All	2909	328	20	15
Disability*	**N**	**Mean**	**SD**	**% (>=350)**
Mental Retardation	393	312	14	2
Hard of Hearing	71	326	21	8
Deaf	62	322	19	8
Speech or Language Impairment	410	330	18	14
Visual Impairment	41	329	27	22
Emotional Disturbance	742	329	25	19
Orthopedic Impairment	76	328	19	17
Other Health Impairment	402	334	24	24
Specific Learning Disability	9603	327	19	13
Deaf-Blindness	*	*	*	*
Multiple Disabilities	69	324	21	14
Autism	64	326	22	17
Traumatic Brain Injury	36	318	15	0
* Results for groups with less than 11 members are not reported				

Table 6.A.3: Demographic Summary for All Examinees[1] by Testing Variations—ELA, September 2005

	N Tested	N (>=350)	% (>=350)	N (<350)	% (<350)	Mean Scale Score	Reading[2] Avg. % Correct			Writing[2] Avg. % Correct		Writing Appl Avg. Score
							WA	RC	LR/A	WS	WC	CR item
Testing Variations												
IEP or Section 504 Plan	3058	438	14%	2620	86%	321	45%	51%	47%	39%	44%	1.5
Transfer of T/B Responses to A/D	52	3	6%	49	94%	312	41%	40%	39%	33%	43%	1.4
Oral Responses Dictated to a Scribe	49	9	18%	40	82%	321	47%	47%	47%	41%	42%	1.5
Spell Checker/Grammar Checker Off	51	6	12%	45	88%	318	44%	45%	45%	41%	44%	1.4
Essay Reponses	28	11	39%	17	61%	343	64%	58%	62%	53%	59%	1.8
Assistive Device No Interference	11	3	27%	8	73%	332	49%	53%	48%	51%	56%	1.8
Braille Version	*	*	*	*	*	*	*	*	*	*	*	*
Large Print Version	19	5	26%	14	74%	321	47%	51%	43%	33%	53%	1.6
Test Over More Than One Day	65	16	25%	49	75%	326	48%	52%	51%	43%	46%	1.6
Supervised Breaks	670	84	13%	586	87%	320	44%	50%	45%	39%	42%	1.6
Beneficial Time	90	12	13%	78	87%	320	41%	50%	47%	37%	40%	1.5
Dictionary	187	27	14%	160	86%	323	47%	50%	46%	41%	43%	1.7
Sign Language	11	0	0%	11	100%	308	34%	38%	34%	29%	45%	1.4
Oral Presentation	887	127	14%	760	86%	321	46%	50%	47%	38%	42%	1.5
Spell Checker Or Grammar Checker	144	17	12%	127	88%	323	47%	51%	47%	40%	43%	1.6
Essay Reponses	15	4	27%	11	73%	337	59%	57%	57%	49%	51%	2.0

[1] Results for groups with less than 11 members are not reported
[2] WA — Word Analysis, RC — Reading Comprehension, LR/A — Literary Responses/Analysis, WS — Writing Strategies, WC — Writing Conventions

Table 6.A.4: Demographic Summary for All Examinees[1] by Testing Variations—Mathematics, September 2005

	N Tested	N (>=350)	% (>=350)	N (<350)	% (<350)	Mean Scale Score	Strands for Mathematics[2] Average Percent Correct				
							PS	NS	AF	MG	Alg1
Testing Variations											
IEP or Section 504 Plan	3305	477	14%	2828	86%	328	44%	44%	40%	39%	28%
Transfer of T/B Responses to A/D	16	3	19%	13	81%	327	39%	46%	37%	40%	33%
Oral Responses Dictated to a Scribe	18	6	33%	12	67%	338	49%	56%	46%	45%	30%
Braille Version	*	*	*	*	*	*	*	*	*	*	*
Large Print Version	13	2	15%	11	85%	320	40%	40%	32%	36%	28%
Test Over More Than One Day	24	5	21%	19	79%	330	44%	45%	44%	42%	26%
Supervised Breaks	611	72	12%	539	88%	326	44%	41%	38%	38%	28%
Beneficial Time	73	9	12%	64	88%	324	39%	41%	37%	40%	27%
Tested At Home Or Hospital	*	*	*	*	*	*	*	*	*	*	*
Dictionary for Math	20	1	5%	19	95%	323	42%	42%	32%	36%	27%
Sign Language	16	3	19%	13	81%	326	42%	43%	37%	39%	30%
Oral Presentation	725	82	11%	643	89%	326	43%	42%	38%	38%	27%
Calculator	2223	354	16%	1869	84%	329	44%	46%	41%	40%	28%
Arithmetic Table	52	4	8%	48	92%	325	40%	44%	34%	40%	29%
Unlisted Modification	122	3	2%	119	98%	323	42%	42%	36%	35%	25%

[1] Results for groups with less than 11 members are not reported

[2] PS — Probability/ Statistics, NS — Number Sense, AF — Algebra & Functions, MG — Measurement/Geometry, Alg1 — Algebra 1

Table 6.A.5: Percentiles of Scale Scores for Students with Testing Variations* —ELA, September 2005

	Percentiles									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD**	N Tested
Testing Variations										
IEP or Section 504 Plan	275	282	302	321	339	365	383	321	26	3058
Transfer of T/B Responses to A/D	275	275	299	310	327	352	361	312	21	52
Oral Responses Dictated to a Scribe	275	277	302	311	335	377	405	321	30	49
Spell Checker/Grammar Checker Off	275	277	304	318	333	354	363	318	23	51
Essay Reponses	290	292	315	347	367	395	405	343	33	28
Assistive Device No Interference	275	275	309	328	367	385	385	332	32	11
Braille Version	*	*	*	*	*	*	*	*	*	*
Large Print Version	279	279	298	321	350	372	372	321	28	19
Test Over More Than One Day	275	282	304	323	348	391	409	326	32	65
Supervised Breaks	275	284	304	319	337	365	383	320	24	670
Beneficial Time	275	275	298	317	335	380	447	320	30	90
Dictionary	275	288	305	323	337	365	391	323	24	187
Sign Language	282	282	300	305	321	328	328	308	14	11
Oral Presentation	275	284	302	319	337	363	377	321	24	887
Spell Checker Or Grammar Checker	275	286	305	324	339	363	388	323	25	144
Essay Reponses	298	298	311	343	350	377	377	337	23	15

* Results for groups with less than 11 members are not reported

** SD - Standard Deviation

Table 6.A.6: Percentiles of Scale Scores for Students with Testing Variations* — Mathematics, September 2005

	Percentiles									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD**	N Tested
Testing Variations										
IEP or Section 504 Plan	286	300	314	325	342	362	383	328	21	3305
Transfer of T/B Responses to A/D	276	276	307	323	339	398	398	327	34	16
Oral Responses Dictated to a Scribe	300	300	314	330	358	393	393	338	29	18
Braille Version	*	*	*	*	*	*	*	*	*	*
Large Print Version	283	283	305	322	331	368	368	320	24	13
Test Over More Than One Day	295	300	315	321	345	372	393	330	25	24
Supervised Breaks	283	298	312	324	338	360	380	326	20	611
Beneficial Time	275	298	309	322	335	360	401	324	22	73
Tested At Home Or Hospital	*	*	*	*	*	*	*	*	*	*
Dictionary for Math	307	308	313	320	329	352	354	323	13	20
Sign Language	300	300	317	323	335	356	356	326	17	16
Oral Presentation	292	300	312	324	336	360	380	326	19	725
Calculator	289	300	316	327	342	364	380	329	20	2223
Arithmetic Table	292	300	315	324	331	372	380	325	17	52
Unlisted Modification	295	303	312	322	335	347	354	323	15	122

* Results for groups with less than 11 members are not reported

** SD - Standard Deviation

Table 6.A.7: Summary of Scale Scores and Passing Rates by Disability and Testing Variations*—ELA, September 2005

Testing Variations	Disability	N	Mean	SD	% (>=350)
Beneficial Time	Emotional Disturbance	12	333	54	42
	Specific Learning Disability	61	319	21	8
Dictionary	Mental Retardation	18	312	21	11
	Specific Learning Disability	131	323	25	15
IEP or Section 504 Plan	Mental Retardation	134	304	22	6
	Hard of Hearing	22	331	26	18
	Deaf	12	308	15	0
	Speech or Language Impairment	88	327	27	16
	Visual Impairment	21	318	26	19
	Emotional Disturbance	128	326	35	21
	Orthopedic Impairment	26	320	32	23
	Other Health Impairment	86	334	31	34
	Specific Learning Disability	2103	322	24	14
	Multiple Disabilities	25	310	26	8
	Autism	13	325	24	15
	Traumatic Brain Injury	12	314	29	8
Large Print Version	Visual Impairment	11	324	28	27
Oral Presentation	Mental Retardation	48	311	23	10
	Speech or Language Impairment	37	314	24	8
	Emotional Disturbance	17	330	25	24
	Other Health Impairment	22	336	25	41
	Specific Learning Disability	693	321	24	14
	Multiple Disabilities	22	308	25	5
Oral Responses Dictated to a Scribe	Specific Learning Disability	11	331	25	27
Spell Checker Or Grammar Checker	Specific Learning Disability	114	323	22	10
Spell Checker Or Grammar Checker Off	Specific Learning Disability	14	329	19	14
Supervised Breaks	Mental Retardation	31	308	19	6
	Speech or Language Impairment	12	326	31	17
	Emotional Disturbance	39	325	31	23
	Other Health Impairment	23	338	30	39
	Specific Learning Disability	495	320	23	11
Test Over More Than One Day	Specific Learning Disability	42	323	29	21
Unlisted Modification	Mental Retardation	11	308	29	18
	Emotional Disturbance	12	325	24	8
	Specific Learning Disability	108	323	23	10

* Results for groups with less than 11 members are not reported

Table 6.A.8: Summary of Scale Scores and Passing Rates by Disability and Testing Variations*—Mathematics, September 2005

Testing Variations	Disability	N	Mean	SD	% (>=350)
Arithmetic Table	Specific Learning Disability	39	327	19	10
Beneficial Time	Emotional Disturbance	13	324	31	15
	Specific Learning Disability	50	324	17	10
Calculator	Mental Retardation	111	314	12	2
	Speech or Language Impairment	65	333	19	23
	Emotional Disturbance	65	328	23	15
	Orthopedic Impairment	17	329	17	18
	Other Health Impairment	91	335	22	29
	Specific Learning Disability	1650	329	19	16
	Multiple Disabilities	15	318	18	7
	Autism	11	324	24	18
IEP or Section 504 Plan	Mental Retardation	140	314	13	3
	Hard of Hearing	20	334	20	15
	Deaf	12	323	18	8
	Speech or Language Impairment	89	329	20	17
	Visual Impairment	19	329	29	26
	Emotional Disturbance	146	327	24	18
	Orthopedic Impairment	30	330	21	20
	Other Health Impairment	113	335	24	26
	Specific Learning Disability	2319	328	19	14
	Multiple Disabilities	26	320	13	8
	Autism	13	319	23	8
	Traumatic Brain Injury	12	325	13	0
Oral Presentation	Mental Retardation	40	318	14	5
	Speech or Language Impairment	27	320	16	4
	Emotional Disturbance	18	323	24	17
	Other Health Impairment	17	327	22	18
	Specific Learning Disability	559	326	19	11
	Multiple Disabilities	20	322	15	10
Supervised Breaks	Mental Retardation	25	317	14	8
	Emotional Disturbance	44	327	22	16
	Other Health Impairment	21	328	20	19
	Specific Learning Disability	456	326	20	11
Test Over More Than One Day	Specific Learning Disability	16	326	24	13
Unlisted Modification	Specific Learning Disability	88	325	15	3

* Results for groups with less than 11 members are not reported

Table 6.A.9: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations*—ELA, September 2005

Testing Variations	Language Fluency	N	Mean	SD	% (>=350)
Beneficial Time	English Only	72	321	32	17
	English Learner	14	313	21	0
Dictionary	English Only	124	327	25	18
	English Learner	58	314	18	7
Essay Reponses	English Only	25	342	32	40
	English Only	14	338	24	29
IEP or Section 504 Plan	English Only	1871	324	27	18
	Initially Fluent English Proficient	108	324	27	17
	Redesignated Fluent English Proficient	114	329	24	20
	English Learner	948	315	22	7
	Unknown	17	325	19	6
Oral Presentation	English Only	469	324	25	18
	Initially Fluent English Proficient	42	324	29	26
	Redesignated Fluent English Proficient	32	325	24	22
	English Learner	339	315	21	7
Oral Responses Dictated to a Scribe	English Only	19	341	33	42
	English Learner	30	308	18	3
Spell Checker Or Grammar Checker	English Only	72	330	27	19
	English Learner	59	316	18	5
Spell Checker Or Grammar Checker Off	English Only	20	333	20	30
	English Learner	30	308	19	0
Supervised Breaks	English Only	422	322	26	16
	Initially Fluent English Proficient	24	327	25	17
	Redesignated Fluent English Proficient	22	326	26	18
	English Learner	200	316	20	4
Test Over More Than One Day	English Only	48	327	36	29
	English Learner	12	324	18	17
Transfer of Student T/B Responses to A/D	English Only	18	323	25	17
	English Learner	32	306	18	0
Unlisted Modification	English Only	108	323	25	14
	English Learner	38	315	20	0

* Results for groups with less than 11 members are not reported

Table 6.A.10: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations*—Mathematics, September 2005

Testing Variations	Language Fluency	N	Mean	SD	% (>=350)
Arithmetic Table	English Only	34	324	16	6
	English Learner	16	324	18	6
Beneficial Time	English Only	59	325	23	14
	English Learner	11	315	15	0
Calculator	English Only	1435	331	21	18
	Initially Fluent English Proficient	74	333	20	18
	Redesignated Fluent English Proficient	84	334	18	24
	English Learner	620	325	18	10
Dictionary for Math	English Only	19	323	14	5
IEP or Section 504 Plan	English Only	2121	329	22	16
	Initially Fluent English Proficient	113	328	21	12
	Redesignated Fluent English Proficient	128	334	19	23
	English Learner	927	325	18	9
	Unknown	16	322	18	6
Oral Presentation	English Only	382	327	20	14
	Initially Fluent English Proficient	34	328	16	6
	Redesignated Fluent English Proficient	21	333	20	24
	English Learner	285	324	17	7
Oral Responses Dictated to a Scribe	English Only	12	342	31	42
Supervised Breaks	English Only	390	326	21	14
	Initially Fluent English Proficient	23	323	19	0
	Redesignated Fluent English Proficient	23	339	14	22
	English Learner	173	323	18	7
Test Over More Than One Day	English Only	18	334	26	28
Transfer of Student T/B Responses to A/D	English Only	14	330	34	21
Unlisted Modification	English Only	87	322	14	2
	English Learner	29	324	13	0

* Results for groups with less than 11 members are not reported

Appendix 6.B: Results of Testing Variations and Disability Analyses—November 2005

Table 6.B.1: Summary Statistics by Testing Variations and Disability—ELA, November 2005

Testing Variations	N	Mean	SD	% (>=350)
Accommodations	1504	327	30	21
Modifications	3147	329	26	20
All	4651	328	27	21
Disability*	**N**	**Mean**	**SD**	**% (>=350)**
Mental Retardation	633	305	22	4
Hard of Hearing	232	323	26	17
Deaf	223	310	24	7
Speech or Language Impairment	1211	329	24	19
Visual Impairment	80	330	31	24
Emotional Disturbance	1793	332	36	30
Orthopedic Impairment	196	324	28	18
Other Health Impairment	1026	335	28	31
Specific Learning Disability	21110	328	25	20
Deaf-Blindness	*	*	*	*
Multiple Disabilities	103	325	33	19
Autism	261	328	32	25
Traumatic Brain Injury	89	325	30	17

* Results for groups with less than 11 members are not reported

Table 6.B.2: Summary Statistics by Testing Variations and Disability—Mathematics, November 2005

Testing Variations	N	Mean	SD	% (>=350)
Accommodations	1536	326	24	15
Modifications	7073	330	22	17
All	8609	329	22	17
Disability*	**N**	**Mean**	**SD**	**% (>=350)**
Mental Retardation	665	312	18	4
Hard of Hearing	228	328	20	13
Deaf	191	322	20	7
Speech or Language Impairment	1230	331	21	17
Visual Impairment	102	333	26	24
Emotional Disturbance	2055	331	29	23
Orthopedic Impairment	247	327	25	17
Other Health Impairment	1214	334	23	23
Specific Learning Disability	22767	329	21	15
Deaf-Blindness	*	*	*	*
Multiple Disabilities	102	327	26	13
Autism	267	328	26	16
Traumatic Brain Injury	89	326	27	16

* Results for groups with less than 11 members are not reported

Table 6.B.3: Demographic Summary for All Examinees[1] by Testing Variations—ELA, November 2005

	N Tested	N (>=350)	% (>=350)	N (<350)	% (<350)	Mean Scale Score	Reading[2] Avg. % Correct			Writing[2] Avg. % Correct		Writing Appl Avg. Score
							WA	RC	LR/A	WS	WC	CR item
Testing Variations												
IEP or Section 504 Plan	8430	1705	20%	6725	80%	327	55%	49%	51%	42%	45%	1.4
Transfer of T/B Responses to A/D	91	24	26%	67	74%	330	56%	50%	52%	44%	50%	1.4
Oral Responses Dictated to a Scribe	50	14	28%	36	72%	335	56%	56%	53%	44%	50%	1.6
Spell Checker/Grammar Checker Off	206	64	31%	142	69%	335	58%	52%	55%	46%	49%	1.6
Essay Reponses	59	21	36%	38	64%	341	62%	61%	58%	48%	51%	1.8
Assistive Device No Interference	44	12	27%	32	73%	336	62%	54%	58%	42%	49%	1.8
Braille Version	13	4	31%	9	69%	338	53%	55%	55%	37%	56%	2.2
Large Print Version	50	12	24%	38	76%	326	52%	50%	48%	40%	44%	1.4
Test Over More Than One Day	258	53	21%	205	79%	327	52%	48%	49%	41%	45%	1.4
Supervised Breaks	1545	273	18%	1272	82%	325	53%	48%	49%	41%	44%	1.3
Beneficial Time	266	39	15%	227	85%	318	49%	43%	46%	36%	40%	1.1
Tested At Home Or Hospital	32	14	44%	18	56%	342	61%	55%	58%	51%	57%	1.4
Dictionary	787	149	19%	638	81%	328	57%	49%	51%	42%	46%	1.5
Sign Language	32	5	16%	27	84%	313	41%	39%	39%	40%	39%	1.2
Oral Presentation	2303	493	21%	1810	79%	330	55%	52%	52%	44%	47%	1.5
Spell Checker Or Grammar Checker	251	85	34%	166	66%	339	63%	56%	58%	48%	52%	1.8
Essay Reponses	58	19	33%	39	67%	339	54%	59%	58%	46%	50%	1.9
Assistive Device	11	3	27%	8	73%	339	62%	59%	55%	48%	54%	1.9

[1] Results for groups with less than 11 members are not reported
[2] WA — Word Analysis, RC — Reading Comprehension, LR/A — Literary Responses/Analysis, WS — Writing Strategies, WC — Writing Conventions

Table 6.B.4: Demographic Summary for All Examinees[1] by Testing Variations—Mathematics, November 2005

	N Tested	N (>=350)	% (>=350)	N (<350)	% (<350)	Mean Scale Score	Strands for Mathematics[2] Average Percent Correct				
							PS	NS	AF	MG	Alg1
Testing Variations											
IEP or Section 504 Plan	9532	1579	17%	7953	83%	329	44%	45%	41%	40%	31%
Transfer of T/B Responses to A/D	58	13	22%	45	78%	332	48%	44%	46%	41%	33%
Oral Responses Dictated to a Scribe	39	9	23%	30	77%	330	47%	47%	41%	38%	34%
Braille Version	23	5	22%	18	78%	338	50%	53%	46%	45%	32%
Large Print Version	64	15	23%	49	77%	332	49%	44%	42%	41%	34%
Test Over More Than One Day	170	39	23%	131	77%	331	44%	48%	42%	40%	33%
Supervised Breaks	1278	214	17%	1064	83%	328	44%	43%	40%	39%	31%
Beneficial Time	209	26	12%	183	88%	323	41%	42%	39%	34%	27%
Tested At Home Or Hospital	30	9	30%	21	70%	334	45%	54%	44%	42%	29%
Dictionary for Math	101	20	20%	81	80%	332	45%	47%	41%	45%	33%
Sign Language	100	11	11%	89	89%	325	37%	38%	40%	37%	34%
Oral Presentation	1630	288	18%	1342	82%	329	43%	44%	41%	40%	31%
Calculator	6817	1168	17%	5649	83%	330	44%	46%	42%	41%	31%
Arithmetic Table	238	43	18%	195	82%	330	45%	45%	40%	43%	32%
Math Manipulatives	46	8	17%	38	83%	330	46%	50%	37%	39%	34%
Assistive Device	12	1	8%	11	92%	326	42%	50%	37%	36%	25%
Unlisted Modification	213	15	7%	198	93%	322	38%	39%	37%	36%	29%

[1] Results for groups with less than 11 members are not reported

[2] PS — Probability/ Statistics, NS — Number Sense, AF — Algebra & Functions, MG — Measurement/Geometry, Alg1 — Algebra 1

Table 6.B.5: Percentiles of Scale Scores for Students with Testing Variations* —ELA, November 2005

	Percentiles									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD**	N Tested
Testing Variations										
IEP or Section 504 Plan	275	284	307	327	345	371	396	327	27	8430
Transfer of T/B Responses to A/D	275	277	306	329	354	395	409	330	32	91
Oral Responses Dictated to a Scribe	275	282	309	331	354	406	442	335	38	50
Spell Checker/Grammar Checker Off	275	289	309	334	354	396	417	335	33	206
Essay Reponses	277	279	323	341	362	393	399	341	30	59
Assistive Device No Interference	289	294	322	334	350	376	423	336	27	44
Braille Version	275	275	312	330	365	423	423	338	41	13
Large Print Version	275	284	304	323	346	369	409	326	30	50
Test Over More Than One Day	275	282	306	324	345	376	396	327	29	258
Supervised Breaks	275	282	306	323	343	371	399	325	27	1545
Beneficial Time	275	275	296	314	336	371	399	318	30	266
Tested At Home Or Hospital	275	275	304	332	374	421	431	342	47	32
Dictionary	275	284	311	329	345	367	384	328	25	787
Sign Language	275	279	293	307	332	367	367	313	28	32
Oral Presentation	275	287	311	329	346	374	393	330	26	2303
Spell Checker Or Grammar Checker	275	294	323	341	356	381	396	339	25	251
Essay Reponses	275	289	322	337	362	387	402	339	29	58
Assistive Device	296	296	326	334	352	377	377	339	22	11

* Results for groups with less than 11 members are not reported

** SD - Standard Deviation

Table 6.B.6: Percentiles of Scale Scores for Students with Testing Variations* — Mathematics, November 2005

	Percentiles									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD**	N Tested
Testing Variations										
IEP or Section 504 Plan	285	297	313	327	342	370	393	329	23	9532
Transfer of T/B Responses to A/D	279	291	313	330	349	380	408	332	27	58
Oral Responses Dictated to a Scribe	282	289	304	331	349	372	393	330	27	39
Braille Version	291	303	312	338	349	393	398	338	29	23
Large Print Version	279	300	311	325	346	390	412	332	29	64
Test Over More Than One Day	285	294	313	325	347	376	385	331	25	170
Supervised Breaks	279	297	311	323	342	372	408	328	24	1278
Beneficial Time	275	291	309	320	337	368	401	323	24	209
Tested At Home Or Hospital	283	297	309	328	360	378	416	334	30	30
Dictionary for Math	291	300	315	329	347	370	383	332	23	101
Sign Language	290	297	309	321	336	367	396	325	22	100
Oral Presentation	282	297	311	325	342	372	408	329	24	1630
Calculator	289	300	315	327	344	368	393	330	22	6817
Arithmetic Table	275	300	313	327	344	378	401	330	24	238
Math Manipulatives	289	297	318	326	340	378	387	330	23	46
Assistive Device	309	309	315	323	331	372	372	326	17	12
Unlisted Modification	285	294	307	320	335	360	378	322	20	213

* Results for groups with less than 11 members are not reported

** SD - Standard Deviation

Table 6.B.7: Summary of Scale Scores and Passing Rates by Disability and Testing Variations*—ELA, November 2005

Testing Variations	Disability	N	Mean	SD	% (>=350)
Assistive Device No Interference	Specific Learning Disability	29	337	23	28
Beneficial Time	Emotional Disturbance	77	322	35	23
	Specific Learning Disability	155	316	27	11
Dictionary	Mental Retardation	28	304	21	4
	Speech or Language Impairment	31	324	23	13
	Emotional Disturbance	18	327	30	17
	Other Health Impairment	14	334	38	29
	Specific Learning Disability	612	329	24	20
Essay Reponses	Specific Learning Disability	30	346	25	40
	Specific Learning Disability	29	345	27	38
IEP or Section 504 Plan	Mental Retardation	251	307	21	4
	Hard of Hearing	59	315	29	10
	Deaf	85	303	18	4
	Speech or Language Impairment	363	327	23	16
	Visual Impairment	49	328	34	24
	Emotional Disturbance	499	329	35	28
	Orthopedic Impairment	67	325	29	13
	Other Health Impairment	266	334	29	30
	Specific Learning Disability	5849	328	25	20
	Multiple Disabilities	29	330	29	21
	Autism	79	328	30	25
	Traumatic Brain Injury	37	325	33	24
Large Print Version	Visual Impairment	21	324	31	24
	Specific Learning Disability	12	335	21	33
Oral Presentation	Mental Retardation	101	313	24	5
	Hard of Hearing	11	309	33	9
	Speech or Language Impairment	100	329	21	14
	Emotional Disturbance	49	330	28	29
	Orthopedic Impairment	18	329	26	22
	Other Health Impairment	58	333	32	28
	Specific Learning Disability	1749	330	25	22
	Multiple Disabilities	16	336	29	31
	Autism	19	323	28	16
Oral Responses Dictated to a Scribe	Orthopedic Impairment	11	344	37	27
	Specific Learning Disability	14	334	34	29
Sign Language	Hard of Hearing	12	319	31	17
	Deaf	17	305	24	12
Spell Checker Or Grammar Checker	Speech or Language Impairment	15	325	13	0
	Other Health Impairment	13	341	38	46
	Specific Learning Disability	179	341	23	35
Spell Checker Or Grammar Checker Off	Emotional Disturbance	12	356	26	42
	Orthopedic Impairment	12	334	44	25

	Specific Learning Disability	101	330	31	27
Supervised Breaks	Mental Retardation	59	307	18	2
	Deaf	12	310	18	0
	Speech or Language Impairment	69	323	21	10
	Emotional Disturbance	166	324	35	25
	Other Health Impairment	40	324	32	13
	Specific Learning Disability	1058	326	26	18
	Autism	21	331	32	24
Test Over More Than One Day	Speech or Language Impairment	21	324	25	14
	Emotional Disturbance	24	316	33	17
	Specific Learning Disability	148	329	27	23
Tested At Home Or Hospital	Specific Learning Disability	11	327	49	27
Transfer of Student T/B Responses to A/D	Visual Impairment	11	319	35	18
	Specific Learning Disability	41	337	21	27
Unlisted Modification	Mental Retardation	13	310	14	0
	Speech or Language Impairment	17	319	18	6
	Specific Learning Disability	186	320	22	8

* Results for groups with less than 11 members are not reported

Table 6.B.8: Summary of Scale Scores and Passing Rates by Disability and Testing Variations*—Mathematics, November 2005

Testing Variations	Disability	N	Mean	SD	% (>=350)
Arithmetic Table	Mental Retardation	17	322	27	12
	Specific Learning Disability	182	333	24	19
Beneficial Time	Emotional Disturbance	66	326	29	17
	Specific Learning Disability	115	321	20	10
Braille Version	Visual Impairment	14	335	32	21
Calculator	Mental Retardation	210	315	20	5
	Hard of Hearing	44	329	24	16
	Deaf	22	328	20	18
	Speech or Language Impairment	323	329	18	14
	Visual Impairment	16	330	25	13
	Emotional Disturbance	256	333	28	24
	Orthopedic Impairment	63	331	24	25
	Other Health Impairment	261	335	23	24
	Specific Learning Disability	5039	330	21	16
	Multiple Disabilities	18	331	27	11
	Autism	67	330	27	19
	Traumatic Brain Injury	22	326	26	14
Dictionary for Math	Specific Learning Disability	67	335	24	24
IEP or Section 504 Plan	Mental Retardation	263	313	18	4
	Hard of Hearing	61	326	23	11
	Deaf	87	323	22	8
	Speech or Language Impairment	387	329	19	15
	Visual Impairment	58	331	27	19
	Emotional Disturbance	572	330	28	21
	Orthopedic Impairment	91	332	27	26
	Other Health Impairment	337	335	25	25
	Specific Learning Disability	6665	329	22	16
	Multiple Disabilities	30	330	25	13
	Autism	92	331	29	18
	Traumatic Brain Injury	38	331	31	21
Large Print Version	Visual Impairment	27	333	27	22
	Specific Learning Disability	18	334	29	22
Math Manipulatives	Specific Learning Disability	26	336	21	23
Oral Presentation	Mental Retardation	68	313	20	7
	Hard of Hearing	12	328	30	17
	Speech or Language Impairment	72	328	20	15
	Emotional Disturbance	40	328	24	20
	Orthopedic Impairment	15	326	28	20
	Other Health Impairment	38	331	30	24
	Specific Learning Disability	1220	329	24	17
	Autism	21	323	22	10
Oral Responses Dictated to Scribe	Specific Learning Disability	12	328	26	17
Sign Language	Hard of Hearing	13	330	22	8
	Deaf	65	321	20	6

	Specific Learning Disability	17	335	24	29
Supervised Breaks	Mental Retardation	39	312	16	3
	Speech or Language Impairment	51	328	20	10
	Emotional Disturbance	149	330	29	21
	Other Health Impairment	44	336	29	32
	Specific Learning Disability	874	328	23	16
	Autism	11	334	43	18
Test Over More Than One Day	Speech or Language Impairment	12	325	19	0
	Emotional Disturbance	18	321	18	6
	Specific Learning Disability	92	330	25	24
Tested At Home Or Hospital	Specific Learning Disability	11	314	19	0
Transfer of Student T/B Responses to A/D	Visual Impairment	13	332	28	15
	Specific Learning Disability	18	333	20	22
Unlisted Modification	Emotional Disturbance	11	329	29	18
	Specific Learning Disability	157	322	18	5

* Results for groups with less than 11 members are not reported

Table 6.B.9: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations*—ELA, November 2005

Testing Variations	Language Fluency	N	Mean	SD	% (>=350)
Assistive Device	English Only	11	339	22	27
Assistive Device No Interference	English Only	33	338	29	30
Beneficial Time	English Only	216	318	31	16
	Initially Fluent English Proficient	11	327	41	18
	English Learner	27	318	23	7
Dictionary	English Only	539	330	25	21
	Initially Fluent English Proficient	23	329	25	17
	Redesignated Fluent English Proficient	16	325	12	0
	English Learner	205	323	23	16
Essay Reponses	English Only	38	340	30	34
	English Only	37	346	29	43
	English Learner	14	319	25	7
	English Learner	15	335	30	27
IEP or Section 504 Plan	English Only	5686	329	28	22
	Initially Fluent English Proficient	319	333	26	25
	Redesignated Fluent English Proficient	240	332	22	22
	English Learner	2121	321	24	13
	Unknown	64	338	31	31
Large Print Version	English Only	31	329	34	32
	English Learner	15	323	24	13
Oral Presentation	English Only	1445	332	27	24
	Initially Fluent English Proficient	100	335	23	26
	Redesignated Fluent English Proficient	65	334	21	23
	English Learner	681	324	24	14
	Unknown	12	320	29	17
Oral Responses Dictated to a Scribe	English Only	28	340	36	32
	English Learner	17	317	28	12
Sign Language	English Only	20	309	25	10
Spell Checker Or Grammar Checker	English Only	174	342	27	39
	Initially Fluent English Proficient	17	334	19	29
	Redesignated Fluent English Proficient	15	335	18	20
	English Learner	45	331	21	20
Spell Checker Or Grammar Checker Off	English Only	128	340	33	38
	English Learner	69	323	26	17
Supervised Breaks	English Only	1067	327	29	21
	Initially Fluent English Proficient	60	323	23	12
	Redesignated Fluent English Proficient	53	326	22	9
	English Learner	359	319	24	11

Test Over More Than One Day	English Only	159	330	30	26
	Redesignated Fluent English Proficient	14	326	21	14
	English Learner	74	316	24	8
Tested At Home Or Hospital	English Only	24	345	46	46
Transfer of Student T/B Responses to A/D	English Only	63	334	31	29
	English Learner	19	314	31	16
Unlisted Modification	English Only	152	319	23	9
	Initially Fluent English Proficient	12	336	14	17
	English Learner	94	319	20	7

* Results for groups with less than 11 members are not reported

Table 6.B.10: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations*—Mathematics, November 2005

Testing Variations	Language Fluency	N	Mean	SD	% (>=350)
Arithmetic Table	English Only	161	328	25	17
	English Learner	65	333	22	18
Assistive Device	English Only	12	326	17	8
Beneficial Time	English Only	168	323	25	13
	English Learner	20	321	22	5
Braille Version	English Only	15	335	26	20
Calculator	English Only	4795	331	22	18
	Initially Fluent English Proficient	256	332	22	20
	Redesignated Fluent English Proficient	231	334	20	19
	English Learner	1491	327	20	13
	Unknown	44	329	29	16
Dictionary for Math	English Only	71	331	23	18
	English Learner	24	333	24	13
IEP or Section 504 Plan	English Only	6595	330	23	18
	Initially Fluent English Proficient	368	333	23	23
	Redesignated Fluent English Proficient	288	335	22	20
	English Learner	2209	325	21	11
	Unknown	72	334	28	26
Large Print Version	English Only	39	339	33	36
	English Learner	18	320	14	0
Math Manipulatives	English Only	32	334	23	19
	English Learner	11	318	22	9
Oral Presentation	English Only	1003	330	25	19
	Initially Fluent English Proficient	71	335	22	27
	Redesignated Fluent English Proficient	55	336	28	29
	English Learner	493	324	22	12
Oral Responses Dictated to a Scribe	English Only	23	331	25	22
	English Learner	12	322	31	25
Sign Language	English Only	63	323	21	11
	English Learner	30	324	20	3
Supervised Breaks	English Only	875	329	25	18
	Initially Fluent English Proficient	47	328	22	17
	Redesignated Fluent English Proficient	44	331	23	25
	English Learner	303	325	23	12
Test Over More Than One Day	English Only	114	330	25	22
	English Learner	39	330	24	18
Tested At Home Or Hospital	English Only	20	336	30	30
Transfer of Student T/B Responses to A/D	English Only	40	331	25	23
Unlisted Modification	English Only	147	323	21	8
	English Learner	51	321	21	4

* Results for groups with less than 11 members are not reported

Appendix 6.C: Results of Testing Variations and Disability Analyses—February 2006

Table 6.C.1: Summary Statistics by Testing Variations and Disability—ELA, February 2006

Testing Variations	N	Mean	SD	% (>=350)
Accommodation	1635	331	34	27
Modification	2887	328	27	21
All	4522	329	30	23
Disability*	**N**	**Mean**	**SD**	**% (>=350)**
Mental Retardation	750	302	21	3
Hard of Hearing	224	338	35	36
Deaf	191	315	32	11
Speech or Language Impairment	1500	345	40	39
Visual Impairment	104	348	41	46
Emotional Disturbance	1915	333	38	33
Orthopedic Impairment	189	337	39	35
Other Health Impairment	1215	343	34	42
Specific Learning Disability	20998	328	28	22
Deaf-Blindness	*	*	*	*
Multiple Disabilities	110	321	34	15
Autism	282	346	43	44
Traumatic Brain Injury	91	322	31	15

* Results for groups with less than 11 members are not reported

Table 6.C.2: Summary Statistics by Testing Variations and Disability—Mathematics, February 2006

Testing Variations	N	Mean	SD	% (>=350)
Accommodation	1713	334	27	23
Modification	5361	332	23	20
All	7074	333	24	20
Disability*	**N**	**Mean**	**SD**	**% (>=350)**
Mental Retardation	760	312	16	3
Hard of Hearing	208	343	31	33
Deaf	172	330	30	19
Speech or Language Impairment	1505	349	38	39
Visual Impairment	100	351	40	46
Emotional Disturbance	2070	333	29	23
Orthopedic Impairment	211	339	33	32
Other Health Impairment	1271	342	30	36
Specific Learning Disability	21632	333	25	21
Deaf-Blindness	*	*	*	*
Multiple Disabilities	104	326	27	13
Autism	296	350	41	43
Traumatic Brain Injury	92	331	24	15

* Results for groups with less than 11 members are not reported

Table 6.C.3: Demographic Summary for All Examinees[1] by Testing Variations—ELA, February 2006

							Reading[2] Avg. % Correct			Writing[2] Avg. % Correct		Writing Appl Avg. Score
	N Tested	N (>=350)	% (>=350)	N (<350)	% (<350)	Mean Scale Score	WA	RC	LR/A	WS	WC	CR item
Testing Variations												
IEP or Section 504 Plan	7815	1775	23%	6040	77%	328	52%	51%	52%	41%	47%	1.6
Transfer of T/B Responses to A/D	113	45	40%	68	60%	343	59%	58%	61%	47%	56%	1.8
Oral Responses Dictated to a Scribe	111	22	20%	89	80%	324	50%	49%	50%	38%	44%	1.5
Spell Checker/Grammar Checker Off	128	63	49%	65	51%	349	66%	65%	65%	51%	56%	2.0
Essay Reponses	92	22	24%	70	76%	330	53%	52%	51%	42%	46%	1.7
Assistive Device No Interference	58	24	41%	34	59%	341	62%	60%	59%	45%	55%	1.9
Braille Version	14	8	57%	6	43%	360	68%	66%	67%	58%	64%	2.1
Large Print Version	51	20	39%	31	61%	343	60%	59%	60%	46%	54%	1.8
Test Over More Than One Day	171	38	22%	133	78%	324	51%	48%	50%	37%	46%	1.6
Supervised Breaks	1701	393	23%	1308	77%	328	53%	51%	52%	40%	47%	1.6
Beneficial Time	333	72	22%	261	78%	325	51%	49%	49%	39%	46%	1.5
Tested At Home Or Hospital	43	13	30%	30	70%	328	53%	51%	53%	41%	44%	1.3
Dictionary	713	158	22%	555	78%	327	55%	50%	50%	40%	46%	1.7
Sign Language	21	4	19%	17	81%	323	58%	43%	49%	40%	41%	1.6
Oral Presentation	2152	468	22%	1684	78%	328	53%	52%	53%	42%	46%	1.6
Spell Checker Or Grammar Checker	314	49	16%	265	84%	328	51%	51%	51%	41%	44%	1.8
Essay Reponses	72	16	22%	56	78%	332	55%	50%	53%	42%	46%	2.0
Assistive Device	24	10	42%	14	58%	348	66%	59%	58%	46%	67%	2.4

[1] Results for groups with less than 11 members are not reported
[2] WA — Word Analysis, RC — Reading Comprehension, LR/A — Literary Responses/Analysis, WS — Writing Strategies, WC — Writing Conventions

Table 6.C.4: Demographic Summary for All Examinees[1] by Testing Variations—Mathematics, February 2006

	N Tested	N (>=350)	% (>=350)	N (<350)	% (<350)	Mean Scale Score	Strands for Mathematics[2] Average Percent Correct				
							PS	NS	AF	MG	Alg1
Testing Variations											
IEP or Section 504 Plan	8304	1753	21%	6551	79%	333	48%	46%	43%	37%	32%
Transfer of T/B Responses to A/D	101	37	37%	64	63%	345	54%	51%	50%	47%	41%
Oral Responses Dictated to a Scribe	56	16	29%	40	71%	338	48%	52%	45%	41%	35%
Braille Version	19	8	42%	11	58%	343	57%	51%	44%	45%	41%
Large Print Version	42	18	43%	24	57%	345	58%	48%	48%	47%	44%
Test Over More Than One Day	92	17	18%	75	82%	332	48%	48%	40%	36%	29%
Supervised Breaks	1418	285	20%	1133	80%	332	48%	45%	43%	37%	32%
Beneficial Time	257	58	23%	199	77%	332	48%	45%	42%	37%	30%
Tested At Home Or Hospital	30	8	27%	22	73%	342	54%	53%	47%	41%	36%
Dictionary for Math	104	26	25%	78	75%	335	47%	53%	43%	39%	30%
Sign Language	30	7	23%	23	77%	331	47%	43%	43%	37%	33%
Oral Presentation	1585	323	20%	1262	80%	332	47%	46%	42%	37%	32%
Calculator	5125	1007	20%	4118	80%	333	47%	47%	42%	38%	32%
Arithmetic Table	324	56	17%	268	83%	332	47%	47%	40%	37%	31%
Math Manipulatives	54	13	24%	41	76%	333	50%	46%	44%	38%	30%
Assistive Device	12	5	42%	7	58%	353	64%	65%	55%	50%	34%
Unlisted Modification	176	29	16%	147	84%	329	46%	45%	41%	34%	30%

[1] Results for groups with less than 11 members are not reported

[2] PS — Probability/ Statistics, NS — Number Sense, AF — Algebra & Functions, MG — Measurement/Geometry, Alg1 — Algebra 1

Table 6.C.5: Percentiles of Scale Scores for Students with Testing Variations* —ELA, February 2006

	Percentiles									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD**	N Tested
Testing Variations										
IEP or Section 504 Plan	275	285	306	326	346	380	412	328	30	7815
Transfer of T/B Responses to A/D	278	289	312	337	372	416	443	343	39	113
Oral Responses Dictated to a Scribe	275	275	301	322	344	372	412	324	30	111
Spell Checker/Grammar Checker Off	291	299	326	348	372	412	420	349	34	128
Essay Reponses	275	278	305	329	348	412	437	330	36	92
Assistive Device No Interference	275	297	315	343	359	394	450	341	31	58
Braille Version	275	275	319	360	397	450	450	360	49	14
Large Print Version	275	289	310	333	377	420	450	343	41	51
Test Over More Than One Day	275	280	303	321	346	370	397	324	29	171
Supervised Breaks	275	282	305	324	346	382	408	328	30	1701
Beneficial Time	275	278	301	319	346	391	443	325	34	333
Tested At Home Or Hospital	275	275	299	319	352	382	450	328	40	43
Dictionary	275	282	306	326	346	375	391	327	27	713
Sign Language	275	297	308	315	328	377	380	323	28	21
Oral Presentation	275	289	308	328	346	375	394	328	27	2152
Spell Checker Or Grammar Checker	278	291	310	326	342	370	408	328	25	314
Essay Reponses	280	299	310	330	348	372	443	332	28	72
Assistive Device	315	322	336	346	362	380	388	348	19	24

* Results for groups with less than 11 members are not reported

** SD - Standard Deviation

Table 6.C.6: Percentiles of Scale Scores for Students with Testing Variations* — Mathematics, February 2006

	Percentiles									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD**	N Tested
Testing Variations										
IEP or Section 504 Plan	287	301	315	329	346	378	410	333	25	8304
Transfer of T/B Responses to A/D	284	301	319	340	360	403	433	345	33	101
Oral Responses Dictated to a Scribe	284	293	315	336	353	395	422	338	30	56
Braille Version	281	281	301	340	360	450	450	343	51	19
Large Print Version	290	296	323	336	366	410	427	345	34	42
Test Over More Than One Day	275	290	311	326	342	389	450	332	32	92
Supervised Breaks	287	299	315	327	344	378	414	332	25	1418
Beneficial Time	275	296	313	327	347	382	450	332	29	257
Tested At Home Or Hospital	304	309	319	335	351	400	450	342	31	30
Dictionary for Math	290	301	318	331	350	382	392	335	24	104
Sign Language	275	287	315	332	349	364	366	331	23	30
Oral Presentation	290	301	315	329	346	378	403	332	24	1585
Calculator	290	301	317	329	346	374	403	333	23	5125
Arithmetic Table	293	301	317	327	344	376	400	332	23	324
Math Manipulatives	296	301	315	323	349	395	418	333	28	54
Assistive Device	321	321	329	343	383	407	407	353	30	12
Unlisted Modification	275	287	314	327	344	372	418	329	26	176

* Results for groups with less than 11 members are not reported

** SD - Standard Deviation

Table 6.C.7: Summary of Scale Scores and Passing Rates by Disability and Testing Variations*—ELA, February 2006

Testing Variations	Disability	N	Mean	SD	% (>=350)
Assistive Device	Specific Learning Disability	19	348	18	37
Assistive Device No Interference	Specific Learning Disability	37	338	24	41
Beneficial Time	Emotional Disturbance	88	326	39	30
	Specific Learning Disability	192	324	29	17
Dictionary	Mental Retardation	36	308	25	3
	Speech or Language Impairment	29	322	23	7
	Emotional Disturbance	20	343	28	55
	Other Health Impairment	19	320	28	16
	Specific Learning Disability	535	328	27	23
Essay Reponses	Mental Retardation	12	305	12	0
	Specific Learning Disability	33	341	29	30
	Specific Learning Disability	50	328	28	18
IEP or Section 504 Plan	Mental Retardation	294	303	19	2
	Hard of Hearing	42	333	34	36
	Deaf	35	326	37	17
	Speech or Language Impairment	282	327	28	18
	Visual Impairment	49	343	40	35
	Emotional Disturbance	463	331	36	30
	Orthopedic Impairment	74	334	35	30
	Other Health Impairment	288	337	33	34
	Specific Learning Disability	5342	328	27	21
	Multiple Disabilities	26	310	33	4
	Autism	87	337	39	36
	Traumatic Brain Injury	32	325	30	19
Large Print Version	Visual Impairment	27	348	40	41
Oral Presentation	Mental Retardation	119	305	19	2
	Hard of Hearing	13	325	29	38
	Speech or Language Impairment	76	330	30	22
	Emotional Disturbance	51	336	36	33
	Orthopedic Impairment	31	324	26	13
	Other Health Impairment	61	332	31	25
	Specific Learning Disability	1646	330	26	22
	Autism	21	323	25	19
	Traumatic Brain Injury	16	325	32	13
Oral Responses Dictated to a Scribe	Orthopedic Impairment	14	320	36	29
	Specific Learning Disability	46	325	27	20
Sign Language	Deaf	13	314	10	0
Spell Checker Or Grammar Checker	Mental Retardation	15	303	12	0
	Speech or Language Impairment	22	318	20	5
	Other Health Impairment	12	323	25	17
	Specific Learning Disability	229	330	24	17
Spell Checker Or Grammar Checker Off	Specific Learning Disability	83	345	28	45

Supervised Breaks	Mental Retardation	71	304	16	0
	Hard of Hearing	17	330	32	35
	Deaf	12	322	22	17
	Speech or Language Impairment	61	330	27	20
	Visual Impairment	13	339	30	31
	Emotional Disturbance	211	331	35	32
	Orthopedic Impairment	17	316	27	18
	Other Health Impairment	72	337	30	31
	Specific Learning Disability	1088	327	28	22
	Autism	31	342	45	35
Test Over More Than One Day	Emotional Disturbance	33	334	34	36
	Specific Learning Disability	90	324	26	20
Tested At Home Or Hospital	Specific Learning Disability	23	318	30	22
Transfer of Student T/B Responses to A/D	Visual Impairment	22	353	42	45
	Specific Learning Disability	30	341	34	40
Unlisted Modification	Emotional Disturbance	12	324	53	25
	Other Health Impairment	11	322	25	18
	Specific Learning Disability	120	322	25	13

* Results for groups with less than 11 members are not reported

Table 6.C.8: Summary of Scale Scores and Passing Rates by Disability and Testing Variations*—Mathematics, February 2006

Testing Variations	Disability	N	Mean	SD	% (>=350)
Arithmetic Table	Mental Retardation	19	314	14	0
	Emotional Disturbance	11	320	18	9
	Other Health Impairment	16	330	23	19
	Specific Learning Disability	234	332	22	17
Beneficial Time	Emotional Disturbance	88	329	30	22
	Specific Learning Disability	132	329	22	18
Calculator	Mental Retardation	206	314	16	5
	Hard of Hearing	23	340	24	35
	Deaf	21	329	27	19
	Speech or Language Impairment	202	332	24	18
	Emotional Disturbance	187	332	23	20
	Orthopedic Impairment	49	338	25	29
	Other Health Impairment	196	338	25	28
	Specific Learning Disability	3855	333	22	20
	Multiple Disabilities	27	327	25	4
	Autism	55	340	36	22
	Traumatic Brain Injury	16	333	13	6
Dictionary for Math	Specific Learning Disability	80	332	21	23
IEP or Section 504 Plan	Mental Retardation	304	313	15	3
	Hard of Hearing	41	339	30	29
	Deaf	34	338	33	21
	Speech or Language Impairment	278	332	25	20
	Visual Impairment	44	340	37	32
	Emotional Disturbance	526	330	26	18
	Orthopedic Impairment	82	340	36	32
	Other Health Impairment	324	337	27	28
	Specific Learning Disability	5725	332	23	20
	Multiple Disabilities	30	319	18	3
	Autism	90	340	37	29
	Traumatic Brain Injury	30	335	23	20
Large Print Version	Visual Impairment	21	349	39	38
Math Manipulatives	Specific Learning Disability	38	327	23	16
Oral Presentation	Mental Retardation	89	315	16	4
	Hard of Hearing	11	337	26	27
	Speech or Language Impairment	58	334	23	22
	Emotional Disturbance	47	334	24	23
	Orthopedic Impairment	28	329	25	18
	Other Health Impairment	66	333	25	21
	Specific Learning Disability	1174	333	23	21
	Multiple Disabilities	13	328	33	8
	Autism	20	327	37	15
Oral Responses Dictated to a Scribe	Orthopedic Impairment	11	351	36	45

	Specific Learning Disability	18	331	19	11
Sign Language	Deaf	11	328	24	27
	Specific Learning Disability	12	328	24	8
Supervised Breaks	Mental Retardation	60	313	15	3
	Speech or Language Impairment	51	329	21	16
	Visual Impairment	11	330	19	27
	Emotional Disturbance	200	328	24	16
	Orthopedic Impairment	16	326	20	6
	Other Health Impairment	68	335	26	28
	Specific Learning Disability	878	333	24	20
	Autism	27	351	51	44
Test Over More Than One Day	Emotional Disturbance	26	331	30	12
	Specific Learning Disability	34	328	27	18
Tested At Home Or Hospital	Specific Learning Disability	12	336	23	17
Transfer of Student T/B Responses to A/D	Visual Impairment	17	345	33	35
Unlisted Modification	Specific Learning Disability Emotional Disturbance	21 16	346 319	27 33	33 6
	Specific Learning Disability	125	329	25	14

* Results for groups with less than 11 members are not reported

Table 6.C.9: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations*—ELA, February 2006

Testing Variations	Language Fluency	N	Mean	SD	% (>=350)
Assistive Device	English Only	20	350	20	50
Assistive Device No Interference	English Only	47	342	33	40
Beneficial Time	English Only	261	328	35	23
	English Learner	57	314	29	14
Braille Version	English Only	12	372	42	67
Dictionary	English Only	454	330	29	28
	Initially Fluent English Proficient	20	321	20	10
	Redesignated Fluent English Proficient	19	335	26	26
	English Learner	219	320	23	12
Essay Reponses	English Only	62	335	37	27
	English Only	53	332	29	23
	English Learner	11	327	22	9
	English Learner	22	313	27	9
IEP or Section 504 Plan	English Only	5346	331	31	26
	Initially Fluent English Proficient	274	333	30	28
	Redesignated Fluent English Proficient	244	333	27	25
	English Learner	1910	320	24	12
	Unknown	41	334	32	29
Large Print Version	English Only	37	344	37	38
Oral Presentation	English Only	1395	331	28	26
	Initially Fluent English Proficient	76	329	26	29
	Redesignated Fluent English Proficient	64	329	25	16
	English Learner	611	322	23	12
Oral Responses Dictated to a Scribe	English Only	66	326	34	21
	English Learner	38	323	22	16
Sign Language	English Only	16	330	28	25
Spell Checker Or Grammar Checker	English Only	181	334	28	24
	Redesignated Fluent English Proficient	13	321	21	0
	English Learner	113	320	19	4
Spell Checker Or Grammar Checker Off	English Only	99	352	35	52
	English Learner	16	335	27	38
Supervised Breaks	English Only	1285	329	31	25
	Initially Fluent English Proficient	57	334	30	30
	Redesignated Fluent English Proficient	66	331	26	23
	English Learner	285	320	26	13
Test Over More Than One Day	English Only	121	326	30	23
	English Learner	39	319	26	15
Tested At Home Or Hospital	English Only	39	329	41	31

Transfer of Student T/B Responses to A/D	English Only	93	338	39	35
	English Learner	14	350	28	43
Unlisted Modification	English Only	119	325	30	19
	English Learner	39	320	28	13

* Results for groups with less than 11 members are not reported

Table 6.C.10: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations*—Mathematics, February 2006

Testing Variations	Language Fluency	N	Mean	SD	% (>=350)
Arithmetic Table	English Only	248	331	23	15
	English Learner	60	329	21	18
Beneficial Time	English Only	189	334	30	24
	English Learner	57	326	25	14
Braille Version	English Only	12	349	48	50
Calculator	English Only	3500	334	23	21
	Initially Fluent English Proficient	208	335	22	21
	Redesignated Fluent English Proficient	178	338	23	28
	English Learner	1219	328	21	15
	Unknown	20	329	20	20
Dictionary for Math	English Only	76	333	24	21
	English Learner	19	334	17	26
IEP or Section 504 Plan	English Only	5781	334	26	23
	Initially Fluent English Proficient	298	336	26	25
	Redesignated Fluent English Proficient	279	338	24	28
	English Learner	1896	328	21	14
	Unknown	50	333	26	20
Large Print Version	English Only	29	343	28	41
Math Manipulatives	English Only	37	339	31	32
	English Learner	15	322	16	7
Oral Presentation	English Only	1036	333	25	22
	Initially Fluent English Proficient	43	332	24	16
	Redesignated Fluent English Proficient	45	340	24	38
	English Learner	454	329	22	16
Oral Responses Dictated to a Scribe	English Only	39	342	33	36
	English Learner	13	322	21	8
Sign Language	English Only	21	332	23	24
Supervised Breaks	English Only	1081	333	26	21
	Initially Fluent English Proficient	44	336	29	32
	Redesignated Fluent English Proficient	56	335	23	21
	English Learner	226	326	22	12
	Unknown	11	336	15	18
Test Over More Than One Day	English Only	75	333	31	20
	English Learner	11	328	45	9
Tested At Home Or Hospital	English Only	26	342	30	27
Transfer of Student T/B Responses to A/D	English Only	80	344	33	35
	English Learner	16	338	29	25
Unlisted Modification	English Only	138	331	25	17
	English Learner	31	324	31	16

* Results for groups with less than 11 members are not reported

Appendix 6.D: Results of Testing Variations and Disability Analyses—March 2006

Table 6.D.1: Summary Statistics by Testing Variations and Disability—ELA, March 2006

Testing Variations	N	Mean	SD	% (>=350)
Accommodation	2376	334	35	30
Modification	3303	329	27	22
All	5679	331	31	25
Disability*	**N**	**Mean**	**SD**	**% (>=350)**
Mental Retardation	875	303	20	3
Hard of Hearing	389	342	37	35
Deaf	323	317	30	12
Speech or Language Impairment	2218	346	37	41
Visual Impairment	176	349	41	45
Emotional Disturbance	2967	338	39	37
Orthopedic Impairment	344	343	38	42
Other Health Impairment	2271	349	35	48
Specific Learning Disability	31587	331	29	26
Deaf-Blindness	11	328	24	27
Multiple Disabilities	135	332	38	30
Autism	542	351	42	47
Traumatic Brain Injury	111	328	34	24

* Results for groups with less than 11 members are not reported

Table 6.D.2: Summary Statistics by Testing Variations and Disability—Mathematics, March 2006

Testing Variations	N	Mean	SD	% (>=350)
Accommodation	2189	335	30	25
Modification	7320	334	23	23
All	9509	334	25	23
Disability*	**N**	**Mean**	**SD**	**% (>=350)**
Mental Retardation	866	313	16	2
Hard of Hearing	389	348	33	40
Deaf	295	330	28	20
Speech or Language Impairment	2214	351	37	42
Visual Impairment	183	348	40	42
Emotional Disturbance	3131	336	31	29
Orthopedic Impairment	371	343	33	38
Other Health Impairment	2374	347	32	44
Specific Learning Disability	32884	335	25	25
Deaf-Blindness	*	*	*	*
Multiple Disabilities	138	337	38	27
Autism	549	355	41	46
Traumatic Brain Injury	106	333	33	21

* Results for groups with less than 11 members are not reported

Table 6.D.3: Demographic Summary for All Examinees[1] by Testing Variations—ELA, March 2006

							Reading[2] Avg. % Correct			Writing[2] Avg. % Correct		Writing Appl Avg. Score
	N Tested	N (>=350)	% (>=350)	N (<350)	% (<350)	Mean Scale Score	WA	RC	LR/A	WS	WC	CR item
Testing Variations												
IEP or Section 504 Plan	13169	4627	35%	8542	65%	340	61%	53%	56%	51%	53%	2.0
Transfer of T/B Responses to A/D	144	73	51%	71	49%	350	64%	58%	61%	56%	59%	2.1
Oral Responses Dictated to a Scribe	126	38	30%	88	70%	331	56%	48%	54%	48%	50%	1.5
Spell Checker/Grammar Checker Off	207	106	51%	101	49%	353	67%	60%	65%	56%	59%	2.2
Essay Reponses	109	37	34%	72	66%	338	57%	51%	57%	49%	54%	1.8
Assistive Device No Interference	65	31	48%	34	52%	353	68%	60%	62%	57%	59%	2.4
Braille Version	20	9	45%	11	55%	354	57%	59%	62%	58%	61%	2.1
Large Print Version	116	62	53%	54	47%	354	68%	61%	65%	60%	60%	2.2
Test Over More Than One Day	296	74	25%	222	75%	330	57%	46%	51%	47%	49%	1.9
Supervised Breaks	2168	558	26%	1610	74%	330	57%	48%	52%	45%	48%	1.9
Beneficial Time	270	45	17%	225	83%	321	51%	43%	46%	39%	41%	1.6
Tested At Home Or Hospital	46	22	48%	24	52%	346	63%	58%	59%	52%	54%	2.0
Dictionary	904	205	23%	699	77%	329	58%	47%	51%	43%	46%	1.9
Sign Language	46	5	11%	41	89%	322	50%	38%	42%	40%	46%	1.9
Oral Presentation	2482	535	22%	1947	78%	329	54%	49%	52%	45%	46%	1.8
Spell Checker Or Grammar Checker	294	114	39%	180	61%	342	64%	56%	59%	48%	54%	2.2
Essay Reponses	81	33	41%	48	59%	346	66%	57%	60%	53%	50%	2.2

[1] Results for groups with less than 11 members are not reported
[2] WA — Word Analysis, RC — Reading Comprehension, LR/A — Literary Responses/Analysis, WS — Writing Strategies, WC — Writing Conventions

Table 6.D.4: Demographic Summary for All Examinees[1] by Testing Variations—Mathematics, March 2006

	N Tested	N (>=350)	% (>=350)	N (<350)	% (<350)	Mean Scale Score	Strands for Mathematics[2] Average Percent Correct				
							PS	NS	AF	MG	Alg1
Testing Variations											
IEP or Section 504 Plan	13840	4658	34%	9182	66%	342	55%	49%	48%	43%	38%
Transfer of T/B Responses to A/D	122	49	40%	73	60%	348	58%	51%	51%	47%	43%
Oral Responses Dictated to a Scribe	99	38	38%	61	62%	346	54%	52%	50%	48%	41%
Braille Version	23	10	43%	13	57%	340	52%	48%	43%	40%	43%
Large Print Version	104	40	38%	64	62%	346	59%	50%	50%	45%	40%
Test Over More Than One Day	126	29	23%	97	77%	331	48%	43%	41%	37%	33%
Supervised Breaks	1833	464	25%	1369	75%	335	52%	45%	43%	39%	34%
Beneficial Time	215	39	18%	176	82%	328	44%	41%	39%	35%	33%
Tested At Home Or Hospital	49	20	41%	29	59%	346	57%	51%	53%	45%	39%
Dictionary for Math	121	29	24%	92	76%	338	49%	49%	44%	41%	35%
Sign Language	70	12	17%	58	83%	334	45%	43%	44%	38%	36%
Oral Presentation	1932	356	18%	1576	82%	331	47%	44%	40%	37%	31%
Calculator	7170	1629	23%	5541	77%	334	50%	46%	42%	39%	32%
Arithmetic Table	234	57	24%	177	76%	333	51%	45%	41%	39%	32%
Math Manipulatives	83	41	49%	42	51%	355	63%	59%	56%	51%	44%
Unlisted Modification	128	36	28%	92	72%	335	51%	46%	44%	40%	33%

[1] Results for groups with less than 11 members are not reported

[2] PS — Probability/ Statistics, NS — Number Sense, AF — Algebra & Functions, MG — Measurement/Geometry, Alg1 — Algebra 1

Table 6.D.5: Percentiles of Scale Scores for Students with Testing Variations* —ELA, March 2006

	Percentiles									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD**	N Tested
Testing Variations										
IEP or Section 504 Plan	275	289	312	335	361	407	442	340	36	13169
Transfer of T/B Responses to A/D	275	281	320	350	381	430	450	350	45	144
Oral Responses Dictated to a Scribe	275	278	299	326	356	399	424	331	38	126
Spell Checker/Grammar Checker Off	293	301	322	350	374	424	450	353	37	207
Essay Reponses	275	289	307	331	365	403	450	338	39	109
Assistive Device No Interference	289	301	333	346	369	443	450	353	36	65
Braille Version	285	287	312	347	388	450	450	354	53	20
Large Print Version	287	295	329	353	377	419	450	354	37	116
Test Over More Than One Day	275	283	309	329	349	382	424	330	31	296
Supervised Breaks	275	287	307	329	350	385	410	330	31	2168
Beneficial Time	275	275	297	316	341	379	415	321	31	270
Tested At Home Or Hospital	275	283	307	344	379	410	450	346	44	46
Dictionary	275	289	309	327	348	379	396	329	27	904
Sign Language	276	291	301	311	331	379	450	322	33	46
Oral Presentation	276	291	310	327	346	375	396	329	26	2482
Spell Checker Or Grammar Checker	285	299	321	341	361	390	419	342	29	294
Essay Reponses	275	293	316	337	374	407	450	346	39	81

* Results for groups with less than 11 members are not reported

** SD - Standard Deviation

Table 6.D.6: Percentiles of Scale Scores for Students with Testing Variations* — Mathematics, March 2006

	Percentiles									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD**	N Tested
Testing Variations										
IEP or Section 504 Plan	290	301	319	336	357	408	449	342	32	13840
Transfer of T/B Responses to A/D	276	303	319	334	372	441	450	348	40	122
Oral Responses Dictated to a Scribe	275	298	313	340	375	424	450	346	40	99
Braille Version	275	290	304	321	358	447	450	340	46	23
Large Print Version	290	301	319	337	367	429	449	346	38	104
Test Over More Than One Day	276	296	313	325	346	401	449	331	31	126
Supervised Breaks	287	301	317	331	350	383	419	335	27	1833
Beneficial Time	283	293	311	321	339	377	408	328	26	215
Tested At Home Or Hospital	275	293	319	335	375	404	450	346	40	49
Dictionary for Math	301	306	315	327	349	408	450	338	34	121
Sign Language	280	303	317	329	344	404	450	334	30	70
Oral Presentation	290	301	315	325	342	377	401	331	23	1932
Calculator	290	301	317	331	347	375	401	334	23	7170
Arithmetic Table	290	298	313	325	348	390	408	333	28	234
Math Manipulatives	296	306	325	348	381	411	450	355	35	83
Unlisted Modification	275	298	315	329	350	388	419	335	29	128

* Results for groups with less than 11 members are not reported

** SD - Standard Deviation

Table 6.D.7: Summary of Scale Scores and Passing Rates by Disability and Testing Variations*—ELA, March 2006

Testing Variations	Disability	N	Mean	SD	% (>=350)
Assistive Device No Interference	Specific Learning Disability	38	346	17	42
Beneficial Time	Mental Retardation	11	299	14	0
	Emotional Disturbance	70	318	33	21
	Specific Learning Disability	145	317	25	9
Braille Version	Visual Impairment	15	358	57	53
Dictionary	Mental Retardation	40	304	16	0
	Deaf	16	316	20	6
	Speech or Language Impairment	51	329	22	14
	Emotional Disturbance	25	331	31	32
	Other Health Impairment	28	335	35	29
	Specific Learning Disability	656	330	27	24
	Autism	14	326	32	21
Essay Reponses	Orthopedic Impairment	15	366	34	73
	Specific Learning Disability	54	328	33	22
	Specific Learning Disability	42	348	34	40
IEP or Section 504 Plan	Mental Retardation	302	305	20	3
	Hard of Hearing	72	329	34	24
	Deaf	64	311	21	3
	Speech or Language Impairment	451	331	28	22
	Visual Impairment	85	348	41	45
	Emotional Disturbance	707	333	37	34
	Orthopedic Impairment	101	342	34	38
	Other Health Impairment	477	341	34	36
	Specific Learning Disability	7443	329	28	23
	Multiple Disabilities	48	325	32	15
	Autism	132	347	39	44
	Traumatic Brain Injury	27	324	23	15
	Unknown	24	332	33	29
Large Print Version	Visual Impairment	60	351	36	48
	Specific Learning Disability	11	357	26	82
Oral Presentation	Mental Retardation	106	306	17	1
	Hard of Hearing	17	326	24	12
	Speech or Language Impairment	125	328	24	16
	Emotional Disturbance	43	333	30	33
	Orthopedic Impairment	25	338	32	32
	Other Health Impairment	76	332	27	26
	Specific Learning Disability	1909	330	26	22
	Multiple Disabilities	24	327	27	17
	Autism	25	329	30	24
Oral Responses Dictated to a Scribe	Orthopedic Impairment	18	351	38	39
	Specific Learning Disability	45	310	24	7
Sign Language	Hard of Hearing	14	317	20	7

	Deaf	17	312	24	6
Spell Checker Or Grammar Checker	Speech or Language Impairment	18	340	26	39
	Other Health Impairment	17	345	31	41
	Specific Learning Disability	205	343	26	40
Spell Checker Or Grammar Checker Off	Emotional Disturbance	14	367	30	64
	Orthopedic Impairment	12	354	31	50
	Other Health Impairment	14	371	36	71
	Specific Learning Disability	110	346	32	45
Supervised Breaks	Mental Retardation	62	305	18	2
	Hard of Hearing	14	324	39	21
	Deaf	24	306	20	4
	Speech or Language Impairment	102	325	24	14
	Visual Impairment	15	353	43	47
	Emotional Disturbance	222	327	38	30
	Orthopedic Impairment	15	348	29	40
	Other Health Impairment	73	343	34	42
	Specific Learning Disability	1460	330	28	24
	Autism	49	356	41	57
Test Over More Than One Day	Speech or Language Impairment	15	325	21	7
	Emotional Disturbance	22	332	31	27
	Other Health Impairment	12	349	29	58
	Specific Learning Disability	205	328	28	22
Transfer of Student T/B Responses to A/D	Visual Impairment	42	345	40	43
	Orthopedic Impairment	14	349	36	50
	Specific Learning Disability	23	334	40	39
Unlisted Modification	Specific Learning Disability	115	336	31	32

* Results for groups with less than 11 members are not reported

Table 6.D.8: Summary of Scale Scores and Passing Rates by Disability and Testing Variations*—Mathematics, March 2006

Testing Variations	Disability	N	Mean	SD	% (>=350)
Arithmetic Table	Mental Retardation	12	312	12	0
	Specific Learning Disability	176	334	26	24
Beneficial Time	Emotional Disturbance	60	323	23	13
	Specific Learning Disability	120	325	20	13
Braille Version	Visual Impairment	16	341	43	44
Calculator	Mental Retardation	207	314	15	2
	Hard of Hearing	44	342	29	32
	Deaf	19	323	12	5
	Speech or Language Impairment	315	335	23	22
	Visual Impairment	26	333	31	23
	Emotional Disturbance	356	332	24	22
	Orthopedic Impairment	63	333	22	25
	Other Health Impairment	308	338	25	31
	Specific Learning Disability	5266	334	22	23
	Multiple Disabilities	29	319	15	3
	Autism	72	343	33	33
	Traumatic Brain Injury	23	324	13	4
Dictionary for Math	Specific Learning Disability	84	329	20	18
IEP or Section 504 Plan	Mental Retardation	297	314	15	2
	Hard of Hearing	79	341	28	34
	Deaf	59	326	14	7
	Speech or Language Impairment	457	337	27	25
	Visual Impairment	92	346	41	39
	Emotional Disturbance	754	331	28	23
	Orthopedic Impairment	116	340	27	36
	Other Health Impairment	521	341	29	36
	Specific Learning Disability	8106	333	24	23
	Multiple Disabilities	48	329	33	17
	Autism	133	351	38	44
	Traumatic Brain Injury	31	331	20	16
	Unknown	24	334	29	33
Large Print Version	Visual Impairment	51	343	40	33
	Specific Learning Disability	12	333	21	25
Math Manipulatives	Specific Learning Disability	52	351	31	46
Oral Presentation	Mental Retardation	94	314	17	4
	Hard of Hearing	22	346	33	50
	Speech or Language Impairment	77	338	31	22
	Emotional Disturbance	40	325	19	15
	Orthopedic Impairment	19	337	24	26
	Other Health Impairment	52	331	24	21
	Specific Learning Disability	1507	331	22	18
	Multiple Disabilities	15	324	25	13
	Autism	19	332	20	26

Oral Responses Dictated to a Scribe	Orthopedic Impairment	15	358	27	67
	Specific Learning Disability	39	332	27	21
Sign Language	Hard of Hearing	14	332	17	21
	Deaf	34	325	15	9
	Specific Learning Disability	11	329	20	9
Supervised Breaks	Mental Retardation	42	315	15	2
	Hard of Hearing	11	335	25	27
	Deaf	22	325	14	5
	Speech or Language Impairment	90	336	27	24
	Visual Impairment	14	346	41	43
	Emotional Disturbance	175	327	26	18
	Orthopedic Impairment	16	336	21	31
	Other Health Impairment	64	348	31	48
	Specific Learning Disability	1239	334	24	24
Test Over More Than One Day	Autism	43	361	40	53
	Emotional Disturbance	20	329	23	15
	Specific Learning Disability	70	322	23	14
Transfer of Student T/B Responses to A/D	Visual Impairment	40	343	38	33
	Orthopedic Impairment	14	349	33	43
	Specific Learning Disability	31	329	26	10
Unlisted Modification	Specific Learning Disability	91	335	25	26

* Results for groups with less than 11 members are not reported

Table 6.D.9: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations*—ELA, March 2006

Testing Variations	Language Fluency	N	Mean	SD	% (>=350)
Assistive Device No Interference	English Only	46	360	36	57
	English Learner	11	322	18	0
Beneficial Time	English Only	201	321	32	17
	Initially Fluent English Proficient	12	325	31	25
	English Learner	49	312	21	8
Braille Version	English Only	15	369	53	60
Dictionary	English Only	564	331	29	25
	Initially Fluent English Proficient	31	339	26	39
	Redesignated Fluent English Proficient	32	344	26	47
	English Learner	272	322	24	14
Essay Reponses	English Only	57	347	42	42
	English Only	78	339	40	33
	English Learner	22	339	27	32
	English Learner	17	318	27	12
IEP or Section 504 Plan	English Only	8390	342	37	39
	Initially Fluent English Proficient	640	354	39	49
	Redesignated Fluent English Proficient	823	361	35	62
	English Learner	3221	324	26	17
	Unknown	95	335	36	31
Large Print Version	English Only	78	361	36	65
	English Learner	22	326	23	14
Oral Presentation	English Only	1475	332	27	26
	Initially Fluent English Proficient	126	335	24	29
	Redesignated Fluent English Proficient	72	334	27	26
	English Learner	804	322	22	11
Oral Responses Dictated to a Scribe	English Only	73	335	40	30
	English Learner	47	321	35	28
Sign Language	English Only	32	324	29	13
Spell Checker Or Grammar Checker	English Only	203	344	30	39
	Initially Fluent English Proficient	21	346	28	52
	Redesignated Fluent English Proficient	11	334	23	18
	English Learner	59	339	25	36
Spell Checker Or Grammar Checker Off	English Only	152	359	36	59
	English Learner	42	328	25	26
Supervised Breaks	English Only	1431	333	32	29
	Initially Fluent English Proficient	97	333	30	31
	Redesignated Fluent English Proficient	111	333	27	28
	English Learner	522	323	25	15

Test Over More Than One Day	English Only	171	334	32	29
	Initially Fluent English Proficient	11	338	27	27
	Redesignated Fluent English Proficient	13	339	35	31
	English Learner	100	321	26	18
Tested At Home Or Hospital	English Only	39	348	45	49
Transfer of Student T/B Responses to A/D	English Only	104	357	44	60
	English Learner	22	322	32	18
Unlisted Modification	English Only	122	333	34	29
	Initially Fluent English Proficient	11	363	25	73
	English Learner	25	331	27	24

* Results for groups with less than 11 members are not reported

Table 6.D.10: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations*—Mathematics, March 2006

Testing Variations	Language Fluency	N	Mean	SD	% (>=350)
Arithmetic Table	English Only	158	333	29	25
	Redesignated Fluent English Proficient	13	340	27	31
	English Learner	54	332	27	22
Beneficial Time	English Only	152	328	25	21
	Initially Fluent English Proficient	12	327	41	17
	English Learner	44	325	29	9
Braille Version	English Only	16	346	50	44
Calculator	English Only	4928	334	23	24
	Initially Fluent English Proficient	310	337	23	26
	Redesignated Fluent English Proficient	248	342	25	33
	English Learner	1623	330	21	17
	Unknown	61	328	18	11
Dictionary for Math	English Only	90	335	32	23
	English Learner	19	342	31	26
IEP or Section 504 Plan	English Only	9068	342	33	34
	Initially Fluent English Proficient	673	355	40	47
	Redesignated Fluent English Proficient	846	362	36	59
	English Learner	3157	333	25	23
	Unknown	96	333	21	23
Large Print Version	English Only	70	351	40	44
	English Learner	21	323	25	19
Math Manipulatives	English Only	59	357	34	53
	English Learner	11	339	32	27
Oral Presentation	English Only	1168	331	24	20
	Initially Fluent English Proficient	86	333	24	21
	Redesignated Fluent English Proficient	65	342	26	31
	English Learner	610	327	22	14
Oral Responses Dictated to a Scribe	English Only	74	348	40	42
	English Learner	15	323	27	13
Sign Language	English Only	38	335	30	24
	English Learner	25	329	21	8
Supervised Breaks	English Only	1217	336	28	26
	Initially Fluent English Proficient	66	333	28	29
	Redesignated Fluent English Proficient	96	337	23	34
	English Learner	450	332	24	20
Test Over More Than One Day	English Only	89	329	29	20
	English Learner	30	332	30	27
Tested At Home Or Hospital	English Only	42	348	42	43
Transfer of Student T/B Responses to A/D	English Only	81	351	39	41
	English Learner	23	325	27	30
Unlisted Modification	English Only	94	333	28	23
	English Learner	22	343	33	41

* Results for groups with less than 11 members are not reported

Appendix 6.E: Results of Testing Variations and Disability Analyses—May 2006

Table 6.E.1: Summary Statistics by Testing Variations and Disability—ELA, May 2006

Testing Variations	N	Mean	SD	% (>=350)
Accommodation	475	318	29	14
Modification	1263	322	25	14
All	1738	321	27	14
Disability*	**N**	**Mean**	**SD**	**% (>=350)**
Mental Retardation	335	298	18	1
Hard of Hearing	114	321	26	11
Deaf	109	304	23	3
Speech or Language Impairment	469	324	28	17
Visual Impairment	33	321	31	18
Emotional Disturbance	859	318	34	19
Orthopedic Impairment	106	319	30	17
Other Health Impairment	454	325	30	20
Specific Learning Disability	8439	315	25	9
Deaf-Blindness	*	*	*	*
Multiple Disabilities	40	317	30	18
Autism	105	320	32	14
Traumatic Brain Injury	42	304	22	5

* Results for groups with less than 11 members are not reported

Table 6.E.2: Summary Statistics by Testing Variations and Disability—Mathematics, May 2006

Testing Variations	N	Mean	SD	% (>=350)
Accommodation	474	326	21	13
Modification	2836	329	20	16
All	3310	329	20	15
Disability*	**N**	**Mean**	**SD**	**% (>=350)**
Mental Retardation	340	311	13	2
Hard of Hearing	107	329	23	17
Deaf	88	319	16	5
Speech or Language Impairment	448	332	24	17
Visual Impairment	33	331	27	24
Emotional Disturbance	970	327	27	17
Orthopedic Impairment	121	328	21	16
Other Health Impairment	570	332	24	19
Specific Learning Disability	8940	326	20	12
Deaf-Blindness	*	*	*	*
Multiple Disabilities	44	322	20	14
Autism	107	327	23	18
Traumatic Brain Injury	44	324	25	20

* Results for groups with less than 11 members are not reported

Table 6.E.3: Demographic Summary for All Examinees[1] by Testing Variations—ELA, May 2006

	N Tested	N (>=350)	% (>=350)	N (<350)	% (<350)	Mean Scale Score	Reading[2] Avg. % Correct			Writing[2] Avg. % Correct		Writing Appl Avg. Score
							WA	RC	LR/A	WS	WC	CR item
Testing Variations												
IEP or Section 504 Plan	3312	593	18%	2719	82%	324	53%	50%	48%	40%	48%	1.9
Transfer of T/B Responses to A/D	32	4	13%	28	88%	317	47%	46%	46%	37%	43%	1.7
Oral Responses Dictated to a Scribe	77	12	16%	65	84%	331	61%	56%	54%	48%	50%	2.0
Spell Checker/Grammar Checker Off	86	18	21%	68	79%	333	65%	57%	53%	46%	52%	2.1
Essay Reponses	36	5	14%	31	86%	324	51%	47%	49%	44%	48%	2.0
Assistive Device No Interference	20	6	30%	14	70%	330	57%	57%	52%	45%	52%	2.0
Braille Version	*	*	*	*	*	*	*	*	*	*	*	*
Large Print Version	25	5	20%	20	80%	319	48%	46%	49%	40%	45%	1.7
Test Over More Than One Day	112	10	9%	102	91%	315	45%	43%	41%	34%	40%	1.8
Supervised Breaks	427	51	12%	376	88%	316	49%	44%	43%	36%	44%	1.8
Beneficial Time	114	14	12%	100	88%	313	48%	43%	40%	35%	41%	1.7
Tested At Home Or Hospital	18	5	28%	13	72%	332	58%	53%	52%	45%	46%	2.1
Dictionary	417	66	16%	351	84%	323	60%	49%	47%	39%	46%	2.0
Sign Language	16	2	13%	14	88%	318	61%	37%	48%	38%	42%	1.7
Oral Presentation	928	142	15%	786	85%	322	53%	50%	48%	41%	45%	1.8
Spell Checker Or Grammar Checker	178	13	7%	165	93%	317	51%	47%	42%	35%	43%	1.9
Essay Reponses	45	8	18%	37	82%	326	54%	55%	50%	41%	49%	1.9

[1] Results for groups with less than 11 members are not reported
[2] WA — Word Analysis, RC — Reading Comprehension, LR/A — Literary Responses/Analysis, WS — Writing Strategies, WC — Writing Conventions

Table 6.E.4: Demographic Summary for All Examinees[1] by Testing Variations—Mathematics, May 2006

	N Tested	N (>=350)	% (>=350)	N (<350)	% (<350)	Mean Scale Score	Strands for Mathematics[2] Average Percent Correct				
							PS	NS	AF	MG	Alg1
Testing Variations											
IEP or Section 504 Plan	3583	634	18%	2949	82%	330	46%	45%	41%	36%	31%
Transfer of T/B Responses to A/D	28	5	18%	23	82%	324	41%	37%	38%	35%	30%
Oral Responses Dictated to a Scribe	24	5	21%	19	79%	328	45%	43%	37%	37%	33%
Braille Version	*	*	*	*	*	*	*	*	*	*	*
Large Print Version	21	6	29%	15	71%	333	47%	48%	42%	39%	32%
Test Over More Than One Day	35	3	9%	32	91%	321	38%	37%	32%	32%	33%
Supervised Breaks	426	65	15%	361	85%	327	44%	42%	38%	34%	30%
Beneficial Time	82	10	12%	72	88%	320	37%	38%	34%	32%	28%
Tested At Home Or Hospital	24	6	25%	18	75%	332	44%	45%	40%	41%	35%
Dictionary for Math	37	2	5%	35	95%	326	40%	45%	41%	31%	27%
Sign Language	11	1	9%	10	91%	329	42%	49%	42%	33%	28%
Oral Presentation	640	109	17%	531	83%	329	45%	44%	39%	36%	31%
Calculator	2793	437	16%	2356	84%	330	46%	46%	40%	35%	31%
Arithmetic Table	136	28	21%	108	79%	334	49%	50%	42%	37%	31%
Math Manipulatives	35	6	17%	29	83%	332	47%	50%	43%	36%	28%
Unlisted Modification	44	13	30%	31	70%	333	48%	46%	43%	36%	38%

[1] Results for groups with less than 11 members are not reported

[2] PS — Probability/ Statistics, NS — Number Sense, AF — Algebra & Functions, MG — Measurement/Geometry, Alg1 — Algebra 1

Table 6.E.5: Percentiles of Scale Scores for Students with Testing Variations* —ELA, May 2006

	Percentiles									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD**	N Tested
Testing Variations										
IEP or Section 504 Plan	275	279	300	320	341	382	423	324	31	3312
Transfer of T/B Responses to A/D	275	275	296	313	335	374	379	317	30	32
Oral Responses Dictated to a Scribe	275	283	320	333	341	377	397	331	25	77
Spell Checker/Grammar Checker Off	275	300	314	333	341	379	443	333	28	86
Essay Reponses	285	287	301	324	344	374	379	324	25	36
Assistive Device No Interference	275	281	309	331	351	365	365	330	26	20
Braille Version	*	*	*	*	*	*	*	*	*	*
Large Print Version	275	275	291	315	339	377	397	319	36	25
Test Over More Than One Day	275	275	292	308	336	359	391	315	30	112
Supervised Breaks	275	277	295	313	333	363	388	316	27	427
Beneficial Time	275	275	291	302	331	379	397	313	32	114
Tested At Home Or Hospital	277	277	306	323	356	450	450	332	43	18
Dictionary	275	281	302	322	342	365	385	323	26	417
Sign Language	278	278	299	311	342	388	388	318	30	16
Oral Presentation	275	281	303	322	339	367	385	322	26	928
Spell Checker Or Grammar Checker	275	285	302	315	331	354	372	317	21	178
Essay Reponses	275	283	309	328	339	365	367	326	24	45

* Results for groups with less than 11 members are not reported

** SD - Standard Deviation

Table 6.E.6: Percentiles of Scale Scores for Students with Testing Variations* — Mathematics, May 2006

	Percentiles									
	1%	5%	25%	50%	75%	95%	99%	Mean Scale Score	SD**	N Tested
Testing Variations										
IEP or Section 504 Plan	288	300	313	327	343	373	412	330	24	3583
Transfer of T/B Responses to A/D	285	291	307	321	335	371	377	324	23	28
Oral Responses Dictated to a Scribe	291	291	309	321	343	367	388	328	26	24
Braille Version	*	*	*	*	*	*	*	*	*	*
Large Print Version	294	302	309	329	352	363	425	333	30	21
Test Over More Than One Day	285	288	302	318	338	383	416	321	27	35
Supervised Breaks	288	300	311	322	340	367	391	327	22	426
Beneficial Time	275	291	307	313	338	361	388	320	22	82
Tested At Home Or Hospital	302	302	316	322	347	388	391	332	26	24
Dictionary for Math	291	304	316	325	336	354	381	326	17	37
Sign Language	300	300	307	327	340	381	381	329	24	11
Oral Presentation	291	301	313	325	340	374	391	329	22	640
Calculator	291	302	316	327	342	365	386	330	20	2793
Arithmetic Table	300	304	319	331	347	369	391	334	20	136
Math Manipulatives	297	307	318	329	345	359	391	332	19	35
Unlisted Modification	291	300	313	330	350	375	379	333	24	44

* Results for groups with less than 11 members are not reported

** SD - Standard Deviation

Table 6.E.7: Summary of Scale Scores and Passing Rates by Disability and Testing Variations*—ELA, May 2006

Testing Variations	Disability	N	Mean	SD	% (>=350)
Assistive Device No Interference	Specific Learning Disability	17	335	24	35
Beneficial Time	Emotional Disturbance	15	315	28	7
	Specific Learning Disability	69	311	31	13
Dictionary	Speech or Language Impairment	12	322	26	17
	Other Health Impairment	15	312	24	7
	Specific Learning Disability	318	324	25	16
Essay Reponses	Specific Learning Disability	22	320	23	9
	Specific Learning Disability	31	331	22	23
IEP or Section 504 Plan	Mental Retardation	107	301	17	0
	Hard of Hearing	29	328	31	24
	Deaf	16	312	32	6
	Speech or Language Impairment	106	322	23	11
	Visual Impairment	13	334	38	31
	Emotional Disturbance	178	321	33	19
	Orthopedic Impairment	39	311	32	13
	Other Health Impairment	117	325	30	20
	Specific Learning Disability	2019	318	25	11
	Autism	32	310	23	3
	Traumatic Brain Injury	16	303	24	6
Oral Presentation	Mental Retardation	45	306	19	0
	Speech or Language Impairment	41	327	24	20
	Emotional Disturbance	22	318	27	9
	Other Health Impairment	28	330	34	29
	Specific Learning Disability	686	323	25	15
	Autism	11	312	22	0
Oral Responses Dictated to a Scribe	Specific Learning Disability	23	328	28	17
Spell Checker Or Grammar Checker	Specific Learning Disability	138	317	21	7
Spell Checker Or Grammar Checker Off	Specific Learning Disability	28	333	30	25
Supervised Breaks	Mental Retardation	18	296	14	0
	Emotional Disturbance	41	320	31	15
	Other Health Impairment	12	322	31	17
	Specific Learning Disability	292	316	25	11
Test Over More Than One Day	Specific Learning Disability	83	315	26	8
Transfer of Student T/B Responses to A/D	Specific Learning Disability	11	334	33	27
Unlisted Modification	Specific Learning Disability	27	317	21	4

* Results for groups with less than 11 members are not reported

Table 6.E.8: Summary of Scale Scores and Passing Rates by Disability and Testing Variations*—Mathematics, May 2006

Testing Variations	Disability	N	Mean	SD	% (>=350)
Arithmetic Table	Specific Learning Disability	103	334	20	20
Beneficial Time	Emotional Disturbance	13	323	28	23
	Specific Learning Disability	45	316	18	4
Calculator	Mental Retardation	94	315	13	3
	Hard of Hearing	20	331	21	20
	Deaf	14	321	17	7
	Speech or Language Impairment	121	331	17	15
	Emotional Disturbance	116	330	24	19
	Orthopedic Impairment	49	326	19	8
	Other Health Impairment	153	333	20	21
	Specific Learning Disability	1990	330	20	15
	Autism	35	331	18	23
	Traumatic Brain Injury	13	331	27	31
Dictionary for Math	Specific Learning Disability	27	325	16	4
IEP or Section 504 Plan	Mental Retardation	104	314	14	3
	Hard of Hearing	27	331	24	26
	Deaf	12	322	18	8
	Speech or Language Impairment	121	331	18	14
	Emotional Disturbance	204	325	24	16
	Orthopedic Impairment	48	328	23	15
	Other Health Impairment	170	332	22	20
	Specific Learning Disability	2330	328	20	14
	Multiple Disabilities	12	329	19	17
	Autism	37	328	19	16
	Traumatic Brain Injury	18	324	26	22
Math Manipulatives	Specific Learning Disability	30	335	18	20
Oral Presentation	Mental Retardation	25	314	17	8
	Speech or Language Impairment	24	331	21	21
	Emotional Disturbance	18	338	33	28
	Other Health Impairment	26	337	27	31
	Specific Learning Disability	473	329	21	16
Supervised Breaks	Mental Retardation	14	312	14	0
	Emotional Disturbance	42	328	23	21
	Other Health Impairment	15	334	24	27
	Specific Learning Disability	303	326	21	13
Test Over More Than One Day	Specific Learning Disability	15	322	32	7
Tested At Home Or Hospital	Specific Learning Disability	11	322	18	9
Unlisted Modification	Specific Learning Disability	32	332	22	28

* Results for groups with less than 11 members are not reported

Table 6.E.9: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations*—ELA, May 2006

Testing Variations	Language Fluency	N	Mean	SD	% (>=350)
Assistive Device No Interference	English Only	14	340	22	43
Beneficial Time	English Only	85	312	32	12
	English Learner	18	308	30	11
Dictionary	English Only	253	324	26	17
	Redesignated Fluent English Proficient	24	332	25	21
	English Learner	128	319	25	13
Essay Reponses	English Only	21	330	25	19
	English Only	39	327	23	18
	English Learner	13	310	17	0
IEP or Section 504 Plan	English Only	2079	325	33	20
	Initially Fluent English Proficient	118	329	34	22
	Redesignated Fluent English Proficient	136	338	32	30
	English Learner	907	316	25	10
	Unknown	72	339	38	33
Large Print Version	English Learner	12	300	25	0
Oral Presentation	English Only	567	326	26	18
	Initially Fluent English Proficient	30	322	24	13
	Redesignated Fluent English Proficient	31	320	30	19
	English Learner	296	316	24	10
Oral Responses Dictated to a Scribe	English Only	27	326	29	19
	English Learner	38	334	18	13
Spell Checker Or Grammar Checker	English Only	74	321	21	9
	English Learner	88	313	21	5
Spell Checker Or Grammar Checker Off	English Only	35	339	35	31
	English Learner	46	331	17	11
Supervised Breaks	English Only	293	319	28	14
	Redesignated Fluent English Proficient	16	327	27	13
	English Learner	102	307	22	6
Test Over More Than One Day	English Only	61	321	34	15
	English Learner	43	306	22	2
Tested At Home Or Hospital	English Only	14	334	46	29
Transfer of Student T/B Responses to A/D	English Only	22	321	31	18
Unlisted Modification	English Only	16	320	24	13

* Results for groups with less than 11 members are not reported

Table 6.E.10: Summary of Scale Scores and Passing Rates by Language Fluency and Testing Variations*—Mathematics, May 2006

Testing Variations	Language Fluency	N	Mean	SD	% (>=350)
Arithmetic Table	English Only	102	335	21	22
	English Learner	29	328	16	14
Beneficial Time	English Only	61	320	20	11
	English Learner	12	316	20	0
Calculator	English Only	1881	330	20	17
	Initially Fluent English Proficient	99	333	20	25
	Redesignated Fluent English Proficient	101	331	18	9
	English Learner	675	326	20	12
	Unknown	37	330	18	16
Dictionary for Math	English Only	24	326	16	4
IEP or Section 504 Plan	English Only	2373	331	24	19
	Initially Fluent English Proficient	137	332	26	25
	Redesignated Fluent English Proficient	135	335	24	19
	English Learner	861	327	22	13
	Unknown	77	332	26	21
Large Print Version	English Only	11	340	19	45
Math Manipulatives	English Only	27	334	19	15
Oral Presentation	English Only	402	331	23	21
	Initially Fluent English Proficient	21	320	13	0
	Redesignated Fluent English Proficient	17	324	25	12
	English Learner	194	327	21	12
Oral Responses Dictated to a Scribe	English Only	12	321	21	8
Supervised Breaks	English Only	298	328	22	18
	Initially Fluent English Proficient	14	322	23	21
	English Learner	98	322	18	7
Test Over More Than One Day	English Only	27	323	29	11
Tested At Home Or Hospital	English Only	20	331	26	25
Transfer of Student T/B Responses to A/D	English Only	20	329	25	25
Unlisted Modification	English Only	27	342	23	44

* Results for groups with less than 11 members are not reported

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