

Louisiana End-of-Course Tests

Executive Summary

December 2007 to May 2016



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Introduction

Louisiana’s End-of-Course (EOC) testing program was initiated by the Louisiana High School Redesign Commission for the purpose of supporting consistent and rigorous standards in key high school courses throughout the state. Table 1 shows the phase-in schedule of the six EOC tests over a nine-year period beginning with the Algebra I test in the 2007–2008 school year and including all tests since the 2012–2013 school year. Prior to the first-year operational administration of each test, a field test was administered to enable the construction of operational forms.

Table 1. Phase-in Schedule of EOC Tests by Academic Year

	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16
Algebra I	FT	OP	OP	OP	OP	OP	OP	OP	OP	OP
English II		FT	OP	OP	OP	OP	OP	OP	OP	OP
Geometry			FT	OP	OP	OP	OP	OP	OP	OP
Biology				FT	OP	OP	OP	OP	OP	OP
English III					FT	OP	OP	OP	OP	OP
U.S. History						FT	OP	OP	OP	OP

Note: The label FT stands for field test; OP stands for operational administration.

This executive summary highlights technical results of Algebra I, English II, Geometry, Biology, English III, and U.S. History tests administered from December 2007 to May 2016, a period covering nine school years. The report focuses on student performance results, reliability, and validity information.

Test Content

The validity of an educational test depends primarily on the test development process and on specifications for test content. The test development process for EOC tests follows industry-standard guidelines and procedures. Panels of qualified educators are assembled to provide input during key stages of the test development process. These stages include (1) developing the test blueprint, (2) writing and reviewing test items for relevant content and absence of bias, (3) deciding how scoring rubrics should be applied to student responses to constructed-response items or writing prompts, and (4) evaluating field-tested items on the basis of statistical evidence for technical quality and fairness. The test development process and key specifications, such as test blueprints, are documented in detail in technical reports (Louisiana Department of Education, 2009, 2010, 2011b, 2011c, 2012, 2013b). All EOC tests conform to test blueprints. The blueprints used since the 2013–2014 school year differ from the blueprints used previously due to a policy decision by Louisiana Department of Education (LDOE) to begin using new academic standards adopted by Louisiana in all content areas, which are available at <http://www.louisianabelieves.com/docs/default-source/teacher-toolbox-resources/k-12-math-crosswalk-documents.pdf?sfvrsn=4> and <http://www.louisianabelieves.com/docs/default-source/teacher-toolbox-resources/k-12-ela-crosswalk-documents.pdf?sfvrsn=4>. The new blueprints were established by LDOE content staff in consultation with curriculum experts and educators throughout the state and with Pacific Metrics content staff. The test development

process for the forms used in the 2015–2016 school year are documented in detail in technical report addenda (Louisiana Department of Education, 2014a, c, f–i, 2015b–c, and 2016a–b, d–g).

Form Design

EOC tests contain multiple-choice (MC) items and a constructed-response (CR) item, an extended-response (ER) item as part of a task, or a writing prompt. MC items assess knowledge, conceptual understanding, and application of skills. These items include an interrogatory stem followed by four response options (A, B, C, and D). CR items, ER items, and writing prompts ask students to prepare a written response to a more complex question that often requires higher-order thinking skills.

CR items appear on the Algebra I and Geometry tests and require students to develop an idea, demonstrate a problem-solving strategy, or justify an answer based on reasoning or evidence. Beginning with the 2013–2014 school year, tasks consisting of two MC items and an ER item appear on the Biology and U.S. History tests. These tasks require students to demonstrate understanding of key subject-area concepts in response to one or more source documents. Writing prompts appear on the English II and English III tests. The English II writing prompt requires students to read a passage and write an essay that includes evidence from the passage in the response; the English III writing prompt requires students to read two sources about an issue and write an essay that takes a position on the issue and includes evidence from both sources.

Table 2 shows the number of points in each operational EOC test by item type. This point structure is part of the new test blueprint, which has been in use since the 2013–2014 school year.

- The Algebra I and Geometry tests consist of 50 possible points. There are forty-six 1-point MC items and one 4-point CR item.
- The Biology and U.S. History tests consist of 52 possible points. There are forty-six 1-point MC items and one 6-point task, which consists of two MC items and one 4-point ER item.
- The English II and English III tests consist of 50 possible points.¹ There are thirty-eight 1-point MC items and one 12-point writing prompt. Responses to the writing prompt are scored on three different dimensions—Content, Style, and Conventions. Content and Style are scored using dimension-specific rubrics on a scale of 0–4 points each. The four Conventions facets (Sentence Formation, Usage, Mechanics, and Spelling) are each scored on a scale of 0–1 point.

¹ Prior to the 2012–2013 school year, Content and Style were labeled Composing and Style/Audience Awareness in English II, and Content and Voice in English III. Also, in the first year of operational testing for English II (2008–2009), Composing and Style/Audience Awareness were worth 8 points each for a total of 16 points for a prompt.

Table 2. Number of Points by Item Type

Item Type	Algebra I	English II	Geometry	Biology	English III	U.S. History
Multiple Choice	46	38	46	46	38	46
Constructed Response	4		4			
Task				6		6
Writing Prompt		12			12	
TOTAL:	50	50	50	52	50	52

To support the development of new test forms, each EOC test contains a small number of embedded field test items. These embedded items do not count toward the total score and are not represented in table 2.

Specific information about the content standards or grade-level expectations assessed on the EOC tests is available for English language arts, mathematics, science, and social studies (Louisiana Department of Education, 2005a–c and 2011a, respectively). Sample test items are also available for each test (Louisiana Department of Education 2013a and 2014b).

The content standards, grade-level expectations, Assessment Guidance, and sample test items can be found at <http://www.louisianabelieves.com/docs/default-source/teacher-toolbox-resources/k-12-math-crosswalk-documents.pdf?sfvrsn=4> and <http://www.louisianabelieves.com/docs/default-source/teacher-toolbox-resources/k-12-ela-crosswalk-documents.pdf?sfvrsn=4>.

Test Administration

There are three annual EOC administrations. The December administration, which often takes place in November and December, is for students who are on block schedules and for students needing to retest. The May administration, which often takes place in April and May, is available to students who are on either semester or block schedules and to students who need to retest. The June administration, added in the 2010–2011 school year, provides an additional opportunity for students who did not previously pass an EOC test to take that test again. Each administration is followed by an administrative error retest, which provides an opportunity for students to retake an EOC test that was voided due to an administrative error during the regular test window (e.g., the student was not given enough time to complete the test, the student was not provided proper accommodations during the testing time, the teacher or administrator provided information or answers that resulted in the test being voided).

All Louisiana state public school students are required to take the EOC tests upon completion of specified high school courses. Accommodations for students who require them are implemented based on each student’s needs as documented in the student’s Individualized Education Program (IEP) or Individual Accommodation Plan (IAP). All students have access to certain online tools during the EOC tests. Depending on the content area, these tools include, but are not limited to, a scientific calculator, a reference sheet, a Writer’s Checklist, Typing Help, and an Extended-Response Checklist.

All EOC tests are divided into three sessions. The CR item, task, or writing prompt are administered in one session and the MC items in two sessions. Each session must be opened and closed individually. The sessions may be completed in a single sitting, but are normally completed in more than one sitting over a period of days. Though the EOC tests are not timed, the suggested testing time for each of the two MC item sessions is between 45 and 60 minutes, depending on the test. For Algebra I and Geometry, the suggested testing time for the CR item session is 40 minutes. For Biology and U.S. History, the suggested testing time for the task session is 50 minutes. For English II and English III, the suggested testing time for the writing prompt session is 75 minutes. The completion rates show that the suggested testing times are sufficient. Extended time is allowed as an accommodation.

More information on test administration can be found in the *End-of-Course Tests: Test Administration Manual* (Louisiana Department of Education, 2016c, available at http://www.louisianabelieves.com/resources/library/assessment/EOC_Test_Administration_Manual.pdf).

Scoring

On the EOC tests, MC items are scored 0/1 (incorrect/correct) by a computer. Blank responses are scored as incorrect. CR items on the Algebra I and Geometry tests, and ER items on Biology and U.S. History tests are scored on a scale of 0–4 points. The English II and English III writing prompt responses are scored on three dimensions: Content, Style, and Conventions. Both Content and Style² are scored on a scale of 0–4 points (except in 2008–2009, the first year of operational testing for English II, when each dimension was worth 8 points). Each of the four Conventions facets (Sentence Formation, Usage, Mechanics, and Spelling) are scored on a scale of 0–1 point. A student’s total score on a writing prompt response is the sum of the scores on all three dimensions, with a maximum possible total score of 12 points.

Raw Scores, Scale Scores, and Achievement Levels

Each of the EOC tests has multiple forms. The forms are intended to measure the same skills and knowledge and have the same total points possible (except for changes to the scoring of the writing prompt described in the footnote on page 2). A student’s raw score is the total number of points the student earned on the test. Due to slight differences in difficulty across forms, raw scores cannot be compared across different forms of the same test.

In order to compare student performance across different forms of the same test, raw scores are translated into scores on a reporting scale (scale scores). Scale scores range from 600 to 800. A statistical process called equating is used to make scale scores comparable across forms within the same test. Equating methods for the EOC tests are based on the application of item response theory (IRT) models (Lord & Novick, 1968; Lord, 1980; Muraki, 1992) to test data.

² Prior to the 2012–2013 school year, Content and Style were named Composing and Style/Audience Awareness for English II, and Content and Voice for English III. In the 2012–2013 school year, the dimensions were renamed to Content and Style for both English II and English III.

Through equating, each form has its own raw-score-to-scale-score transformation table. If one form is easier than another, higher raw scores may be required for that form in order to obtain the same scale scores associated with other forms.

Results from a standard setting process are also used to define the reporting scale for EOC tests. In standard setting, cut scores are set for achievement levels of *Fair*, *Good*, and *Excellent*. The lowest achievement level, *Needs Improvement*, has no cut score. The *Good* cut score is associated with a scale score of 700 on all EOC tests. Table 3 shows the scale score ranges for each achievement level for current operational EOC tests.

Table 3. Scale Score Ranges and Achievement Levels

Achievement Level	Scale Score Range					
	Algebra I	English II	Geometry	Biology	English III	U.S. History
<i>Excellent</i>	739 to 800	739 to 800	731 to 800	740 to 800	741 to 800	748 to 800
<i>Good</i>	700 to 738	700 to 738	700 to 730	700 to 739	700 to 740	700 to 747
<i>Fair</i>	668 to 699	668 to 699	665 to 699	661 to 699	661 to 699	665 to 699
<i>Needs Improvement</i>	600 to 667	600 to 667	600 to 664	600 to 660	600 to 660	600 to 664

Although all EOC tests have the same scale score range (600 to 800) and the same *Good* cut score (700), scale scores are not comparable across tests. For example, the *Good* cut score does not have the same difficulty for Algebra I as it does for English II. Moreover, the Algebra I *Fair* cut score (668) is not necessarily more difficult than the Biology *Fair* cut score (661) just because it has a higher value. The difficulty of an achievement level cannot be compared across tests through the scale values of its cut score.

The standard setting process for EOC tests is based on a teacher survey and a standard setting method called the bookmark method (Lewis, Mitzel, & Green, 1996; Mitzel, Lewis, Patz, & Green, 2001; Schulz & Mitzel, 2009). Details of the standard setting process are described in technical and standard setting reports available from LDOE.

More information on scale scores and cut scores can be found in the *End-of-Course Tests Interpretive Guide* (Louisiana Department of Education, 2015a), which is available at <http://www.louisianabelieves.com/resources/library/assessment>. For each test, detailed technical procedures are provided in their respective technical reports (Louisiana Department of Education, 2009, 2010, 2011b, 2011c, 2012, 2013b).

Population Performance

Tables 4.1 to 4.39 each summarize a student population for a specific test and school year. There is one table for each school year that an EOC test has been operational. For this executive summary, which spans school year 2007–2008 to school year 2015–2016, the Algebra I test has been operational for nine school years, beginning with the 2007–2008 school year. The English II test has been operational for eight school years (2008–2009 to 2015–2016). The

Geometry test has been operational for seven school years (2009–2010 to 2015–2016). The Biology test has been operational for six school years (2010–2011 to 2015–2016). The English III test has been operational for five school years (2011–2012 to 2015–2016). The U.S. History test has been operational for four school years (2012–2013 to 2015–2016).

The information in tables 4.1 to 4.39 may differ slightly from the corresponding information in statewide summary reports due to differences in inclusion criteria and demographic groupings. The subcategories in the tables are non-overlapping; therefore, for any related group of subcategories, the numbers will sum to the total number of students in that table. For example, the education classification counts for regular education, special education, and gifted and talented students will sum to the total number of students in the overall table.

In the fall of 2010, new federal standards for reporting race and ethnicity information were implemented in Louisiana’s EOC program. As a result, the race categories collected through the registration process were modified in the 2010–2011 school year to allow students to be identified by more than one race. Moreover, because students were required to enter at least one ethnicity to register for an EOC test, the “Missing” category, beginning in the 2010–2011 school year, was eliminated from the tables presented in this report.

In the 2014–2015 school year, LDOE decided to replace lunch status with economically disadvantaged status in reporting subgroup performance. As a result, in the tables that present student performance since the 2014–2015 school year (i.e., tables 4.8, 4.9, 4.16, 4.17, 4.23, 4.24, 4.29, 4.30, 4.34, 4.35, 4.38, and 4.39), performance of economically disadvantaged subgroups, instead of lunch status subgroups, are shown.

While one may discern trends in achievement across years by comparing tables for the same test, such comparisons should be made with caution. Student motivation on EOC tests, which usually has significant effects on student performance, depends on when policies tied to EOC test scores became effective. Students tend to perform better when the test becomes high stakes. Policies connecting EOC test scores to course grades became effective in the 2010–2011 school year for all students. Policies connecting EOC test scores to graduation requirements became effective for students entering high school as freshmen in the fall of 2010.

Data Privacy Statement

The Louisiana Department of Education has modified and/or suppressed data reported to protect the privacy of students in compliance with the Family Educational Rights and Privacy Act (FERPA) codified at 20 U.S.C. 1232g. The strategies used to protect privacy vary and may include rounding or other techniques but do not substantially affect the general usefulness of the data. Because of the privacy protections, numerical and percentage totals may not add precisely to the sum of the row or column to which the total refers. The symbol \geq indicates that the number reported is within 10 students of the actual number (i.e., ≥ 20 means there are at least 20, and at most 29 students).

Table 4.1. Student Performance on Algebra I: 2007–2008 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥48190	686	38	36	28	26	10
<u>Sex</u>							
Female	≥24150	686	37	34	29	27	10
Male	≥24030	685	39	37	27	26	11
<u>Race</u>							
Alaskan Native or American Indian	≥590	687	37	34	28	28	10
Asian or Pacific Islander	≥750	709	43	18	22	32	28
Black (not Hispanic)	≥20120	672	34	50	29	18	4
Hispanic	≥1240	682	39	40	26	25	9
White (not Hispanic)	≥25470	696	37	25	28	33	15
<u>Grade</u>							
7 or lower	≥250	739	42	8	9	25	59
8	≥4170	722	37	10	14	40	37
9	≥35220	686	36	34	29	27	9
10 or higher	≥8540	668	31	53	29	16	2
<u>Lunch Status</u>							
Free	≥21050	675	34	46	29	20	5
Paid	≥23380	696	39	26	26	32	16
Reduced	≥3750	687	35	33	30	29	8
<u>Migrant Status</u>							
Yes	≥110	678	36	42	32	20	6
No	≥48070	686	38	35	28	26	10
<u>Education Classification</u>							
Regular	≥42530	685	36	35	30	27	8
Special Education	≥2900	659	32	68	21	9	2
Gifted and Talented	≥2540	730	36	6	12	35	47
<u>Section 504</u>							
Yes	≥950	668	32	54	29	13	4
No	≥47210	686	38	35	28	27	10
<u>LEP Status</u>							
Fully English Proficient	≥47540	686	38	35	28	26	10
Limited English Proficient	≥640	676	42	50	21	20	10

Notes: The percent of students across achievement levels may not total 100 due to rounding. Counts for Section 504 and Education Classifications exclude 27 and 209 students, respectively, with missing values.

Table 4.2. Student Performance on Algebra I: 2008–2009 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥47820	689	39	34	28	27	12
<u>Sex</u>							
Female	≥23950	689	38	32	29	27	12
Male	≥23860	688	40	36	26	26	12
<u>Race</u>							
Alaskan Native or American Indian	≥420	689	37	34	27	29	10
Asian or Pacific Islander	≥800	719	44	16	17	31	36
Black (not Hispanic)	≥19840	675	35	46	30	19	5
Hispanic	≥1330	686	40	36	28	25	11
White (not Hispanic)	≥24400	699	38	24	27	33	17
Missing	≥1010	690	44	37	24	21	18
<u>Grade</u>							
7 or lower	≥190	741	42	9	6	26	59
8	≥4300	728	39	8	14	35	43
9	≥36790	686	37	35	29	27	9
10 or higher	≥6520	672	31	48	33	17	2
<u>Lunch Status</u>							
Free	≥20480	677	35	44	30	21	5
Paid	≥23750	698	40	26	26	31	18
Reduced	≥3580	688	38	33	29	27	11
<u>Migrant Status</u>							
Yes	≥110	682	37	43	23	26	7
No	≥47710	689	39	34	28	27	12
<u>Education Classification</u>							
Regular	≥42590	688	37	33	29	27	10
Special Education	≥2760	661	33	66	22	10	2
Gifted and Talented	≥2460	735	38	6	12	30	52
<u>Section 504</u>							
Yes	≥1130	671	33	53	27	16	4
No	≥46690	689	39	33	28	27	12
<u>LEP Status</u>							
Fully English Proficient	≥47130	689	39	34	28	27	12
Limited English Proficient	≥690	683	44	44	23	20	13

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.3. Student Performance on Algebra I: 2009–2010 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥43840	692	37	29	30	29	12
<u>Sex</u>							
Female	≥22190	693	36	28	31	31	11
Male	≥21640	691	38	31	29	28	12
<u>Race</u>							
Alaskan Native or American Indian	≥330	695	35	25	32	32	10
Asian or Pacific Islander	≥720	720	41	13	20	30	37
Black (not Hispanic)	≥18210	679	33	42	32	21	5
Hispanic	≥1240	691	37	30	28	30	12
White (not Hispanic)	≥22410	702	35	19	28	36	16
Missing	≥910	683	39	41	24	25	9
<u>Grade</u>							
7 or lower	≥200	741	41	9	6	19	65
8	≥4190	732	34	5	11	37	47
9	≥36950	689	34	31	32	30	8
10 or higher	≥2490	672	32	50	32	15	3
<u>Lunch Status</u>							
Free	≥19750	682	34	39	33	23	5
Paid	≥20560	702	37	21	26	36	18
Reduced	≥3520	692	35	28	31	30	10
<u>Migrant Status</u>							
Yes	≥40	691	34	33	35	19	13
No	≥43790	692	37	29	30	29	12
<u>Education Classification</u>							
Regular	≥38420	692	35	29	31	31	10
Special Education	≥2930	665	32	60	27	11	3
Gifted and Talented	≥2480	734	35	6	12	32	51
<u>Section 504</u>							
Yes	≥1050	678	30	43	35	20	3
No	≥42780	692	37	29	30	30	12
<u>LEP Status</u>							
Fully English Proficient	≥43340	692	37	29	30	30	12
Limited English Proficient	≥490	679	35	44	31	18	7

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.4. Student Performance on Algebra I: 2010–2011 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥46210	702	37	20	28	33	18
<u>Sex</u>							
Female	≥23360	703	36	19	28	34	18
Male	≥22840	701	38	21	29	32	18
<u>Race</u>							
American Indian or Alaska Native	≥370	705	32	14	30	39	17
Asian	≥850	735	37	6	11	31	52
Black or African American	≥19590	689	34	30	33	28	9
Hispanic/Latino	≥1620	701	38	22	28	32	18
Native Hawaiian or Pacific Islander	≥20	705	39	22	9	48	22
White	≥23430	711	36	13	25	38	25
Two or more races	≥290	706	38	18	27	31	24
<u>Grade</u>							
7 or lower	≥270	740	49	11	4	16	69
8	≥4640	738	31	3	8	34	55
9	≥38930	699	35	21	31	34	14
10 or higher	≥2350	676	33	46	33	17	4
<u>Lunch Status</u>							
Free	≥22820	692	35	28	33	29	11
Paid	≥20260	713	36	13	23	37	27
Reduced	≥3120	704	35	17	29	36	18
<u>Migrant Status</u>							
Yes	≥90	696	41	29	32	21	19
No	≥46110	702	37	20	28	33	18
<u>Education Classification</u>							
Regular	≥40220	702	35	19	30	35	17
Special Education	≥3310	672	33	51	29	15	4
Gifted and Talented	≥2670	741	34	4	9	27	60
<u>Section 504</u>							
Yes	≥1650	685	33	36	33	25	7
No	≥44550	703	37	20	28	33	19
<u>LEP Status</u>							
Fully English Proficient	≥45580	702	37	20	28	33	18
Limited English Proficient	≥620	687	39	36	29	23	12

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.5. Student Performance on Algebra I: 2011–2012 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≈45380	704	40	21	23	34	22
<u>Sex</u>							
Female	≈22840	705	39	20	23	35	23
Male	≈22540	703	40	22	23	33	22
<u>Race</u>							
American Indian or Alaska Native	≈370	708	38	17	23	35	25
Asian	≈770	734	42	8	11	27	54
Black or African American	≈19210	689	37	32	28	29	11
Hispanic/Latino	≈1620	702	43	24	21	31	24
Native Hawaiian or Pacific Islander	≈20	685	42	35	35	20	10
White	≈23070	715	37	12	19	38	30
Two or more races	≈300	714	37	13	20	39	28
<u>Grade</u>							
7 or lower	≈220	757	27	≤1	3	15	81
8	≈5020	739	34	4	8	31	58
9	≈37020	702	37	21	25	36	19
10 or higher	≈3100	670	33	54	26	16	3
<u>Lunch Status</u>							
Free	≈22280	693	37	28	27	31	13
Paid	≈19730	716	39	13	18	36	32
Reduced	≈3360	707	37	17	24	37	23
<u>Migrant Status</u>							
Yes	≈110	700	42	26	23	30	21
No	≈45260	704	40	21	23	34	22
<u>Education Classification</u>							
Regular	≈39420	704	38	19	24	36	21
Special Education	≈3170	668	35	57	23	16	4
Gifted and Talented	≈2790	743	34	3	7	26	63
<u>Section 504</u>							
Yes	≈1870	687	36	34	28	28	10
No	≈43510	705	40	20	23	34	23
<u>LEP Status</u>							
Fully English Proficient	≈44770	704	40	21	23	34	22
Limited English Proficient	≈600	678	40	45	25	21	10

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.6. Student Performance on Algebra I: 2012–2013 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥47670	706	38	18	27	34	21
<u>Sex</u>							
Female	≥24080	708	37	16	27	36	22
Male	≥23590	705	39	20	27	32	21
<u>Race</u>							
American Indian or Alaska Native	≥380	708	35	13	29	40	19
Asian	≥780	739	39	5	12	26	57
Black or African American	≥20310	693	35	26	33	30	11
Hispanic/Latino	≥1770	706	39	19	26	35	21
Native Hawaiian or Pacific Islander	≥20	706	45	21	25	29	25
White	≥24030	716	37	11	22	37	29
Two or more races	≥340	718	37	12	19	38	32
<u>Grade</u>							
7 or lower	≥290	752	42	7	6	13	74
8	≥6340	741	33	3	9	32	57
9	≥37590	703	36	18	29	36	17
10 or higher	≥3440	675	33	46	34	16	5
<u>Lunch Status</u>							
Free	≥23300	696	36	24	32	31	13
Paid	≥21030	717	38	12	21	36	31
Reduced	≥3330	710	36	13	27	38	22
<u>Migrant Status</u>							
Yes	≥60	703	38	16	30	36	18
No	≥47610	706	38	18	27	34	21
<u>Education Classification</u>							
Regular	≥41060	707	36	16	28	36	20
Special Education	≥3500	671	33	53	28	15	4
Gifted and Talented	≥3100	745	34	3	9	27	62
<u>Section 504</u>							
Yes	≥2260	688	34	29	37	26	8
No	≥45400	707	38	17	26	34	22
<u>LEP Status</u>							
Fully English Proficient	≥47050	707	38	18	27	34	22
Limited English Proficient	≥620	686	37	35	33	21	10

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.7. Student Performance on Algebra I: 2013–2014 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥46950	708	38	18	26	34	23
<u>Sex</u>							
Female	≥23680	709	37	15	26	35	24
Male	≥23260	706	39	20	25	32	22
<u>Race</u>							
American Indian or Alaska Native	≥340	713	34	11	22	41	25
Asian	≥980	723	46	18	12	28	42
Black or African American	≥19680	694	35	27	32	30	12
Hispanic/Latino	≥2110	704	39	21	25	33	21
Native Hawaiian or Pacific Islander	≥200	701	46	39	12	23	27
White	≥23170	718	36	10	21	37	32
Two or more races	≥450	716	36	12	22	37	29
<u>Grade</u>							
7 or lower	≥250	756	40	5	6	12	76
8	≥5750	743	33	3	8	28	62
9	≥36670	705	35	17	27	36	19
10 or higher	≥4270	678	31	42	35	19	4
<u>Lunch Status</u>							
Free	≥24610	697	35	24	31	31	14
Paid	≥19170	720	38	11	19	35	35
Reduced	≥3160	712	35	12	25	38	24
<u>Migrant Status</u>							
Yes	≥70	708	36	16	28	37	20
No	≥46880	708	38	18	26	34	23
<u>Education Classification</u>							
Regular	≥40730	708	36	16	27	36	22
Special Education	≥3390	673	32	52	29	14	5
Gifted and Talented	≥2830	746	34	3	8	26	63
<u>Section 504</u>							
Yes	≥2640	691	34	29	32	28	10
No	≥44310	709	38	17	25	34	24
<u>LEP Status</u>							
Fully English Proficient	≥46130	708	38	17	26	34	23
Limited English Proficient	≥810	682	36	43	26	23	8

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.8. Student Performance on Algebra I: 2014–2015 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				Needs Improvement	Fair	Good	Excellent
State	≈1030	706	39	18	27	33	21
<u>Sex</u>							
Female	≈25550	709	38	16	28	35	22
Male	≈25470	704	40	21	27	32	20
<u>Race</u>							
American Indian or Alaska Native	≈350	711	35	12	26	40	22
Asian	≈850	744	41	5	11	26	59
Black or African American	≈22550	693	35	27	33	29	10
Hispanic/Latino	≈2420	703	40	21	27	34	18
Native Hawaiian or Pacific Islander	≈50	711	45	23	18	27	32
White	≈24310	717	38	11	23	37	29
Two or more races	≈470	717	39	11	25	35	28
<u>Grade</u>							
7 or lower	≈230	758	36	≈1	6	25	68
8	≈5700	745	34	3	9	28	60
9	≈40400	704	36	18	29	36	17
10 or higher	≈4670	680	33	41	34	20	5
<u>Economical Status</u>							
Economically Disadvantaged	≈31320	697	36	24	32	31	13
Not Economically Disadvantaged	≈19700	721	39	10	20	36	33
<u>Migrant Status</u>							
Yes	≈120	704	43	21	25	32	22
No	≈50900	706	39	18	27	33	21
<u>Education Classification</u>							
Regular	≈44000	707	37	16	28	36	20
Special Education	≈4110	670	32	55	29	13	4
Gifted and Talented	≈2910	746	36	3	9	27	62
<u>Section 504</u>							
Yes	≈3080	688	34	30	37	25	8
No	≈47950	708	39	18	27	34	22
<u>LEP Status</u>							
Fully English Proficient	≈50000	707	39	18	27	34	21
Limited English Proficient	≈1030	684	38	39	29	22	10

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.9. Student Performance on Algebra I: 2015–2016 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				Needs Improvement	Fair	Good	Excellent
State	≈50980	707	39	17	25	36	22
<u>Sex</u>							
Female	≈25740	709	39	15	24	38	23
Male	≈25240	704	40	20	26	34	21
<u>Race</u>							
American Indian or Alaska Native	≈410	705	36	17	26	40	17
Asian	≈870	741	41	6	9	30	56
Black or African American	≈22230	694	36	25	31	33	11
Hispanic/Latino	≈2950	697	40	26	27	31	16
Native Hawaiian or Pacific Islander	≈30	725	44	10	19	32	39
White	≈23800	719	38	10	19	39	32
Two or more races	≈670	712	39	13	23	38	26
<u>Grade</u>							
7 or lower	≈250	764	31	≤1	5	12	82
8	≈6310	744	34	2	7	31	60
9	≈39430	704	37	17	27	38	18
10 or higher	≈4970	681	33	36	34	25	5
<u>Economical Status</u>							
Economically Disadvantaged	≈34320	698	37	22	29	35	14
Not Economically Disadvantaged	≈16650	725	37	7	16	39	38
<u>Migrant Status</u>							
Yes	≈100	697	41	26	26	33	15
No	≈50870	707	39	17	25	36	22
<u>Education Classification</u>							
Regular	≈44010	708	37	15	26	39	21
Special Education	≈4050	670	32	53	29	14	3
Gifted and Talented	≈2920	746	36	3	8	28	62
<u>Section 504</u>							
Yes	≈3360	690	35	28	33	29	9
No	≈47620	708	39	16	24	36	23
<u>LEP Status</u>							
Fully English Proficient	≈49580	708	39	16	25	36	22
Limited English Proficient	≈1400	675	34	45	32	18	5

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.10. Student Performance on English II: 2008–2009 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥39350	697	40	24	27	34	16
<u>Sex</u>							
Female	≥20250	702	39	18	26	37	18
Male	≥19100	690	41	30	27	30	13
<u>Race</u>							
Alaskan Native or American Indian	≥350	698	35	21	32	33	13
Asian or Pacific Islander	≥730	712	41	15	20	37	27
Black (not Hispanic)	≥15740	681	38	36	32	26	6
Hispanic	≥990	693	41	29	25	32	15
White (not Hispanic)	≥21210	708	39	16	23	39	22
Missing	≥320	694	45	29	23	31	17
<u>Grade</u>							
9 or lower	≥2170	684	45	38	23	25	13
10	≥34980	699	40	22	27	35	16
11	≥1980	675	36	42	31	23	4
12	≥210	669	40	47	30	17	5
<u>Lunch Status</u>							
Free	≥15610	684	38	33	31	28	7
Paid	≥20720	706	40	18	23	37	22
Reduced	≥3010	696	38	22	28	37	12
<u>Migrant Status</u>							
Yes	≥60	686	40	34	26	32	7
No	≥39280	697	40	24	27	34	16
<u>Education Classification</u>							
Regular	≥35220	695	39	24	28	35	14
Special Education	≥1910	665	38	55	26	15	4
Gifted and Talented	≥2220	739	37	6	7	29	58
<u>Section 504</u>							
Yes	≥830	678	36	38	35	22	4
No	≥38510	697	40	24	26	34	16
<u>LEP Status</u>							
Fully English Proficient	≥38960	697	40	24	27	34	16
Limited English Proficient	≥390	674	37	46	31	18	5

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.11. Student Performance on English II: 2009–2010 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥40200	701	39	20	26	36	18
<u>Sex</u>							
Female	≥20890	705	38	16	26	38	20
Male	≥19310	697	40	24	27	33	16
<u>Race</u>							
Alaskan Native or American Indian	≥330	705	33	11	31	44	14
Asian or Pacific Islander	≥740	717	40	12	20	34	34
Black (not Hispanic)	≥16730	685	37	32	33	28	8
Hispanic	≥1110	694	40	26	26	34	14
White (not Hispanic)	≥20700	714	36	10	21	42	27
Missing	≥570	693	39	25	28	35	13
<u>Grade</u>							
9 or lower	≥2480	687	43	35	27	25	14
10	≥36790	703	39	18	26	37	19
11	≥770	676	38	41	32	23	5
12	≥140	675	42	44	22	28	6
<u>Lunch Status</u>							
Free	≥17150	688	37	29	32	31	9
Paid	≥20040	712	38	13	22	39	27
Reduced	≥3000	701	37	19	26	40	15
<u>Migrant Status</u>							
Yes	≥50	690	32	26	35	28	11
No	≥40140	701	39	20	26	36	18
<u>Education Classification</u>							
Regular	≥35690	700	37	19	27	38	16
Special Education	≥2040	665	35	55	29	13	3
Gifted and Talented	≥2460	742	34	4	7	25	65
<u>Section 504</u>							
Yes	≥920	681	33	36	37	23	5
No	≥39270	702	39	20	26	36	19
<u>LEP Status</u>							
Fully English Proficient	≥39760	701	39	20	26	36	18
Limited English Proficient	≥430	668	35	53	30	14	3

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.12. Student Performance on English II: 2010–2011 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥42400	710	35	12	28	41	20
Sex							
Female	≥21840	713	33	9	26	42	23
Male	≥20550	705	36	14	29	39	18
Race							
American Indian or Alaska Native	≥280	712	32	9	30	41	20
Asian	≥770	724	39	8	20	35	38
Black or African American	≥17780	695	32	19	38	35	9
Hispanic/Latino	≥1490	706	34	14	29	39	18
Native Hawaiian or Pacific Islander	≥30	704	39	19	22	43	16
White	≥21740	721	32	5	19	46	30
Two or more races	≥280	716	33	8	24	42	26
Grade							
9 or lower	≥2710	699	40	22	30	30	18
10	≥38770	711	34	10	27	42	21
11	≥780	684	34	31	37	27	5
12	≥110	681	40	39	29	25	8
Lunch Status							
Free	≥19520	698	33	17	35	37	10
Paid	≥19910	721	33	6	20	43	31
Reduced	≥2960	709	32	10	29	45	16
Migrant Status							
Yes	≥80	692	29	20	45	30	5
No	≥42310	710	35	11	27	41	20
Education Classification							
Regular	≥37320	709	32	10	29	43	18
Special Education	≥2460	674	32	43	36	18	2
Gifted and Talented	≥2610	748	29	≤1	5	25	69
Section 504							
Yes	≥1430	691	32	24	40	29	7
No	≥40960	710	35	11	27	41	21
LEP Status							
Fully English Proficient	≥41900	710	35	11	27	41	21
Limited English Proficient	≥490	677	28	37	44	18	≤1

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.13. Student Performance on English II: 2011–2012 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥44020	712	34	10	24	42	24
<u>Sex</u>							
Female	≥22690	715	33	8	23	43	26
Male	≥21330	709	35	12	26	41	21
<u>Race</u>							
American Indian or Alaska Native	≥360	714	32	7	25	46	22
Asian	≥860	725	37	8	16	36	40
Black or African American	≥18760	698	32	17	35	38	11
Hispanic/Latino	≥1510	708	34	12	26	42	20
Native Hawaiian or Pacific Islander	≥20	714	41	14	19	38	29
White	≥22210	724	31	4	16	46	34
Two or more races	≥280	721	35	7	18	39	36
<u>Grade</u>							
9 or lower	≥2930	702	39	20	29	31	20
10	≥40280	714	33	9	24	43	24
11	≥710	686	34	30	36	28	6
12	≥90	693	36	27	25	40	9
<u>Lunch Status</u>							
Free	≥20940	701	33	15	32	40	13
Paid	≥20040	724	32	5	17	44	35
Reduced	≥3030	714	31	8	24	45	23
<u>Migrant Status</u>							
Yes	≥80	703	36	20	19	47	15
No	≥43930	713	34	10	24	42	24
<u>Education Classification</u>							
Regular	≥38460	713	32	8	25	45	22
Special Education	≥2980	675	34	42	35	19	4
Gifted and Talented	≥2570	748	28	≤1	5	26	68
<u>Section 504</u>							
Yes	≥1850	694	32	20	39	33	8
No	≥42160	713	34	9	24	42	24
<u>LEP Status</u>							
Fully English Proficient	≥43460	713	34	10	24	42	24
Limited English Proficient	≥550	681	30	34	38	25	3

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.14. Student Performance on English II: 2012–2013 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥43320	719	32	7	18	48	27
<u>Sex</u>							
Female	≥21990	722	31	5	16	49	30
Male	≥21330	715	33	9	19	48	24
<u>Race</u>							
American Indian or Alaska Native	≥360	722	28	4	15	49	32
Asian	≥840	732	34	5	11	38	46
Black or African American	≥18210	706	31	11	27	49	13
Hispanic/Latino	≥1530	716	34	9	19	47	26
Native Hawaiian or Pacific Islander	≥20	716	36	14	14	46	25
White	≥22010	729	29	3	10	49	38
Two or more races	≥320	728	31	4	12	47	37
<u>Grade</u>							
9 or lower	≥3480	705	38	17	24	38	21
10	≥38720	721	30	5	17	50	28
11	≥970	687	38	33	26	32	9
12	≥150	682	36	36	26	33	4
<u>Lunch Status</u>							
Free	≥20150	708	31	10	25	49	16
Paid	≥20310	728	31	4	11	47	39
Reduced	≥2860	721	29	4	16	53	26
<u>Migrant Status</u>							
Yes	≥60	709	32	11	24	52	13
No	≥43260	719	32	7	18	48	27
<u>Education Classification</u>							
Regular	≥37690	720	29	5	18	52	26
Special Education	≥2960	678	33	39	32	24	4
Gifted and Talented	≥2670	751	25	≤1	3	27	70
<u>Section 504</u>							
Yes	≥1860	701	30	13	34	43	10
No	≥41460	719	32	6	17	49	28
<u>LEP Status</u>							
Fully English Proficient	≥42770	719	32	6	18	49	27
Limited English Proficient	≥550	687	29	25	37	37	2

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.15. Student Performance on English II: 2013–2014 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥45050	717	32	7	21	48	24
<u>Sex</u>							
Female	≥23210	720	32	5	19	49	28
Male	≥21840	712	33	9	23	47	21
<u>Race</u>							
American Indian or Alaska Native	≥360	719	28	3	19	55	23
Asian	≥1370	717	38	9	21	39	30
Black or African American	≥18570	704	30	11	30	46	12
Hispanic/Latino	≥1680	715	33	8	21	47	24
Native Hawaiian or Pacific Islander	≥620	712	31	9	22	48	21
White	≥22050	727	30	3	13	49	34
Two or more races	≥380	725	30	4	13	52	31
<u>Grade</u>							
9 or lower	≥3190	707	37	15	28	36	21
10	≥40680	718	31	6	20	49	25
11	≥1020	687	34	30	32	31	6
12	≥150	684	39	38	26	27	9
<u>Lunch Status</u>							
Free	≥21640	707	30	10	28	48	14
Paid	≥20600	726	32	4	14	46	35
Reduced	≥2810	719	29	4	18	52	25
<u>Migrant Status</u>							
Yes	≥40	707	34	14	20	49	16
No	≥45000	717	32	7	21	48	24
<u>Education Classification</u>							
Regular	≥39170	717	30	5	21	51	23
Special Education	≥3170	679	31	37	38	22	3
Gifted and Talented	≥2710	751	27	≤1	4	26	70
<u>Section 504</u>							
Yes	≥2280	699	30	15	36	40	9
No	≥42760	717	32	7	20	48	25
<u>LEP Status</u>							
Fully English Proficient	≥44520	717	32	7	21	48	25
Limited English Proficient	≥530	685	29	28	39	31	2

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.16. Student Performance on English II: 2014–2015 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥45880	716	33	7	21	46	26
<u>Sex</u>							
Female	≥23350	720	31	5	18	48	29
Male	≥22520	711	34	10	23	45	22
<u>Race</u>							
American Indian or Alaska Native	≥340	718	30	6	14	55	25
Asian	≥850	727	35	6	14	39	40
Black or African American	≥19120	704	31	12	29	46	13
Hispanic/Latino	≥2160	709	36	12	22	45	21
Native Hawaiian or Pacific Islander	≥40	709	41	20	11	41	28
White	≥22880	726	30	4	14	47	36
Two or more races	≥460	724	30	3	17	46	35
<u>Grade</u>							
9 or lower	≥2870	708	39	17	22	36	25
10	≥41550	717	32	6	20	48	26
11	≥1270	685	35	31	34	29	6
12	≥170	689	42	31	30	24	15
<u>Economical Status</u>							
Economically Disadvantaged	≥26380	708	31	10	26	47	16
Not Economically Disadvantaged	≥19490	727	31	4	13	45	38
<u>Migrant Status</u>							
Yes	≥70	704	33	14	27	43	16
No	≥45800	716	33	7	21	46	26
<u>Education Classification</u>							
Regular	≥40110	717	30	5	20	50	25
Special Education	≥3190	675	32	41	35	21	3
Gifted and Talented	≥2560	750	26	≤1	4	25	71
<u>Section 504</u>							
Yes	≥2560	700	31	13	35	40	11
No	≥43320	717	33	7	20	47	26
<u>LEP Status</u>							
Fully English Proficient	≥45090	716	32	7	20	47	26
Limited English Proficient	≥780	677	32	35	40	24	2

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.17. Student Performance on English II: 2015–2016 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥49030	718	34	8	21	42	28
<u>Sex</u>							
Female	≥24910	722	33	6	19	43	32
Male	≥24120	713	35	10	23	42	25
<u>Race</u>							
American Indian or Alaska Native	≥360	723	31	6	17	45	33
Asian	≥890	735	36	5	12	32	51
Black or African American	≥21330	705	31	12	31	43	15
Hispanic/Latino	≥2460	706	41	19	21	37	22
Native Hawaiian or Pacific Islander	≥30	712	43	19	19	30	32
White	≥23380	729	31	4	13	43	41
Two or more races	≥560	725	33	5	16	42	36
<u>Grade</u>							
9 or lower	≥3690	709	41	17	27	30	27
10	≥43740	719	33	6	21	44	29
11	≥1400	689	38	31	30	29	10
12	≥190	687	43	36	26	24	14
<u>Economical Status</u>							
Economically Disadvantaged	≥31650	709	33	11	27	43	19
Not Economically Disadvantaged	≥17380	733	31	3	11	41	45
<u>Migrant Status</u>							
Yes	≥100	704	40	19	22	40	18
No	≥48930	718	34	8	21	42	28
<u>Education Classification</u>							
Regular	≥42480	718	31	6	21	46	27
Special Education	≥3560	677	32	40	36	19	4
Gifted and Talented	≥2980	753	28	≤1	4	22	73
<u>Section 504</u>							
Yes	≥2940	700	31	14	38	37	11
No	≥46090	719	34	8	20	43	30
<u>LEP Status</u>							
Fully English Proficient	≥47890	719	34	7	21	43	29
Limited English Proficient	≥1140	674	34	44	33	20	3

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.18. Student Performance on Geometry: 2009–2010 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥42350	684	37	34	32	22	12
<u>Sex</u>							
Female	≥21850	683	36	34	33	22	11
Male	≥20500	685	38	34	31	22	13
<u>Race</u>							
Alaskan Native or American Indian	≥340	685	33	30	36	26	8
Asian or Pacific Islander	≥780	713	40	13	22	31	34
Black (not Hispanic)	≥17530	668	33	50	32	14	4
Hispanic	≥1230	680	37	38	32	21	9
White (not Hispanic)	≥21760	696	36	21	33	29	17
Missing	≥680	674	37	45	29	19	8
<u>Grade</u>							
9 or lower	≥5460	711	43	18	17	27	39
10	≥31680	682	35	34	35	23	9
11	≥4430	667	30	49	35	13	2
12	≥780	664	32	56	29	12	2
<u>Lunch Status</u>							
Free	≥17870	672	33	45	34	16	5
Paid	≥21300	693	38	25	30	27	17
Reduced	≥3180	684	35	32	36	23	10
<u>Migrant Status</u>							
Yes	≥60	677	33	43	30	21	7
No	≥42290	684	37	34	32	22	12
<u>Education Classification</u>							
Regular	≥37740	682	35	34	34	23	9
Special Education	≥2020	657	31	67	24	7	2
Gifted and Talented	≥2580	727	36	7	13	27	52
<u>Section 504</u>							
Yes	≥970	666	32	55	30	12	4
No	≥41370	684	37	34	32	22	12
<u>LEP Status</u>							
Fully English Proficient	≥41890	684	37	34	32	22	12
Limited English Proficient	≥460	667	35	55	27	12	6

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.19. Student Performance on Geometry: 2010–2011 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥42570	693	36	25	34	25	16
<u>Sex</u>							
Female	≥21880	692	36	24	35	25	15
Male	≥20690	694	37	25	33	25	17
<u>Race</u>							
American Indian or Alaska Native	≥290	693	33	20	42	25	13
Asian	≥750	722	41	10	20	26	44
Black or African American	≥17760	678	33	38	38	18	6
Hispanic/Latino	≥1430	694	36	23	35	24	17
Native Hawaiian or Pacific Islander	≥20	690	36	24	31	31	14
White	≥22020	704	34	14	32	31	23
Two or more races	≥280	699	38	19	33	28	20
<u>Grade</u>							
9 or lower	≥5810	721	41	13	15	24	48
10	≥33390	690	33	25	37	26	12
11	≥2750	674	32	43	37	16	4
12	≥620	675	35	41	37	15	6
<u>Lunch Status</u>							
Free	≥19500	681	33	34	38	21	7
Paid	≥20080	704	36	16	30	29	25
Reduced	≥2980	693	34	22	39	25	14
<u>Migrant Status</u>							
Yes	≥80	684	34	31	39	21	9
No	≥42480	693	36	25	34	25	16
<u>Education Classification</u>							
Regular	≥37630	692	34	24	36	26	14
Special Education	≥2350	663	32	58	31	8	3
Gifted and Talented	≥2580	735	33	4	12	23	61
<u>Section 504</u>							
Yes	≥1420	678	33	40	37	16	7
No	≥41140	694	36	24	34	25	16
<u>LEP Status</u>							
Fully English Proficient	≥42110	693	36	24	34	25	16
Limited English Proficient	≥460	677	36	41	35	17	8

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.20. Student Performance on Geometry: 2011–2012 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥42990	699	36	19	31	30	19
<u>Sex</u>							
Female	≥22300	697	35	19	32	31	18
Male	≥20690	700	37	19	31	30	21
<u>Race</u>							
American Indian or Alaska Native	≥350	701	33	15	32	34	19
Asian	≥870	729	38	6	16	26	52
Black or African American	≥17980	683	32	31	39	23	8
Hispanic/Latino	≥1530	696	36	22	32	29	18
Native Hawaiian or Pacific Islander	≥20	696	37	26	17	39	17
White	≥21950	710	34	10	26	36	28
Two or more races	≥280	705	38	15	29	28	27
<u>Grade</u>							
9 or lower	≥6530	723	40	11	13	27	49
10	≥33780	695	33	19	35	32	15
11	≥2210	677	32	39	35	20	6
12	≥460	679	35	37	36	18	9
<u>Lunch Status</u>							
Free	≥20080	687	33	27	37	26	10
Paid	≥19860	710	35	11	25	34	29
Reduced	≥3050	700	34	17	32	32	20
<u>Migrant Status</u>							
Yes	≥70	696	40	24	33	21	22
No	≥42920	699	36	19	31	30	19
<u>Education Classification</u>							
Regular	≥37760	698	34	18	33	32	18
Special Education	≥2630	666	34	53	30	13	4
Gifted and Talented	≥2590	737	33	3	10	24	63
<u>Section 504</u>							
Yes	≥1660	682	33	33	38	21	8
No	≥41330	699	36	18	31	31	20
<u>LEP Status</u>							
Fully English Proficient	≥42470	699	36	19	31	30	20
Limited English Proficient	≥520	683	38	36	31	18	14

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.21. Student Performance on Geometry: 2012–2013 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥42190	702	36	17	28	32	23
<u>Sex</u>							
Female	≥21700	702	35	16	28	32	23
Male	≥20480	702	37	17	28	32	24
<u>Race</u>							
American Indian or Alaska Native	≥370	704	34	13	30	31	26
Asian	≥800	731	36	5	12	27	56
Black or African American	≥17250	687	32	27	36	27	10
Hispanic/Latino	≥1480	703	36	18	26	32	24
Native Hawaiian or Pacific Islander	≥20	702	34	14	32	36	18
White	≥21940	713	34	9	23	36	33
Two or more races	≥300	713	35	8	26	33	33
<u>Grade</u>							
9 or lower	≥7370	723	41	12	13	24	51
10	≥31730	700	33	16	31	35	19
11	≥2640	678	32	38	35	21	6
12	≥430	673	34	46	29	19	6
<u>Lunch Status</u>							
Free	≥19180	691	33	24	34	29	13
Paid	≥20120	713	35	10	22	34	33
Reduced	≥2880	704	34	13	29	34	24
<u>Migrant Status</u>							
Yes	≥60	706	41	20	16	26	38
No	≥42130	702	36	17	28	32	23
<u>Education Classification</u>							
Regular	≥37080	702	34	15	29	34	22
Special Education	≥2380	668	31	52	30	13	4
Gifted and Talented	≥2720	739	34	3	8	23	65
<u>Section 504</u>							
Yes	≥1790	684	33	31	35	24	9
No	≥40400	703	36	16	28	32	24
<u>LEP Status</u>							
Fully English Proficient	≥41680	702	36	16	28	32	24
Limited English Proficient	≥500	682	35	35	33	22	10

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.22. Student Performance on Geometry: 2013–2014 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥42950	705	37	17	28	29	26
Sex							
Female	≥22400	706	36	16	27	30	27
Male	≥20550	704	38	18	28	27	26
Race							
American Indian or Alaska Native	≥350	707	35	15	24	34	27
Asian	≥1270	716	42	14	23	24	39
Black or African American	≥17200	691	33	26	35	26	13
Hispanic/Latino	≥1680	705	37	18	29	28	26
Native Hawaiian or Pacific Islander	≥610	701	33	15	31	35	18
White	≥21420	716	36	10	22	31	37
Two or more races	≥400	710	37	15	23	31	31
Grade							
9 or lower	≥7920	730	38	8	12	23	57
10	≥31710	702	34	17	31	31	21
11	≥2800	681	32	37	35	21	7
12	≥510	673	32	49	30	16	5
Lunch Status							
Free	≥20180	694	34	24	33	27	16
Paid	≥19970	716	37	11	22	30	37
Reduced	≥2800	708	35	14	28	31	28
Migrant Status							
Yes	≥40	698	41	29	29	19	24
No	≥42910	705	37	17	28	29	26
Education Classification							
Regular	≥37600	704	35	16	29	31	24
Special Education	≥2450	672	31	51	30	14	5
Gifted and Talented	≥2900	744	33	2	9	19	70
Section 504							
Yes	≥2080	688	34	31	35	22	12
No	≥40870	706	37	16	27	29	27
LEP Status							
Fully English Proficient	≥42470	705	37	17	28	29	27
Limited English Proficient	≥480	688	36	32	34	21	13

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.23. Student Performance on Geometry: 2014–2015 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥42980	707	37	15	26	32	27
<u>Sex</u>							
Female	≥22150	709	36	13	25	34	28
Male	≥20830	705	38	17	26	31	26
<u>Race</u>							
American Indian or Alaska Native	≥280	712	34	10	25	36	29
Asian	≥820	735	37	5	12	27	56
Black or African American	≥17830	693	34	23	33	31	14
Hispanic/Latino	≥1960	706	37	15	26	32	27
Native Hawaiian or Pacific Islander	≥30	714	37	10	26	31	33
White	≥21620	717	36	9	21	34	37
Two or more races	≥410	716	34	9	21	33	37
<u>Grade</u>							
9 or lower	≥7160	735	37	6	11	22	61
10	≥31170	704	34	15	28	36	22
11	≥4080	686	33	30	35	26	9
12	≥560	676	33	44	33	16	7
<u>Economical Status</u>							
Economically Disadvantaged	≥24440	698	35	20	31	32	18
Not Economically Disadvantaged	≥18540	720	36	9	19	33	39
<u>Migrant Status</u>							
Yes	≥70	706	36	12	36	26	26
No	≥42910	707	37	15	26	32	27
<u>Education Classification</u>							
Regular	≥38000	707	35	14	26	34	26
Special Education	≥2510	674	32	46	33	16	6
Gifted and Talented	≥2470	745	33	2	8	22	69
<u>Section 504</u>							
Yes	≥2270	691	35	26	32	28	14
No	≥40710	708	37	14	25	33	28
<u>LEP Status</u>							
Fully English Proficient	≥42300	707	37	15	26	32	27
Limited English Proficient	≥680	689	38	32	31	22	16

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.24. Student Performance on Geometry: 2015–2016 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				Needs Improvement	Fair	Good	Excellent
State	≥43400	707	38	17	25	29	29
<u>Sex</u>							
Female	≥22470	708	38	16	25	29	29
Male	≥20920	707	39	18	25	28	29
<u>Race</u>							
American Indian or Alaska Native	≥280	714	37	12	19	33	36
Asian	≥830	742	38	5	9	20	67
Black or African American	≥18490	692	34	26	33	27	14
Hispanic/Latino	≥1930	706	38	18	24	31	27
Native Hawaiian or Pacific Islander	≥40	708	38	19	26	21	33
White	≥21300	719	36	9	19	31	41
Two or more races	≥500	714	39	14	24	28	34
<u>Grade</u>							
9 or lower	≥7140	733	40	9	11	19	61
10	≥31200	705	35	16	27	32	25
11	≥4380	686	32	31	35	25	9
12	≥650	670	31	54	29	12	5
<u>Economical Status</u>							
Economically Disadvantaged	≥27040	698	36	22	30	29	19
Not Economically Disadvantaged	≥16350	723	37	8	17	29	45
<u>Migrant Status</u>							
Yes	≥80	703	44	25	21	25	29
No	≥43320	707	38	17	25	29	29
<u>Education Classification</u>							
Regular	≥37910	707	36	16	26	30	28
Special Education	≥2560	673	32	50	29	14	6
Gifted and Talented	≥2920	745	34	3	7	20	70
<u>Section 504</u>							
Yes	≥2420	689	35	30	33	24	14
No	≥40980	708	38	16	25	29	30
<u>LEP Status</u>							
Fully English Proficient	≥42670	708	38	17	25	29	29
Limited English Proficient	≥720	688	36	32	30	25	13

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.25. Student Performance on Biology: 2010–2011 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥44800	693	38	21	37	31	12
<u>Sex</u>							
Female	≥22680	692	37	20	39	31	10
Male	≥22120	694	40	21	34	31	13
<u>Race</u>							
American Indian or Alaska Native	≥320	698	34	13	39	39	10
Asian	≥800	713	41	11	25	36	28
Black or African American	≥18820	675	34	34	43	19	3
Hispanic/Latino	≥1540	689	40	23	37	29	11
Native Hawaiian or Pacific Islander	≥20	678	40	34	34	21	10
White	≥22980	707	35	9	32	40	18
Two or more races	≥290	699	36	15	36	37	12
<u>Grade</u>							
9 or lower	≥6450	698	42	20	32	30	18
10	≥35120	693	37	20	37	32	11
11	≥2620	677	36	33	41	21	5
12	≥580	680	35	26	45	24	5
<u>Lunch Status</u>							
Free	≥20420	680	35	30	42	23	5
Paid	≥21380	705	37	12	31	38	19
Reduced	≥2990	693	36	18	40	33	9
<u>Migrant Status</u>							
Yes	≥70	679	36	28	44	23	5
No	≥44720	693	38	21	37	31	12
<u>Education Classification</u>							
Regular	≥39450	692	36	20	39	32	10
Special Education	≥2660	661	35	52	34	11	3
Gifted and Talented	≥2670	735	33	3	11	37	48
<u>Section 504</u>							
Yes	≥1600	678	36	32	42	20	5
No	≥43190	693	38	20	37	31	12
<u>LEP Status</u>							
Fully English Proficient	≥44300	693	38	20	37	31	12
Limited English Proficient	≥490	658	34	54	35	9	2

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.26. Student Performance on Biology: 2011–2012 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥44300	701	37	13	35	37	15
<u>Sex</u>							
Female	≥22660	700	35	13	37	37	13
Male	≥21640	702	38	14	33	36	16
<u>Race</u>							
American Indian or Alaska Native	≥350	706	33	8	37	38	17
Asian	≥840	721	39	6	23	36	35
Black or African American	≥19220	684	34	23	46	26	5
Hispanic/Latino	≥1470	697	37	16	37	34	13
Native Hawaiian or Pacific Islander	≥10	697	33	5	53	32	11
White	≥22110	715	33	5	27	46	22
Two or more races	≥280	709	37	9	27	43	21
<u>Grade</u>							
9 or lower	≥7360	701	41	17	32	32	19
10	≥35090	702	35	12	36	38	14
11	≥1500	688	39	25	39	25	11
12	≥350	683	35	25	43	27	6
<u>Lunch Status</u>							
Free	≥21350	689	34	20	43	30	7
Paid	≥19820	714	35	7	27	43	23
Reduced	≥3130	703	34	10	35	41	14
<u>Migrant Status</u>							
Yes	≥80	693	38	18	41	32	9
No	≥44220	701	37	13	35	37	15
<u>Education Classification</u>							
Regular	≥38820	701	35	12	37	38	13
Special Education	≥3020	670	35	40	40	16	3
Gifted and Talented	≥2450	740	31	≤1	9	36	54
<u>Section 504</u>							
Yes	≥1860	686	35	23	45	26	7
No	≥42440	702	36	13	35	37	15
<u>LEP Status</u>							
Fully English Proficient	≥43750	701	36	13	35	37	15
Limited English Proficient	≥550	673	33	35	43	19	3

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.27. Student Performance on Biology: 2012–2013 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥42810	705	38	13	29	40	18
<u>Sex</u>							
Female	≥21950	704	37	13	30	40	17
Male	≥20850	706	39	14	27	40	19
<u>Race</u>							
American Indian or Alaska Native	≥370	710	33	6	31	44	20
Asian	≥770	725	37	7	15	41	37
Black or African American	≥17660	687	35	24	38	31	6
Hispanic/Latino	≥1490	703	38	16	28	40	17
Native Hawaiian or Pacific Islander	≥20	718	31	≤1	24	56	20
White	≥22220	718	34	5	22	46	27
Two or more races	≥250	716	35	7	23	44	25
<u>Grade</u>							
9 or lower	≥7920	702	42	19	27	35	20
10	≥32880	707	36	11	29	42	18
11	≥1720	691	39	23	35	31	11
12	≥270	687	42	28	30	31	11
<u>Lunch Status</u>							
Free	≥19720	692	36	20	36	35	9
Paid	≥20220	717	35	7	22	44	27
Reduced	≥2860	708	35	9	29	44	18
<u>Migrant Status</u>							
Yes	≥60	704	44	20	28	31	21
No	≥42750	705	38	13	29	40	18
<u>Education Classification</u>							
Regular	≥37600	705	36	12	30	42	17
Special Education	≥2650	668	36	46	33	17	3
Gifted and Talented	≥2550	741	30	≤1	8	34	56
<u>Section 504</u>							
Yes	≥1890	689	36	23	37	33	7
No	≥40910	706	38	13	28	40	19
<u>LEP Status</u>							
Fully English Proficient	≥42290	705	37	13	29	40	18
Limited English Proficient	≥520	674	35	37	38	22	3

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.28. Student Performance on Biology: 2013–2014 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥45520	707	36	11	28	42	18
Sex							
Female	≥23370	707	35	11	28	43	17
Male	≥22150	707	37	12	27	41	19
Race							
American Indian or Alaska Native	≥340	713	33	8	23	47	21
Asian	≥1350	708	42	16	25	35	24
Black or African American	≥18690	692	34	19	38	36	7
Hispanic/Latino	≥1740	706	36	11	30	42	17
Native Hawaiian or Pacific Islander	≥750	713	34	8	25	44	23
White	≥22230	719	33	5	20	48	27
Two or more races	≥390	715	35	8	21	48	23
Grade							
9 or lower	≥9270	708	39	13	25	40	22
10	≥33900	707	35	10	28	43	18
11	≥1990	695	36	18	36	35	10
12	≥350	684	38	27	38	29	7
Lunch Status							
Free	≥21950	696	35	17	35	38	10
Paid	≥20630	718	35	7	21	46	27
Reduced	≥2930	711	32	7	26	48	19
Migrant Status							
Yes	≥50	695	36	18	30	43	9
No	≥45470	707	36	11	28	42	18
Education Classification							
Regular	≥39770	707	34	10	29	44	17
Special Education	≥2950	671	37	43	34	19	4
Gifted and Talented	≥2800	742	29	≤1	6	35	57
Section 504							
Yes	≥2280	691	35	20	40	32	9
No	≥43240	708	36	11	27	43	19
LEP Status							
Fully English Proficient	≥45030	707	36	11	28	42	18
Limited English Proficient	≥490	679	35	30	42	23	4

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.29. Student Performance on Biology: 2014–2015 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥47840	706	37	12	30	38	20
<u>Sex</u>							
Female	≥24270	707	36	11	31	38	20
Male	≥23570	706	38	13	29	37	21
<u>Race</u>							
American Indian or Alaska Native	≥360	709	33	10	24	49	17
Asian	≥850	726	37	7	16	37	41
Black or African American	≥20110	691	35	21	40	31	9
Hispanic/Latino	≥2020	701	39	16	29	38	17
Native Hawaiian or Pacific Islander	≥40	701	44	23	16	35	26
White	≥23930	719	34	5	23	43	30
Two or more races	≥510	715	35	7	28	41	24
<u>Grade</u>							
9 or lower	≥11440	706	39	14	29	35	22
10	≥33450	707	36	11	30	39	20
11	≥2590	699	40	18	32	32	18
12	≥350	684	36	26	43	25	6
<u>Economical Status</u>							
Economically Disadvantaged	≥27880	697	36	17	37	34	12
Not Economically Disadvantaged	≥19960	720	35	6	21	42	32
<u>Migrant Status</u>							
Yes	≥70	699	39	17	31	37	15
No	≥47770	706	37	12	30	38	20
<u>Education Classification</u>							
Regular	≥41890	707	35	11	31	40	19
Special Education	≥3150	669	36	44	36	17	4
Gifted and Talented	≥2800	744	30	≤1	8	29	62
<u>Section 504</u>							
Yes	≥2720	691	36	21	39	30	9
No	≥45120	707	37	12	29	38	21
<u>LEP Status</u>							
Fully English Proficient	≥47110	707	37	12	30	38	21
Limited English Proficient	≥730	671	37	43	34	20	3

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.30. Student Performance on Biology: 2015–2016 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥50610	703	38	14	33	35	18
<u>Sex</u>							
Female	≥25890	703	37	13	34	36	17
Male	≥24710	703	39	14	32	35	19
<u>Race</u>							
American Indian or Alaska Native	≥380	709	35	9	30	42	20
Asian	≥920	726	38	6	18	36	40
Black or African American	≥21780	687	35	22	43	28	7
Hispanic/Latino	≥2420	697	41	19	33	32	16
Native Hawaiian or Pacific Islander	≥40	711	40	12	30	33	26
White	≥24460	716	35	6	25	42	27
Two or more races	≥580	710	36	10	26	42	22
<u>Grade</u>							
9 or lower	≥14170	702	40	16	32	33	19
10	≥33440	704	37	12	33	37	18
11	≥2570	699	42	19	34	29	18
12	≥410	681	40	35	33	24	8
<u>Economical Status</u>							
Economically Disadvantaged	≥32660	694	36	18	39	32	11
Not Economically Disadvantaged	≥17940	720	35	5	23	41	31
<u>Migrant Status</u>							
Yes	≥100	693	46	23	31	31	15
No	≥50500	703	38	14	33	35	18
<u>Education Classification</u>							
Regular	≥43890	703	36	12	35	37	16
Special Education	≥3580	666	36	47	35	14	3
Gifted and Talented	≥3130	742	31	≤1	9	31	58
<u>Section 504</u>							
Yes	≥3000	686	36	24	42	26	7
No	≥47610	704	38	13	32	36	19
<u>LEP Status</u>							
Fully English Proficient	≥49620	704	38	13	33	36	18
Limited English Proficient	≥990	669	35	42	38	17	2

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.31. Student Performance on English III: 2011–2012 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥40110	699	38	18	31	35	15
<u>Sex</u>							
Female	≥20740	701	37	15	32	36	16
Male	≥19370	696	39	21	31	34	14
<u>Race</u>							
American Indian or Alaska Native	≥300	702	34	15	27	45	12
Asian	≥740	716	39	11	21	39	29
Black or African American	≥16700	682	35	29	39	26	6
Hispanic/Latino	≥1410	697	38	18	32	36	14
Native Hawaiian or Pacific Islander	≥30	695	41	25	22	38	16
White	≥20620	711	36	9	26	43	22
Two or more races	≥290	711	40	13	22	39	26
<u>Grade</u>							
9 or lower	≥80	664	35	49	36	13	3
10	≥2240	692	43	27	30	27	16
11	≥36050	700	38	17	31	37	16
12	≥1730	678	35	34	38	24	4
<u>Lunch Status</u>							
Free	≥17750	686	35	26	38	29	7
Paid	≥19470	711	37	11	25	41	23
Reduced	≥2890	699	35	15	35	38	12
<u>Migrant Status</u>							
Yes	≥60	686	30	19	48	29	3
No	≥40050	699	38	18	31	35	15
<u>Education Classification</u>							
Regular	≥35640	698	36	17	33	37	13
Special Education	≥2010	660	34	58	29	11	2
Gifted and Talented	≥2450	741	32	2	8	32	58
<u>Section 504</u>							
Yes	≥1540	679	36	35	36	22	6
No	≥38570	700	38	17	31	36	15
<u>LEP Status</u>							
Fully English Proficient	≥39680	699	38	18	31	36	15
Limited English Proficient	≥430	667	30	45	40	13	≤1

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.32. Student Performance on English III: 2012–2013 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥40730	706	36	11	30	41	17
<u>Sex</u>							
Female	≥21270	709	35	9	30	43	19
Male	≥19450	703	37	14	31	40	15
<u>Race</u>							
American Indian or Alaska Native	≥350	705	34	9	33	41	17
Asian	≥810	722	38	6	18	43	33
Black or African American	≥17270	691	33	19	41	34	6
Hispanic/Latino	≥1360	707	36	11	29	44	16
Native Hawaiian or Pacific Islander	≥20	702	35	10	38	31	21
White	≥20620	718	33	5	22	47	25
Two or more races	≥260	718	37	7	24	39	30
<u>Grade</u>							
9 or lower	≥170	662	31	51	39	9	2
10	≥2970	692	42	26	32	27	15
11	≥36540	708	35	10	30	43	17
12	≥1030	684	35	26	41	26	7
<u>Lunch Status</u>							
Free	≥18020	693	33	17	39	36	8
Paid	≥20020	717	35	6	23	45	25
Reduced	≥2670	707	33	9	30	45	16
<u>Migrant Status</u>							
Yes	≥40	704	39	18	25	41	16
No	≥40680	706	36	11	30	41	17
<u>Education Classification</u>							
Regular	≥35790	706	34	10	32	44	15
Special Education	≥2440	669	34	46	35	16	3
Gifted and Talented	≥2490	744	32	2	8	31	59
<u>Section 504</u>							
Yes	≥1750	686	34	24	43	27	6
No	≥38970	707	36	11	30	42	17
<u>LEP Status</u>							
Fully English Proficient	≥40330	706	36	11	30	41	17
Limited English Proficient	≥390	676	31	32	46	21	2

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.33. Student Performance on English III: 2013–2014 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥39800	709	34	8	31	42	19
<u>Sex</u>							
Female	≥20640	712	33	6	30	44	20
Male	≥19160	706	35	10	32	41	18
<u>Race</u>							
American Indian or Alaska Native	≥300	710	30	6	28	51	15
Asian	≥1270	709	40	13	27	35	25
Black or African American	≥15960	695	32	13	42	37	8
Hispanic/Latino	≥1490	709	35	9	28	43	20
Native Hawaiian or Pacific Islander	≥440	706	29	7	33	50	10
White	≥19970	720	32	4	22	47	27
Two or more races	≥340	720	32	3	23	46	28
<u>Grade</u>							
9 or lower	≥190	695	37	18	38	34	10
10	≥3020	703	37	14	33	36	17
11	≥35540	710	33	7	30	43	19
12	≥1040	687	35	23	41	29	7
<u>Lunch Status</u>							
Free	≥17940	698	32	12	40	39	10
Paid	≥19350	719	33	5	22	45	27
Reduced	≥2510	711	31	6	31	45	19
<u>Migrant Status</u>							
Yes	≥40	695	35	19	31	38	13
No	≥39750	709	34	8	31	42	19
<u>Education Classification</u>							
Regular	≥35190	709	32	7	32	45	17
Special Education	≥2100	671	33	39	42	16	3
Gifted and Talented	≥2510	745	30	≤1	7	29	63
<u>Section 504</u>							
Yes	≥1750	689	34	20	45	26	8
No	≥38040	710	34	8	30	43	19
<u>LEP Status</u>							
Fully English Proficient	≥39430	709	34	8	31	43	19
Limited English Proficient	≥360	674	32	37	43	17	3

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.34. Student Performance on English III: 2014–2015 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥41200	709	34	9	29	43	19
<u>Sex</u>							
Female	≥21570	712	33	7	28	45	21
Male	≥19620	705	35	11	31	41	17
<u>Race</u>							
American Indian or Alaska Native	≥340	712	32	6	29	43	22
Asian	≥760	725	35	5	18	40	38
Black or African American	≥17270	696	32	14	40	39	8
Hispanic/Latino	≥1610	708	35	10	28	43	19
Native Hawaiian or Pacific Islander	≥20	706	33	4	40	36	20
White	≥20820	719	32	5	22	47	27
Two or more races	≥350	718	31	4	22	48	26
<u>Grade</u>							
9 or lower	≥70	672	33	39	38	21	3
10	≥2350	706	39	15	26	37	22
11	≥37490	710	33	8	29	44	19
12	≥1270	688	37	22	42	26	9
<u>Economical Status</u>							
Economically Disadvantaged	≥22480	700	32	12	36	41	11
Not Economically Disadvantaged	≥18710	720	33	5	21	46	29
<u>Migrant Status</u>							
Yes	≥40	698	31	11	39	41	9
No	≥41150	709	34	9	29	43	19
<u>Education Classification</u>							
Regular	≥36450	709	32	7	30	46	17
Special Education	≥2360	670	33	43	39	15	4
Gifted and Talented	≥2390	745	29	≤1	6	30	62
<u>Section 504</u>							
Yes	≥2010	691	32	18	43	32	7
No	≥39190	710	34	8	29	44	20
<u>LEP Status</u>							
Fully English Proficient	≥40780	709	34	8	29	43	19
Limited English Proficient	≥420	674	28	32	49	18	≤1

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.35. Student Performance on English III: 2015–2016 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				Needs Improvement	Fair	Good	Excellent
State	≥42110	710	33	8	29	46	17
<u>Sex</u>							
Female	≥21850	714	32	6	27	48	19
Male	≥20250	706	34	10	32	43	15
<u>Race</u>							
American Indian or Alaska Native	≥300	712	32	7	27	49	17
Asian	≥820	722	36	5	20	44	31
Black or African American	≥17440	698	31	12	40	40	7
Hispanic/Latino	≥1910	706	35	12	28	45	15
Native Hawaiian or Pacific Islander	≥40	717	36	10	19	45	26
White	≥21080	720	31	4	21	50	25
Two or more races	≥480	716	32	5	24	49	22
<u>Grade</u>							
9 or lower	≥80	683	34	27	46	20	6
10	≥2460	709	38	13	27	38	22
11	≥38130	711	32	7	29	47	17
12	≥1420	685	35	25	42	28	5
<u>Economical Status</u>							
Economically Disadvantaged	≥25140	702	32	11	36	43	10
Not Economically Disadvantaged	≥16960	722	31	3	19	50	27
<u>Migrant Status</u>							
Yes	≥60	700	37	17	23	51	9
No	≥42040	710	33	8	29	46	17
<u>Education Classification</u>							
Regular	≥37040	710	31	6	30	48	15
Special Education	≥2340	672	33	41	40	17	2
Gifted and Talented	≥2720	742	29	≤1	8	37	55
<u>Section 504</u>							
Yes	≥2200	694	33	17	41	34	8
No	≥39900	711	33	7	29	46	18
<u>LEP Status</u>							
Fully English Proficient	≥41520	711	33	7	29	46	18
Limited English Proficient	≥580	670	31	38	44	17	≤1

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.36. Student Performance on U.S. History: 2012–2013 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥41540	704	39	18	29	38	15
<u>Sex</u>							
Female	≥21520	700	38	19	32	37	12
Male	≥20020	708	41	16	27	38	19
<u>Race</u>							
American Indian or Alaska Native	≥370	702	38	17	31	40	12
Asian	≥820	723	41	9	18	44	29
Black or African American	≥17600	688	36	28	35	31	6
Hispanic/Latino	≥1390	707	39	16	28	38	18
Native Hawaiian or Pacific Islander	≥30	711	35	11	29	43	17
White	≥21030	715	38	10	25	43	22
Two or more races	≥270	718	38	9	22	46	23
<u>Grade</u>							
9 or lower	≥240	665	34	54	29	16	≤1
10	≥2820	684	40	36	31	25	8
11	≥36300	706	39	15	29	40	16
12	≥2180	689	37	28	36	28	8
<u>Lunch Status</u>							
Free	≥18530	691	37	25	35	32	8
Paid	≥20260	715	39	11	24	43	22
Reduced	≥2740	705	38	16	30	40	15
<u>Migrant Status</u>							
Yes	≥40	696	40	23	35	33	9
No	≥41500	704	39	18	29	38	15
<u>Education Classification</u>							
Regular	≥36440	703	38	16	31	39	14
Special Education	≥2610	674	37	47	29	19	4
Gifted and Talented	≥2480	741	35	3	10	39	48
<u>Section 504</u>							
Yes	≥1820	689	40	29	33	29	9
No	≥39720	704	39	17	29	38	16
<u>LEP Status</u>							
Fully English Proficient	≥41100	704	39	17	29	38	15
Limited English Proficient	≥440	678	34	38	34	25	3

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.37. Student Performance on U.S. History: 2013–2014 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥40390	712	37	12	24	44	19
Sex							
Female	≥20970	709	36	13	26	45	16
Male	≥19410	716	38	11	22	44	23
Race							
American Indian or Alaska Native	≥300	709	34	9	32	45	13
Asian	≥1280	716	42	12	23	38	26
Black or African American	≥16240	698	36	20	31	39	9
Hispanic/Latino	≥1530	715	36	10	23	47	20
Native Hawaiian or Pacific Islander	≥550	712	35	10	25	48	17
White	≥20130	723	35	6	18	49	26
Two or more races	≥330	725	36	5	20	43	32
Grade							
9 or lower	≥180	682	38	40	29	26	5
10	≥3130	704	40	20	26	39	16
11	≥35270	714	37	11	24	45	20
12	≥1800	698	37	22	31	38	10
Lunch Status							
Free	≥18280	701	36	18	30	41	11
Paid	≥19570	723	36	7	19	47	27
Reduced	≥2520	715	35	9	24	48	19
Migrant Status							
Yes	≥50	697	38	18	33	42	7
No	≥40330	712	37	12	24	44	19
Education Classification							
Regular	≥35700	712	36	11	25	46	18
Special Education	≥2180	683	38	38	31	25	6
Gifted and Talented	≥2490	745	32	2	6	39	53
Section 504							
Yes	≥1790	696	38	24	31	34	11
No	≥38590	713	37	12	24	45	20
LEP Status							
Fully English Proficient	≥39970	713	37	12	24	45	19
Limited English Proficient	≥420	689	34	27	35	32	6

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.38. Student Performance on U.S. History: 2014–2015 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥43800	713	38	12	24	45	20
<u>Sex</u>							
Female	≥22780	710	37	12	26	45	17
Male	≥21010	717	38	11	21	45	23
<u>Race</u>							
American Indian or Alaska Native	≥350	716	33	6	24	52	18
Asian	≥830	733	39	6	12	41	41
Black or African American	≥18510	701	36	18	31	41	10
Hispanic/Latino	≥1750	713	38	13	23	45	19
Native Hawaiian or Pacific Islander	≥20	709	39	19	19	41	22
White	≥21950	723	36	7	18	48	27
Two or more races	≥370	722	35	7	18	49	26
<u>Grade</u>							
9 or lower	≥1790	689	36	28	32	34	5
10	≥2630	704	39	18	27	40	15
11	≥37420	716	37	10	23	46	21
12	≥1940	702	39	19	29	38	14
<u>Economical Status</u>							
Economically Disadvantaged	≥24360	704	36	16	29	43	13
Not Economically Disadvantaged	≥19430	725	36	6	17	47	29
<u>Migrant Status</u>							
Yes	≥60	694	38	31	21	36	11
No	≥43740	713	38	12	24	45	20
<u>Education Classification</u>							
Regular	≥38780	713	36	11	24	47	18
Special Education	≥2580	684	37	37	30	26	6
Gifted and Talented	≥2430	747	33	2	6	37	55
<u>Section 504</u>							
Yes	≥2230	699	37	20	30	38	11
No	≥41570	714	38	11	23	45	20
<u>LEP Status</u>							
Fully English Proficient	≥43280	714	38	11	24	45	20
Limited English Proficient	≥520	685	33	32	33	32	3

Note: The percent of students across achievement levels may not total 100 due to rounding.

Table 4.39. Student Performance on U.S. History: 2015–2016 School Year

	Number	Mean	Standard Deviation	Percent by Achievement Level			
				<i>Needs Improvement</i>	<i>Fair</i>	<i>Good</i>	<i>Excellent</i>
State	≥49830	715	37	11	22	47	20
<u>Sex</u>							
Female	≥25640	712	36	12	24	47	17
Male	≥24190	718	38	10	19	46	24
<u>Race</u>							
American Indian or Alaska Native	≥350	717	34	7	22	52	19
Asian	≥890	733	37	5	13	43	39
Black or African American	≥20510	701	35	18	29	44	10
Hispanic/Latino	≥2230	717	37	10	20	48	22
Native Hawaiian or Pacific Islander	≥30	726	30	3	18	50	29
White	≥25210	725	35	6	16	49	28
Two or more races	≥570	721	37	8	19	45	27
<u>Grade</u>							
9 or lower	≥2270	692	37	29	27	37	7
10	≥7450	704	36	16	27	43	13
11	≥38230	719	36	9	20	48	23
12	≥1860	702	38	19	27	41	13
<u>Economical Status</u>							
Economically Disadvantaged	≥30460	706	36	15	26	45	13
Not Economically Disadvantaged	≥19360	729	34	5	15	49	32
<u>Migrant Status</u>							
Yes	≥80	702	39	23	23	42	12
No	≥49750	715	37	11	22	47	20
<u>Education Classification</u>							
Regular	≥43780	715	35	10	22	49	19
Special Education	≥3140	684	37	37	30	27	6
Gifted and Talented	≥2910	748	31	1	6	39	55
<u>Section 504</u>							
Yes	≥2700	700	36	20	30	39	11
No	≥47120	716	37	11	21	47	21
<u>LEP Status</u>							
Fully English Proficient	≥49120	715	37	11	22	47	21
Limited English Proficient	≥710	690	35	28	31	35	6

Note: The percent of students across achievement levels may not total 100 due to rounding.

Reliability

Traditional statistics for test forms include the mean, standard deviation, standard error of measurement, and reliability of the raw score or number-correct (NC) score. These statistics are reported in tables 5.1 through 5.6 for test forms that were administered during the period covered by this report (2007–2016). All statistics in these tables are based on data from May administrations. If a form was administered in more than one May administration, statistics for that form are based on the first May administration. Because forms were designed to be approximately equal in difficulty within a test, differences of more than 1 point in the average raw score among forms are likely due to differences, or trends, in student achievement across years. Due to the aforementioned change in points for the writing prompt, English II forms A through H are not strictly comparable to later forms (J, K, M, N, P, Q, R, S, T, and U) in terms of NC statistics and reliability.

The reliability coefficients that are of particular importance are the Spearman Brown coefficient and Cronbach's alpha coefficient. Coefficients greater than 0.80 are considered very good, and those above 0.85 are considered excellent. The NC standard error of measurement (NC SEM), calculated from the conventional Cronbach reliability coefficient, is the average measurement error associated with the NC score. It is expected that about two-thirds of all students would score within one SEM of their observed score if they were to take a form statistically identical to the one taken.

Table 5.1. Number-Correct (NC) Statistics and Reliability for Algebra I

Form	Number of Items	Total Score Points	NC Mean	NC Standard Deviation	NC SEM	Reliability	
						Spearman Brown	Cronbach
A	48	50	23.3	8.2	3.18	0.85	0.85
B	48	50	23.8	7.6	3.04	0.85	0.84
C	48	50	23.4	7.9	3.16	0.84	0.84
D	48	50	24.1	7.9	3.16	0.85	0.84
E	48	50	26.0	8.7	3.15	0.87	0.87
M	48	50	26.6	9.0	3.12	0.89	0.88
N	47	50	26.4	8.2	3.15	0.86	0.85
P	47	50	26.7	8.2	3.11	0.86	0.86
R	47	50	26.3	8.4	3.19	0.86	0.86

Table 5.2. Number-Correct (NC) Statistics and Reliability for English II

Form	Number of Items	Total Score Points	NC Mean	NC Standard Deviation	NC SEM	Reliability	
						Spearman Brown	Cronbach
A	42	56	34.1	10.2	3.6	0.89	0.88
B	42	56	33.3	10.3	3.7	0.89	0.87
C	42	56	34.3	9.6	3.6	0.88	0.86
D	42	56	34.4	9.6	3.6	0.88	0.86
E	42	56	34.1	10.1	3.6	0.89	0.87
F	42	56	33.4	10.5	3.6	0.90	0.88
G	42	56	34.3	10.0	3.6	0.89	0.87
H	42	56	34.6	9.3	3.6	0.87	0.85
J	42	48	29.7	8.2	3.1	0.88	0.86
K	42	48	31.1	7.5	3.0	0.86	0.84
M	42	48	32.5	7.6	2.9	0.87	0.85
N	42	48	32.5	7.5	2.9	0.87	0.85
P	42	48	32.6	7.6	2.9	0.87	0.85
Q	42	48	32.2	7.5	2.9	0.87	0.85
R	44	50	32.4	7.8	2.9	0.88	0.86
S	44	50	31.9	8.1	3.0	0.88	0.87
U	44	50	32.7	8.3	2.9	0.89	0.88

Table 5.3. Number-Correct (NC) Statistics and Reliability for Geometry

Form	Number of Items	Total Score Points	NC Mean	NC Standard Deviation	NC SEM	Reliability	
						Spearman Brown	Cronbach
A	48	50	24.0	9.0	3.1	0.88	0.88
B	48	50	24.1	8.8	3.2	0.87	0.87
C	48	50	24.7	8.6	3.1	0.87	0.87
M	48	50	27.7	8.8	3.2	0.88	0.87
N	47	50	25.2	8.3	3.2	0.86	0.85
P	47	50	25.3	8.9	3.2	0.87	0.87
R	47	50	25.5	9.0	3.2	0.88	0.87

Table 5.4. Number-Correct (NC) Statistics and Reliability for Biology

Form	Number of Items	Total Score Points	NC Mean	NC Standard Deviation	NC SEM	Reliability	
						Spearman Brown	Cronbach
A	48	50	29.39	8.59	2.98	0.88	0.88
B	48	50	29.35	8.87	3.05	0.89	0.88
C	48	50	28.64	8.48	3.05	0.88	0.87
D	48	50	28.97	8.34	3.07	0.87	0.86
E	48	50	31.28	9.02	3.00	0.89	0.89
H	49	52	33.02	8.76	3.11	0.88	0.87
J	49	52	33.52	8.64	3.16	0.87	0.87
K	49	52	32.33	8.67	3.12	0.87	0.87

Table 5.5. Number-Correct (NC) Statistics and Reliability for English III

Form	Number of Items	Total Score Points	NC Mean	NC Standard Deviation	NC SEM	Reliability	
						Spearman Brown	Cronbach
A	42	48	29.30	8.02	2.97	0.88	0.86
B	42	48	29.29	7.87	2.92	0.88	0.86
C	42	48	29.42	7.81	2.95	0.88	0.86
M	42	48	30.18	7.68	2.92	0.88	0.86
N	42	48	30.30	7.68	2.93	0.88	0.86
P	42	48	30.18	7.56	2.90	0.87	0.85
Q	42	48	30.00	7.77	2.95	0.88	0.86
S	44	50	31.15	8.29	2.99	0.88	0.87
T	44	50	30.42	8.05	2.96	0.88	0.87
U	44	50	31.09	7.65	3.02	0.86	0.84

Table 5.6. Number-Correct (NC) Statistics and Reliability for U.S. History

Form	Number of Items	Total Score Points	NC Mean	NC Standard Deviation	NC SEM	Reliability	
						Spearman Brown	Cronbach
A	48	50	28.2	8.8	3.17	0.87	0.87
C	49	52	29.5	8.9	3.16	0.87	0.87
D	49	52	29.3	9.1	3.18	0.88	0.88
E	49	52	30.0	8.7	3.14	0.87	0.87

Classification Accuracy and Consistency

One of the primary functions of EOC tests is to classify students into achievement levels. For the EOC tests, the achievement levels are *Needs Improvement*, *Fair*, *Good*, and *Excellent*. Students are classified into these levels on the basis of their raw score on the test form taken. Raw scores are mapped to scale scores, which in turn are mapped to achievement levels.

As pointed out in the *Standards for Educational and Psychological Testing* (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 2014), reliability coefficients and standard errors of measurement do not directly address the technical performance of classification tests.

To provide more direct information about the reliability and accuracy of classification decisions, two indices are provided for EOC tests: (1) classification accuracy and (2) classification consistency.

Indices of classification accuracy provide information about the effects of measurement error on a classification test. There are two types of classification error. A “false positive” error (also called a “too high” error) occurs when an examinee is classified into a level that is *higher* than his or her true level. A “false negative” error (also called a “too low” error) occurs when an examinee is classified into a level that is *lower* than his or her true level.

As a proportion, classification accuracy is 1 minus the sum of these two types of error rates, has a theoretical range of 0 to 1 (perfect accuracy), and may also be expressed as a percentage ranging from 0% to 100%.

Classification consistency is the proportion or percentage of examinees who would be classified the same way if they took the test again. As a proportion, classification consistency has the same range as the reliability coefficient—0 to 1, with 1 meaning that all students would receive the same classification if they took the test again. As a percentage, classification consistency ranges from 0% to 100%.

Indices of classification accuracy and consistency for the EOC tests were derived using methods described in Schulz, Kolen, and Nicewander (1999). These methods are internally based (*Standards*, 1999). Classification consistency and accuracy estimates for a given form (e.g., form A) are based only on the IRT item parameter estimates for that form and the assumption that the true distribution of student achievement on the theta scale (which is shared with the item *b* parameter) is normal and has a mean of 0 and a standard deviation of 1. This theta-distribution assumption is the same assumption used to calibrate the items and is commonly used to compute internal reliability indices. Traditional reliability coefficients, such as Cronbach’s alpha and the Spearman Brown coefficient, are also internally based and are generally considered to be slightly higher than the result one would obtain with the test-retest method of estimating reliability.

Classification Accuracy

Tables 6.1 through 6.6 show classification accuracy rates for whether a student is at or above a given achievement level. These rates are predictions based on item parameter estimates and the assumption that student ability is normally distributed on the IRT ability metric. For example, if all students were classified for Algebra I form B as being at-or-above *Good* or not, 89% of the students would be classified accurately, 5% would be classified too high (classified as at-or-above *Good*, but would be below *Good*; false positives), and 7% would be classified too low (classified as being below *Good*, but would be at-or-above *Good*; false negatives). These percentages may not sum to 100 due to rounding. Classification accuracy rates above 80% are considered good for all at-or-above classifications. The classification accuracy rates for all EOC test forms are acceptable.

Table 6.1. At-or-Above Classification Accuracy for Algebra I

Form	Accurate Classifications			False Positives			False Negatives		
	\geq Fair	\geq Good	\geq Excellent	\geq Fair	\geq Good	\geq Excellent	\geq Fair	\geq Good	\geq Excellent
A	86%	88%	96%	7%	6%	2%	8%	6%	2%
B	86%	89%	96%	6%	5%	2%	8%	7%	2%
C	85%	88%	96%	7%	5%	2%	8%	6%	2%
D	86%	89%	96%	6%	5%	2%	8%	6%	2%
E	87%	90%	96%	6%	4%	2%	7%	6%	2%
L	85%	89%	96%	8%	4%	2%	7%	7%	2%
M	85%	89%	96%	7%	3%	1%	8%	8%	2%
N	85%	87%	96%	7%	4%	1%	9%	9%	3%
P	84%	88%	96%	6%	4%	2%	9%	8%	2%
Q	85%	89%	96%	7%	5%	2%	8%	6%	2%
R	85%	88%	96%	8%	5%	1%	7%	6%	3%

Table 6.2. At-or-Above Classification Accuracy for English II

Form	Accurate Classifications			False Positives			False Negatives		
	\geq Fair	\geq Good	\geq Excellent	\geq Fair	\geq Good	\geq Excellent	\geq Fair	\geq Good	\geq Excellent
A	92%	91%	94%	4%	4%	2%	3%	5%	3%
B	92%	91%	94%	4%	5%	3%	3%	5%	3%
C	92%	90%	93%	5%	5%	4%	3%	4%	3%
D	92%	90%	93%	4%	6%	4%	4%	4%	3%
E	92%	91%	94%	4%	5%	3%	3%	5%	4%
F	92%	91%	94%	4%	4%	3%	4%	5%	2%
G	92%	90%	95%	5%	4%	2%	3%	5%	3%
H	92%	90%	93%	5%	4%	4%	3%	6%	3%
J	92%	90%	93%	5%	5%	3%	3%	5%	3%
K	91%	90%	94%	5%	4%	3%	4%	6%	4%
L	92%	92%	94%	4%	4%	3%	4%	4%	2%
M	92%	91%	94%	5%	5%	3%	4%	4%	3%
N	92%	91%	94%	4%	5%	3%	4%	4%	3%
P	92%	91%	94%	4%	4%	3%	5%	4%	3%
Q	91%	91%	94%	4%	4%	3%	4%	5%	4%
R	92%	91%	95%	2%	2%	2%	5%	7%	3%
S	93%	91%	94%	4%	5%	2%	4%	4%	3%
T	93%	92%	94%	3%	4%	3%	4%	5%	3%
U	93%	91%	94%	4%	4%	3%	4%	5%	3%

Table 6.3. At-or-Above Classification Accuracy for Geometry

Form	Accurate Classifications			False Positives			False Negatives		
	\geq Fair	\geq Good	\geq Excellent	\geq Fair	\geq Good	\geq Excellent	\geq Fair	\geq Good	\geq Excellent
A	87%	91%	96%	5%	3%	2%	8%	5%	2%
B	88%	91%	96%	6%	4%	2%	7%	5%	3%
C	88%	90%	96%	5%	3%	2%	7%	6%	2%
L	87%	91%	96%	7%	4%	2%	6%	4%	2%
M	86%	90%	96%	6%	5%	2%	8%	5%	2%
N	82%	88%	95%	8%	5%	1%	9%	7%	3%
P	84%	90%	96%	6%	3%	2%	10%	7%	2%
Q	83%	89%	96%	6%	4%	1%	11%	6%	3%
R	83%	89%	96%	7%	4%	2%	10%	7%	3%

Table 6.4. At-or-Above Classification Accuracy for Biology

Form	Accurate Classifications			False Positives			False Negatives		
	\geq Fair	\geq Good	\geq Excellent	\geq Fair	\geq Good	\geq Excellent	\geq Fair	\geq Good	\geq Excellent
A	92%	90%	95%	5%	5%	3%	3%	6%	3%
B	92%	90%	95%	5%	4%	2%	4%	6%	3%
C	91%	90%	95%	5%	4%	2%	5%	6%	3%
D	91%	90%	95%	6%	4%	2%	3%	6%	3%
E	91%	90%	95%	4%	5%	2%	4%	4%	3%
G	91%	90%	95%	6%	4%	2%	3%	6%	3%
H	91%	90%	95%	4%	4%	3%	4%	6%	2%
J	92%	90%	95%	5%	5%	2%	4%	5%	3%
K	91%	90%	95%	5%	4%	2%	4%	6%	3%

Table 6.5. At-or-Above Classification Accuracy for English III

Form	Accurate Classifications			False Positives			False Negatives		
	\geq Fair	\geq Good	\geq Excellent	\geq Fair	\geq Good	\geq Excellent	\geq Fair	\geq Good	\geq Excellent
A	92%	90%	93%	4%	5%	4%	4%	5%	3%
B	92%	89%	93%	4%	6%	3%	4%	5%	4%
C	92%	89%	93%	5%	6%	3%	3%	5%	3%
L	92%	90%	94%	5%	4%	3%	3%	5%	3%
M	92%	90%	93%	4%	6%	3%	4%	4%	3%
N	92%	90%	93%	5%	4%	3%	4%	6%	3%
P	92%	90%	93%	4%	6%	3%	4%	4%	4%
Q	92%	90%	93%	5%	6%	3%	3%	5%	4%
R	92%	90%	94%	3%	3%	2%	5%	7%	4%
S	92%	91%	95%	5%	4%	3%	3%	5%	2%
T	92%	90%	95%	5%	5%	3%	3%	5%	2%
U	92%	90%	95%	4%	4%	2%	4%	6%	3%

Table 6.6. At-or-Above Classification Accuracy for U.S. History

Form	Accurate Classifications			False Positives			False Negatives		
	\geq Fair	\geq Good	\geq Excellent	\geq Fair	\geq Good	\geq Excellent	\geq Fair	\geq Good	\geq Excellent
A	90%	88%	95%	5%	5%	3%	4%	7%	3%
B	90%	89%	95%	7%	5%	2%	4%	6%	3%
C	90%	89%	95%	5%	5%	2%	5%	6%	3%
D	90%	89%	95%	6%	5%	2%	4%	6%	3%
E	89%	89%	95%	5%	6%	2%	5%	6%	2%

Classification Consistency

Tables 7.1 through 7.6 present classification consistency rates for at-or-above decisions. Classification consistency rates are estimates of the percentage of students who would be classified the same way if they were to retake the test using a form statistically identical to the one taken. For example, if students took the Algebra I form A test, and then those same students took another test form statistically identical to form A and were classified with respect to whether they were at-or-above *Good* on both occasions, 84% would be classified the same way on both occasions (see table 7.1). Classification consistency rates above 80% are considered very good for all at-or-above classifications.

Classification consistency rates are slightly lower than classification accuracy rates. For example, the *Fair-or-higher* classification accuracy rate for English II form A is 92% in table 6.2, while the corresponding classification consistency rate is 89% in table 7.2. Classification consistency rates are lower because measurement error is factored in twice. That is, classification accuracy is based on only one hypothetical measurement with a given test form, while classification consistency is based on two hypothetical measurements with a given test form. The classification consistency rates for all EOC test forms are acceptable.

Table 7.1. At-or-Above Classification Consistency for Algebra I

Form	Classification Consistency		
	\geq <i>Fair</i>	\geq <i>Good</i>	\geq <i>Excellent</i>
A	81%	84%	93%
B	80%	84%	92%
C	80%	84%	93%
D	81%	85%	93%
E	82%	86%	93%
L	80%	85%	93%
M	80%	86%	93%
N	79%	83%	93%
P	79%	85%	92%
Q	79%	84%	93%
R	79%	84%	93%

Table 7.2. At-or-Above Classification Consistency for English II

Form	Classification Consistency		
	\geq Fair	\geq Good	\geq Excellent
A	89%	87%	90%
B	90%	87%	90%
C	90%	86%	88%
D	89%	86%	88%
E	90%	87%	89%
F	89%	88%	90%
G	89%	87%	91%
H	90%	86%	88%
J	89%	86%	88%
K	88%	86%	89%
L	89%	88%	90%
M	89%	87%	89%
N	89%	88%	89%
P	89%	88%	89%
Q	88%	87%	89%
R	89%	89%	91%
S	90%	87%	91%
T	90%	88%	90%
U	90%	88%	90%

Table 7.3. At-or-Above Classification Consistency for Geometry

Form	Classification Consistency		
	\geq Fair	\geq Good	\geq Excellent
A	83%	88%	93%
B	83%	87%	92%
C	83%	87%	92%
L	82%	88%	93%
M	81%	87%	92%
N	76%	84%	93%
P	79%	87%	92%
Q	78%	86%	93%
R	77%	85%	93%

Table 7.4. At-or-Above Classification Consistency for Biology

Form	Classification Consistency		
	\geq Fair	\geq Good	\geq Excellent
A	89%	86%	90%
B	89%	87%	91%
C	87%	86%	91%
D	88%	86%	91%
E	88%	86%	91%
G	88%	86%	91%
H	88%	87%	91%
J	88%	86%	91%
K	88%	86%	91%

Table 7.5. At-or-Above Classification Consistency for English III

Form	Classification Consistency		
	\geq <i>Fair</i>	\geq <i>Good</i>	\geq <i>Excellent</i>
A	88%	85%	88%
B	89%	85%	88%
C	89%	84%	88%
L	90%	87%	89%
M	89%	86%	88%
N	89%	85%	88%
P	89%	85%	88%
Q	89%	85%	89%
R	88%	86%	91%
S	90%	87%	91%
T	89%	86%	91%
U	89%	86%	91%

Table 7.6. At-or-Above Classification Consistency for U.S. History

Form	Classification Consistency		
	\geq <i>Fair</i>	\geq <i>Good</i>	\geq <i>Excellent</i>
A	87%	84%	90%
B	87%	84%	92%
C	87%	85%	91%
D	87%	85%	92%
E	86%	84%	92%

Validity

Validity is the most fundamental consideration in educational and psychological testing. Validity evidence is frequently reported for state assessments (Yu & Zhao, 2009). This section provides a brief summary of information pertaining to the validity of the EOC tests.

Content Validity

The validity of an educational test depends chiefly on its content and the procedures used in test development. The section of this report entitled “Test Content” provides some information pertaining to the content validity of the EOC tests. More detailed information is provided in technical reports (Louisiana Department of Education, 2009, 2010, 2011b, 2011c, 2012, 2013b). As shown in the reports, all test forms conform to the established test blueprints and have been subjected to extensive reviews and processes that meet or exceed industry standard guidelines for content validity.

External Validity

External validity depends on the relationship of test scores to external variables such as course grades, scores on tests that measure similar or related content, and success in subsequent courses or educational programs. External validity studies already conducted within the EOC program have examined the relationships between

- Algebra I test scores and course grades in the 2007–2008 school year;
- Algebra I test scores in 2007–2008 and LEAP Mathematics test scores in spring 2007;
- Algebra I test scores in 2007–2008 and *i*LEAP Mathematics test scores in spring 2008;
- English II test scores and course grades in the 2008–2009 school year;
- English II test scores in 2008–2009 and scores on the GEE English Language Arts test in spring 2009;
- Algebra I test scores and Algebra II course grades for students who took Algebra I in 2007–2008 and Algebra II in 2009–2010; and
- Algebra I test scores in 2007–2008 and subsequent performance on the ACT in or after June 2009.

These studies are documented in reports submitted to LDOE. They may be repeated periodically or conducted with other EOC tests in the future in order to help inform policy decisions regarding the use of EOC tests or to help evaluate the impact of policies.

The purpose of external validity studies is to inform and support particular uses of test scores. Therefore, validity is not so much an attribute of a test as it is an attribute of actions or policies based on test scores. The policies established for the use of EOC tests for course grades, graduation, and for school accountability have been and will continue to be informed by external validity studies.

Conclusion

The EOC tests were constructed with careful attention to criteria for validity and technical quality. Committees of state educators were involved in all key aspects of test development, in defining the characteristics of the online administration, and in setting achievement levels. Operational forms were constructed from items that demonstrated good technical quality through field testing and satisfied many other criteria for content, clarity, and fairness. Operational forms were assembled using detailed guidelines for content validity, form equivalence, and technical quality. Methods based on IRT were used to equate test forms, estimate student achievement, and support the standard setting process. These efforts resulted in tests that meet generally accepted standards for validity and reliability.

As noted in the beginning, this executive summary highlights the technical results of the EOC tests administered in the December 2007 to May 2016 period. Detailed information on any of the technical procedures can be found in technical reports prepared for each of the tests (Louisiana Department of Education, 2009, 2010, 2011b, 2011c, 2012, 2013b).

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