

Kentucky

Grade 4 and 8 Public Schools State Mathematics 2015

This report provides selected results for Kentucky's public school students at grades 4 and 8 from the National Assessment of Educational Progress (NAEP) assessment in mathematics. Results are reported by average scale scores and by achievement levels (*Basic*, *Proficient*, and *Advanced*).

State-level results in mathematics are available for 11 assessment years (at grade 8 in 1990; and at both grades 4 and 8 in 1992, 1996, 2000, 2003, 2005, 2007, 2009, 2011, 2013, and 2015), although not all states may have participated or met the criteria for reporting in every year. All 50 states, the District of Columbia, and the Department of Defense Education Activity schools (DoDEA) participated in the 2015 mathematics assessment at grades 4 and 8.

For more information about the assessment, visit the NAEP website at <http://nces.ed.gov/nationsreportcard/> which contains

- *The Nation's Report Card™, Mathematics 2015*
- The full set of national and state results in an interactive database
- Released test questions, scoring guides, and question-level performance data

NAEP is a project of the National Center for Education Statistics (NCES), reporting on the academic achievement of elementary and secondary students in the United States.

KEY FINDINGS FOR 2015

Grade 4:

- In 2015, the average mathematics score for fourth-grade students in Kentucky was 242. This was not significantly different from that for the nation's public schools (240).
- The average score for students in Kentucky in 2015 (242) was higher than that in 1992 (215) and was not significantly different from that in 2013 (241).
- In 2015, the percentage of students in Kentucky who performed at or above *Proficient* was 40 percent. This was not significantly different from that for the nation's public schools (39 percent).
- The percentage of students in Kentucky who performed at or above *Proficient* in 2015 (40 percent) was greater than that in 1992 (13 percent) and was not significantly different from that in 2013 (41 percent).
- In 2015, the percentage of students in Kentucky who performed at or above *Basic* was 84 percent. This was greater than that for the nation's public schools (81 percent).
- The percentage of students in Kentucky who performed at or above *Basic* in 2015 (84 percent) was greater than that in 1992 (51 percent) and was not significantly different from that in 2013 (84 percent).

Grade 8:

- In 2015, the average mathematics score for eighth-grade students in Kentucky was 278. This was lower than that for the nation's public schools (281).
- The average score for students in Kentucky in 2015 (278) was higher than that in 1990 (257) and was lower than that in 2013 (281).
- In 2015, the percentage of students in Kentucky who performed at or above *Proficient* was 28 percent. This was smaller than that for the nation's public schools (32 percent).
- The percentage of students in Kentucky who performed at or above *Proficient* in 2015 (28 percent) was greater than that in 1990 (10 percent) and was not significantly different from that in 2013 (30 percent).
- In 2015, the percentage of students in Kentucky who performed at or above *Basic* was 68 percent. This was smaller than that for the nation's public schools (70 percent).
- The percentage of students in Kentucky who performed at or above *Basic* in 2015 (68 percent) was greater than that in 1990 (43 percent) and was smaller than that in 2013 (71 percent).

The U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, and National Assessment of Educational Progress (NAEP) has provided software that generated user-selectable data, statistical significance test result statements, and technical descriptions of the NAEP assessments for this report. Content may be added or edited by states or other jurisdictions. This document, therefore, is not an official publication of the National Center for Education Statistics.

Introduction

What Was Assessed?

The content for each NAEP assessment is determined by the National Assessment Governing Board. The framework for each assessment documents the content and process areas to be measured and sets guidelines for the types of questions to be used. The mathematics frameworks were developed with the guidance of the Council of Chief State School Officers (CCSSO) and under the direction of the Governing Board. The current framework is available at the Governing Board's website <https://www.nagb.org/content/nagb/assets/documents/publications/frameworks/mathematics/2015-mathematics-framework.pdf>.

For grades 4 and 8, the mathematics framework for the 2015 assessment is similar to earlier versions that guided the 1990, 1992, 1996, 2000, 2003, 2005, 2007, 2009, 2011, and 2013 mathematics assessments. Although the frameworks are updated periodically, the mathematics content objectives for grades 4 and 8 have not changed substantially, allowing students' performance in 2015 to be compared with previous years.

Content Areas and Mathematical Complexity

The 2015 mathematics framework classifies assessment questions in two dimensions, *content area* and *mathematical complexity*, that are used to guide the assessment. Each question is designed to measure one of the five content areas. However, certain aspects of mathematics, such as computation, occur in all content areas. Although the names of the content areas have changed from one framework to the next, a consistent focus has remained on measuring student performance in all five content areas. The distribution of questions among each content area differs by grade to reflect the knowledge and skills appropriate for each grade level.

- **Number properties and operations** measures students' understanding of ways to represent, calculate, and estimate with numbers.
- **Measurement** measures students' knowledge of measurement attributes, such as capacity and temperature, and geometric attributes, such as length, area, and volume.
- **Geometry** measures students' knowledge and understanding of shapes in a plane and in space.
- **Data analysis, statistics, and probability** measures students' understanding of data representation, characteristics of data sets, experiments and samples, and probability.
- **Algebra** measures students' understanding of patterns, using variables, algebraic representation, and functions.

The mathematical complexity of a question refers to the level of cognitive demand it places on students. Each level of complexity includes aspects of knowing and doing mathematics, such as performing procedures, understanding concepts, or solving problems.

- **Low complexity** questions typically specify what a student is to do, which is often to carry out a routine mathematical procedure.
- **Moderate complexity** questions involve more flexibility of thinking and often require a response with multiple steps.
- **High complexity** questions make heavier demands and often require abstract reasoning or analysis in a novel situation.

Assessment Design

Because of the breadth of the content covered in the NAEP mathematics assessment, each student took just a portion of the test, consisting of two 25-minute sections. Most student's testing time was divided evenly between multiple-choice and constructed-response questions. Short constructed-response questions asked students to provide the answer for a numerical problem or to briefly describe the solution to a problem.

Longer constructed-response questions required students to write both a solution and its justification, explanation, or interpretation. Released test questions, along with student performance data by state, are available on the NAEP website at <http://nces.ed.gov/nationsreportcard/itmrlsx/>.

Some questions in the 2015 assessment incorporated the use of calculators (four-function calculators at grade 4 and scientific or graphing calculators at grade 8), rulers, protractors (at grade 8), or manipulatives such as spinners and geometric shapes. Calculator use at all grades was permitted on approximately one-third of the assessment.

Who Was Assessed?

All 50 states, the District of Columbia, and the Department of Defense Education Activity schools (DoDEA) participated in the 2015 mathematics assessment at grades 4 and 8. The overall participation rates for schools and students must meet guidelines established by the National Center for Education Statistics (NCES) and the National Assessment Governing Board for assessment results to be reported publicly. A participation rate of at least 85 percent for schools in each subject and grade was required. Participation rates for the 2015 mathematics assessment are available on the NAEP website at http://www.nationsreportcard.gov/reading_math_2015/#mathematics/about#participation.

The schools and students participating in NAEP assessments are selected to be representative both nationally and for public schools at the state level. The comparisons between national and state results in this report present the performance of public school students only. In NAEP reports, the category "nation (public)" does not include DoDEA or Bureau of Indian Education schools.

How Is Student Mathematics Performance Reported?

The 2015 state results are compared to results from 9 earlier assessments at grade 4 and from 10 earlier assessments at grade 8.

Scale Scores: Student performance is reported as an average score based on the NAEP mathematics scale, which ranges from 0 to 500 for grades 4 and 8. Because NAEP scales are developed independently for each subject and for each content area within a subject, the scores cannot be compared across subjects or across content areas within the same subject. Results are also reported at five percentiles (10th, 25th, 50th, 75th, and 90th) to show trends in performance for lower-, middle-, and higher-performing students.

Achievement Levels: Based on recommendations from policymakers, educators, and members of the general public, the Governing Board has set specific achievement levels for each subject area and grade. Achievement levels are performance standards indicating what students should know and be able to do. They provide another perspective with which to interpret student performance. NAEP results are reported in terms of three achievement levels—*Basic*, *Proficient*, and *Advanced*—and are expressed in terms of the percentage of students who attained each level. The three achievement levels are defined as follows:

- *Basic* denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade.
- *Proficient* represents solid academic performance for each grade assessed. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and appropriate analytical skills.
- *Advanced* represents superior performance.

The achievement levels are cumulative; therefore, students performing at the *Proficient* level also display the competencies associated with the *Basic* level, and students at the *Advanced* level also demonstrate the competencies associated with both the *Basic* and the *Proficient* levels.

As provided by law, NCES, upon review of congressionally mandated evaluations of NAEP, has determined that achievement levels are to be used on a trial basis and should be interpreted with caution. The NAEP achievement levels have been widely used by national and state officials. The mathematics achievement-level descriptions are summarized in Figures 1-A and 1-B .

Figure
1-A

The Nation's Report Card 2015 State Assessment

Descriptions of fourth-grade achievement levels for 2015 NAEP mathematics assessment

Basic Level (214) Fourth-grade students performing at the *Basic* level should show some evidence of understanding the mathematical concepts and procedures in the five NAEP content areas.

Fourth-graders performing at the *Basic* level should be able to estimate and use basic facts to perform simple computations with whole numbers, show some understanding of fractions and decimals, and solve some simple real-world problems in all NAEP content areas. Students at this level should be able to use—although not always accurately—four-function calculators, rulers, and geometric shapes. Their written responses are often minimal and presented without supporting information.

Proficient Level (249) Fourth-grade students performing at the *Proficient* level should consistently apply integrated procedural knowledge and conceptual understanding to problem solving in the five NAEP content areas.

Fourth-graders performing at the *Proficient* level should be able to use whole numbers to estimate, compute, and determine whether results are reasonable. They should have a conceptual understanding of fractions and decimals; be able to solve real-world problems in all NAEP content areas; and use four-function calculators, rulers, and geometric shapes appropriately. Students performing at the *Proficient* level should employ problem-solving strategies such as identifying and using appropriate information. Their written solutions should be organized and presented both with supporting information and explanations of how they were achieved.

Advanced Level (282) Fourth-grade students performing at the *Advanced* level should apply integrated procedural knowledge and conceptual understanding to complex and nonroutine real-world problem solving in the five NAEP content areas.

Fourth-graders performing at the *Advanced* level should be able to solve complex and nonroutine real-world problems in all NAEP content areas. They should display mastery in the use of four-function calculators, rulers, and geometric shapes. These students are expected to draw logical conclusions and justify answers and solution processes by explaining why, as well as how, they were achieved. They should go beyond the obvious in their interpretations and be able to communicate their thoughts clearly and concisely.

NOTE: The scores in parentheses in the shaded boxes indicate the lowest point on the 0-500 scale at which the achievement-level range begins.

SOURCE: National Assessment Governing Board. (2014). *Mathematics Framework for the 2015 National Assessment of Educational Progress*. Washington, DC.

Figure
1-B

The Nation's Report Card 2015 State Assessment

Descriptions of eighth-grade achievement levels for 2015 NAEP mathematics assessment

Basic Level (262) Eighth-grade students performing at the *Basic* level should exhibit evidence of conceptual and procedural understanding in the five NAEP content areas. This level of performance signifies an understanding of arithmetic operations—including estimation—on whole numbers, decimals, fractions, and percents.

Eighth-graders performing at the *Basic* level should complete problems correctly with the help of structural prompts such as diagrams, charts, and graphs. They should be able to solve problems in all NAEP content areas through the appropriate selection and use of strategies and technological tools—including calculators, computers, and geometric shapes. Students at this level also should be able to use fundamental algebraic and informal geometric concepts in problem solving.

As they approach the *Proficient* level, students at the *Basic* level should be able to determine which of the available data are necessary and sufficient for correct solutions and use them in problem solving. However, these eighth-graders show limited skill in communicating mathematically.

Proficient Level (299) Eighth-grade students performing at the *Proficient* level should apply mathematical concepts and procedures consistently to complex problems in the five NAEP content areas.

Eighth-graders performing at the *Proficient* level should be able to conjecture, defend their ideas, and give supporting examples. They should understand the connections among fractions, percents, decimals, and other mathematical topics such as algebra and functions. Students at this level are expected to have a thorough understanding of *Basic* level arithmetic operations—an understanding sufficient for problem solving in practical situations.

Quantity and spatial relationships in problem solving and reasoning should be familiar to them, and they should be able to convey underlying reasoning skills beyond the level of arithmetic. They should be able to compare and contrast mathematical ideas and generate their own examples. These students should make inferences from data and graphs, apply properties of informal geometry, and accurately use the tools of technology. Students at this level should understand the process of gathering and organizing data and be able to calculate, evaluate, and communicate results within the domain of statistics and probability.

Advanced Level (333) Eighth-grade students performing at the *Advanced* level should be able to reach beyond the recognition, identification, and application of mathematical rules in order to generalize and synthesize concepts and principles in the five NAEP content areas.

Eighth-graders performing at the *Advanced* level should be able to probe examples and counterexamples in order to shape generalizations from which they can develop models. Eighth-graders performing at the *Advanced* level should use number sense and geometric awareness to consider the reasonableness of an answer. They are expected to use abstract thinking to create unique problem-solving techniques and explain the reasoning processes underlying their conclusions.

NOTE: The scores in parentheses in the shaded boxes indicate the lowest point on the 0-500 scale at which the achievement-level range begins.

SOURCE: National Assessment Governing Board. (2014). *Mathematics Framework for the 2015 National Assessment of Educational Progress*. Washington, DC.

Assessing Students With Disabilities and/or English Language Learners

Testing accommodations, such as extra testing time or individual (rather than group) administration, are provided for students with disabilities (SD) and/or English language learners (ELL) who could not fairly and accurately demonstrate their abilities without modified test administration procedures. In 1996, administration procedures were introduced at the national level allowing certain accommodations for students requiring such accommodations to participate.

In state NAEP mathematics assessments prior to 2000, no testing accommodations or adaptations were permitted for SD and/or ELL students. In 2000, NAEP was administered using a split sample of schools—one sample in which accommodations were permitted for special-needs students who normally received them and another sample in which accommodations were not permitted. Therefore, there were two different sets of results available for 2000, and both are shown in the tables in this report. Please note that bullet statements only reference the results from the 2000 assessment where accommodations were permitted. Results for the assessment years when accommodations were not permitted in state NAEP assessments (1990, 1992, 1996) are reported in the same tables as the results when accommodations were permitted (2000, 2003, 2005, 2007, 2009, 2011, 2013, and 2015).

Even with the availability of accommodations, however, some students may still be excluded from the NAEP assessment. Due to differences in policies and practices regarding the identification and inclusion of SD and/or ELL students, variations in exclusion and accommodation rates should be considered when comparing students' performance over time and across states. The types of accommodations used in the 2015 NAEP mathematics assessment are available on the NAEP website at http://www.nationsreportcard.gov/reading_math_2015/#mathematics/about#inclusion.

Interpreting Results

The scores and percentages in this report are estimates based on samples of students rather than on entire populations. In addition, the collection of questions used at each grade level is only a sample of the many questions that could have been asked to assess the skills and abilities described in the NAEP framework. Comparisons over time or between groups are based on statistical tests that consider both the size of the differences and the standard errors of the two statistics being compared. Standard errors are margins of error, and estimates based on smaller groups are likely to have larger margins of error. The size of the standard errors may also be influenced by other factors such as how representative the assessed students are of the entire population. Statistical tests that factor in these standard errors are used to determine whether the differences between average scores or percentages are significant. All differences were tested for statistical significance at the .05 level using unrounded numbers.

NAEP sample sizes have increased since 2002 compared to previous years, resulting in smaller standard errors. As a consequence, smaller differences are detected as statistically significant than were detected in previous assessments. In addition, estimates based on smaller groups are likely to have relatively large standard errors. Thus, some seemingly large differences may not be statistically significant. That is, it cannot be determined whether these differences are due to sampling error, or to true differences in the population of interest.

Differences between scores or percentages are discussed in this report only when they are significant from a statistical perspective. Significant differences between 2015 and prior assessments are marked with a notation (*) in the tables. Any differences in scores within a year or across years that are mentioned in the text as "higher," "lower," "greater," or "smaller" are statistically significant.

Score or percentage differences or gaps cited in this report are calculated based on differences between unrounded numbers. Therefore, the reader may find that the score or percentage difference cited in the text or tables may not be identical to the difference obtained from subtracting the rounded values shown in the accompanying tables or figures.

The reader is cautioned against making simple causal inferences between student performance and the other variables (e.g., race/ethnicity, gender, and type of school location) discussed in this report. A statistically significant relationship between a variable and measures of student performance does not imply that the variable causes differences in how well students perform. The relationship may be influenced by a number of other variables not accounted for in this report, such as family income, parental involvement, or student attitudes.

NAEP 2015 Mathematics Overall Average Score and Achievement-Level Results for Public School Students

Overall mathematics results for public school students from Kentucky are reported in this section, as well as regional and national results. The regions defined by the U.S. Census Bureau are Northeast, South, Midwest, and West (<http://nces.ed.gov/nationsreportcard/hsts/tabulations/regions.asp>). Trend data by region are not provided for assessment years prior to 2003.

Prior to 2000, testing accommodations were not provided for students with special needs in NAEP state mathematics assessments. For 2000, results are displayed for both the sample in which accommodations were permitted and the sample in which they were not permitted. Subsequent assessment results were based on the more inclusive samples. In the text of this report, comparisons to 2000 results refer only to the sample in which accommodations were permitted.

Overall Scale Score Results

Student performance is reported as an average score based on the NAEP mathematics scale, which ranges from 0 to 500 for grades 4 and 8.

Tables 1-A and 1-B show the overall performance results of grades 4 and 8 public school students in Kentucky, the nation (public), and the region. Prior to 2003, the list of states that comprise a given region for NAEP differed from the list used by the U.S. Census Bureau, which has been used in NAEP from 2003 onward. Therefore, the data for the state's region are given only for 2003, 2005, 2007, 2009, 2011, 2013, and 2015. The first column of results presents the average score on the NAEP mathematics scale. The remaining columns show the scores at selected percentiles. Percentiles indicate the percentages of students whose scores fell at or below a particular score. For example, the 25th percentile defines the cut point for the lowest 25 percent of students within the distribution of scale scores.

Grade 4 Scale Score Results

- In 2015, the average scale score for students in Kentucky was 242. This was not significantly different from that for students across the nation (240).
- In Kentucky, the average scale score for students in 2015 was not significantly different from that in 2013 (241). However, the average scale score for students in public schools across the nation in 2015 was lower than that in 2013 (241).
- In Kentucky, the average scale score for students in 2015 was higher than the scores in 1992, 1996, 2000, 2003, 2005, and 2007. However, it was not significantly different from the scores in 2009, 2011, and 2013.

Grade 8 Scale Score Results

- In 2015, the average scale score for students in Kentucky was 278. This was lower than that for students across the nation (281).
- In Kentucky, the average scale score for students in 2015 was lower than that in 2013 (281). Similarly, the average scale score for students in public schools across the nation in 2015 was lower than that in 2013 (284).
- In Kentucky, the average scale score for students in 2015 was higher than the scores in 1990, 1992, 1996, 2000, 2003, and 2005. However, it was lower than the scores in 2011 and 2013.

Table
1-A

The Nation's Report Card 2015 State Assessment

Average scale scores and selected percentile scores in NAEP mathematics for fourth-grade public school students, by year and jurisdiction: Various years, 1992–2015

Year and jurisdiction		Average scale score	10th percentile	25th percentile	50th percentile	75th percentile	90th percentile
1992 ¹	Nation (public)	219*	176*	197*	220*	241*	259*
	Kentucky	215*	178*	195*	215*	235*	253*
1996 ¹	Nation (public)	222*	180*	201*	224*	244*	261*
	Kentucky	220*	180*	201*	222*	240*	257*
2000 ¹	Nation (public)	226*	185*	206*	228*	249*	265*
	Kentucky	221*	183*	202*	222*	242*	257*
2000	Nation (public)	224*	183*	203*	225*	247*	264*
	Kentucky	219*	179*	200*	221*	241*	258*
2003	Nation (public)	234*	196*	215*	235*	254*	270*
	South ²	233*	197*	215*	234*	253*	268*
	Kentucky	229*	194*	212*	230*	247*	262*
2005	Nation (public)	237*	199*	219*	239*	257*	272*
	South ²	237*	201*	219*	238*	256*	271*
	Kentucky	231*	196*	214*	232*	250*	265*
2007	Nation (public)	239*	201	221	241	259*	274*
	South ²	239*	203	221*	240*	257*	272*
	Kentucky	235*	200*	218*	236*	254*	268*
2009	Nation (public)	239*	201	221	241	259*	275*
	South ²	238*	203	221*	239*	257*	273*
	Kentucky	239	203	220*	239	258	274
2011	Nation (public)	240	202*	222*	242	260	276
	South ²	239*	204	222	240*	258*	274*
	Kentucky	241	206	224	242	259	274
2013	Nation (public)	241*	202*	222*	243*	262*	278
	South ²	241	204	222	242	261	277
	Kentucky	241	204	223	243	261	276
2015	Nation (public)	240	201	221	241	260	277
	South ²	241	204	222	242	261	277
	Kentucky	242	206	224	243	260	277

* Value is significantly different ($p < .05$) from the value for the same jurisdiction in 2015.¹ Accommodations were not permitted for this assessment.² Region in which jurisdiction is located. Regional data are not provided for years prior to 2003 to be consistent with the U.S. Census Bureau defined regions.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2015 Mathematics Assessments.

Table
1-B

The Nation's Report Card 2015 State Assessment

Average scale scores and selected percentile scores in NAEP mathematics for eighth-grade public school students, by year and jurisdiction: Various years, 1990–2015

Year and jurisdiction		Average scale score	10th percentile	25th percentile	50th percentile	75th percentile	90th percentile
1990 ¹	Nation (public)	262*	214*	237*	263*	288*	307*
	Kentucky	257*	216*	235*	256*	279*	300*
1992 ¹	Nation (public)	267*	219*	242*	268*	293*	314*
	Kentucky	262*	218*	239*	263*	285*	306*
1996 ¹	Nation (public)	271*	222*	247*	272*	296*	316*
	Kentucky	267*	226*	246*	266*	288*	307*
2000 ¹	Nation (public)	274*	225*	250*	276*	300*	321*
	Kentucky	272*	229	250*	273*	295*	313*
2000	Nation (public)	272*	221*	247*	274*	299*	320*
	Kentucky	270*	226*	248*	271*	294*	314*
2003	Nation (public)	276*	228*	253*	278*	301*	321*
	South ²	274*	228*	251*	275*	298*	318*
	Kentucky	274*	231	252	276	298*	317
2005	Nation (public)	278*	230*	254*	279*	303*	323*
	South ²	276*	230*	253*	277*	300*	321*
	Kentucky	274*	233	252	274	297*	316*
2007	Nation (public)	280*	234	257	281	305*	325*
	South ²	279	235	256	280	303	323
	Kentucky	279	237	256	279	301	321
2009	Nation (public)	282	235	258*	283*	307	328
	South ²	281*	236*	257*	281*	305	325
	Kentucky	279	238*	258	279	301	321
2011	Nation (public)	283*	236*	259*	284*	308*	329
	South ²	282*	237*	259*	283*	306*	327
	Kentucky	282*	238*	259	282*	305	325
2013	Nation (public)	284*	236*	260*	285*	309*	330*
	South ²	282*	237*	259*	283*	306*	327
	Kentucky	281*	237	258	281	304	324
2015	Nation (public)	281	234	257	282	307	328
	South ²	279	233	255	279	303	325
	Kentucky	278	234	255	278	302	323

* Value is significantly different ($p < .05$) from the value for the same jurisdiction in 2015.¹ Accommodations were not permitted for this assessment.² Region in which jurisdiction is located. Regional data are not provided for years prior to 2003 to be consistent with the U.S. Census Bureau defined regions.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2015 Mathematics Assessments.

Overall Achievement-Level Results

Student results are reported as the percentages of students performing relative to performance standards set by the National Assessment Governing Board. These performance standards for what students should know and be able to do were based on the recommendations of broadly representative panels of educators and members of the public.

Tables 2-A and 2-B show the percentage of students at grades 4 and 8 who performed below *Basic*, at or above *Basic*, at or above *Proficient*, and at *Advanced*. Because the percentages are cumulative from *Basic* to *Proficient* to *Advanced*, they may sum to more than 100 percent. Only the percentage of students performing at or above *Basic* (which includes the students at *Proficient* and *Advanced*) plus the students below *Basic* will sum to 100 percent.

Grade 4 Achievement-Level Results

- In 2015, the percentage of Kentucky's students who performed at or above *Proficient* was 40 percent. This was not significantly different from the percentage of the nation's public school students who performed at or above *Proficient* (39 percent).
- In Kentucky, the percentage of students who performed at or above *Proficient* in 2015 was greater than the percentages in 1992, 1996, 2000, 2003, 2005, and 2007, but was not significantly different from the percentages in 2009, 2011, and 2013.
- In 2015, the percentage of Kentucky's students who performed at or above *Basic* was 84 percent. This was greater than the percentage of the nation's public school students who performed at or above *Basic* (81 percent).
- In Kentucky, the percentage of students who performed at or above *Basic* in 2015 was greater than the percentages in 1992, 1996, 2000, 2003, 2005, and 2007, but was not significantly different from the percentages in 2009, 2011, and 2013.

Grade 8 Achievement-Level Results

- In 2015, the percentage of Kentucky's students who performed at or above *Proficient* was 28 percent. This was smaller than the percentage of the nation's public school students who performed at or above *Proficient* (32 percent).
- In Kentucky, the percentage of students who performed at or above *Proficient* in 2015 was greater than the percentages in 1990, 1992, 1996, 2000, 2003, and 2005, but was not significantly different from the percentages in 2007, 2009, 2011, and 2013.
- In 2015, the percentage of Kentucky's students who performed at or above *Basic* was 68 percent. This was smaller than the percentage of the nation's public school students who performed at or above *Basic* (70 percent).
- In Kentucky, the percentage of students who performed at or above *Basic* in 2015 was greater than the percentages in 1990, 1992, 1996, and 2000, but was smaller than the percentages in 2011 and 2013.

Table
2-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students at or above NAEP mathematics achievement levels, by year and jurisdiction: Various years, 1992–2015

Year and jurisdiction		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
1992 ¹	Nation (public)	43*	57*	17*	2*
	Kentucky	49*	51*	13*	1*
1996 ¹	Nation (public)	38*	62*	20*	2*
	Kentucky	40*	60*	16*	1*
2000 ¹	Nation (public)	33*	67*	25*	2*
	Kentucky	40*	60*	17*	1*
2000	Nation (public)	36*	64*	22*	2*
	Kentucky	41*	59*	17*	1*
2003	Nation (public)	24*	76*	31*	4*
	South ²	24*	76*	29*	3*
	Kentucky	28*	72*	22*	2*
2005	Nation (public)	21*	79*	35*	5*
	South ²	20*	80*	34*	4*
	Kentucky	25*	75*	26*	3*
2007	Nation (public)	19	81	39	5*
	South ²	18	82	36*	5*
	Kentucky	21*	79*	31*	3*
2009	Nation (public)	19	81	38	6*
	South ²	18*	82*	36*	5*
	Kentucky	19	81	37	6
2011	Nation (public)	18*	82*	40	6*
	South ²	18	82	37*	5*
	Kentucky	15	85	39	5
2013	Nation (public)	18*	82*	41*	8
	South ²	17	83	40	7
	Kentucky	16	84	41	6
2015	Nation (public)	19	81	39	7
	South ²	17	83	40	7
	Kentucky	16	84	40	7

* Value is significantly different ($p < .05$) from the value for the same jurisdiction in 2015.¹ Accommodations were not permitted for this assessment.² Region in which jurisdiction is located. Regional data are not provided for years prior to 2003 to be consistent with the U.S. Census Bureau defined regions. NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2015 Mathematics Assessments.

Table
2-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students at or above NAEP mathematics achievement levels, by year and jurisdiction: Various years, 1990–2015

Year and jurisdiction		Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
1990 ¹	Nation (public)	49*	51*	15*	2*
	Kentucky	57*	43*	10*	1*
1992 ¹	Nation (public)	44*	56*	20*	3*
	Kentucky	49*	51*	14*	2*
1996 ¹	Nation (public)	39*	61*	23*	4*
	Kentucky	44*	56*	16*	1*
2000 ¹	Nation (public)	35*	65*	26*	5*
	Kentucky	37*	63*	21*	3*
2000	Nation (public)	38*	62*	25*	5*
	Kentucky	40*	60*	20*	3*
2003	Nation (public)	33*	67*	27*	5*
	South ²	36*	64*	24*	4*
	Kentucky	35	65	24*	4*
2005	Nation (public)	32*	68*	28*	6*
	South ²	34*	66*	26*	5*
	Kentucky	36	64	23*	3*
2007	Nation (public)	30	70	31*	7*
	South ²	30	70	29	6*
	Kentucky	31	69	27	5
2009	Nation (public)	29*	71*	33	7
	South ²	29*	71*	30*	7
	Kentucky	30	70	27	5
2011	Nation (public)	28*	72*	34*	8
	South ²	28*	72*	32*	7
	Kentucky	28*	72*	31	6
2013	Nation (public)	27*	73*	34*	8
	South ²	28*	72*	32*	7
	Kentucky	29*	71*	30	6
2015	Nation (public)	30	70	32	8
	South ²	31	69	29	6
	Kentucky	32	68	28	5

* Value is significantly different ($p < .05$) from the value for the same jurisdiction in 2015.¹ Accommodations were not permitted for this assessment.² Region in which jurisdiction is located. Regional data are not provided for years prior to 2003 to be consistent with the U.S. Census Bureau defined regions.NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2015 Mathematics Assessments.

Comparisons Between Kentucky, the Nation, and Participating States and Jurisdictions

All 50 states, the District of Columbia, and Department of Defense Education Activity schools (DoDEA) participated in the 2015 mathematics assessment at grades 4 and 8. References to "jurisdictions" in the results statements may include states, the District of Columbia, and DoDEA schools.

Comparisons by Scale Scores

Figures 2-A and 2-B compare Kentucky's 2015 overall mathematics scale scores at grades 4 and 8 with those of public schools in the nation and all other participating states and jurisdictions. The different shadings indicate whether the average score of the nation (public), a state, or a jurisdiction was found to be higher than, lower than, or not significantly different from that of Kentucky in the NAEP 2015 mathematics assessment.

Grade 4 Scale Score Comparison Results

- The average score for students in Kentucky was higher than 20 jurisdictions, not significantly different from 22 jurisdictions, and lower than 9 jurisdictions.

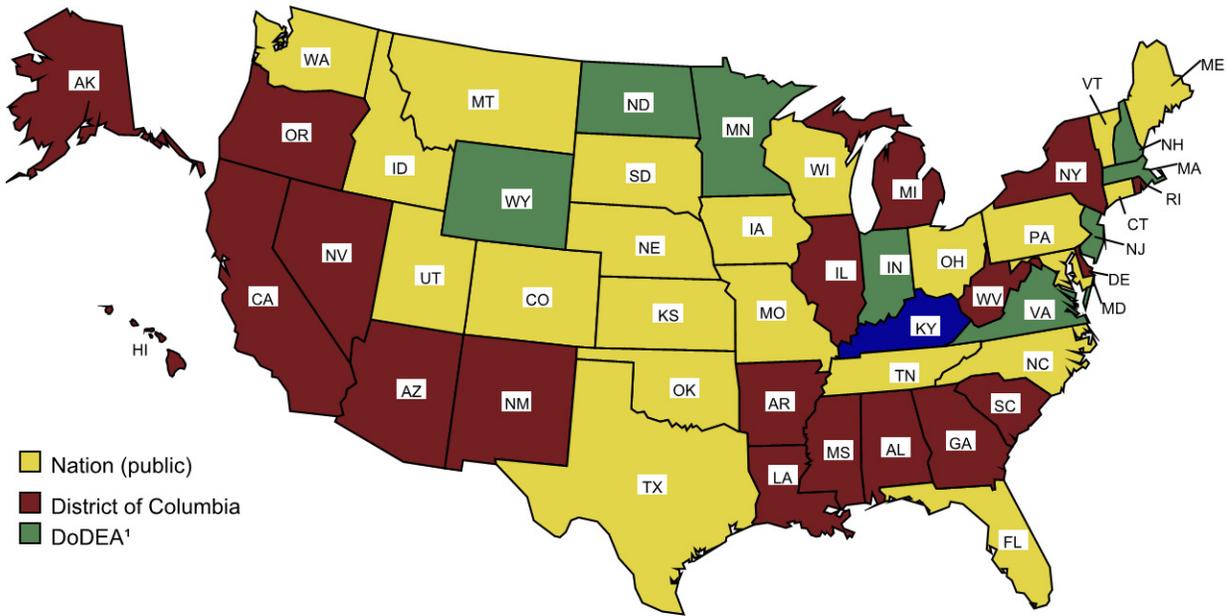
Grade 8 Scale Score Comparison Results

- The average score for students in Kentucky was higher than 7 jurisdictions, not significantly different from 14 jurisdictions, and lower than 30 jurisdictions.

Figure 2-A

The Nation's Report Card 2015 State Assessment

Kentucky's average scale score in NAEP mathematics for fourth-grade public school students compared with scores for the nation and other participating jurisdictions: 2015



- ☆ Focal state/jurisdiction (Kentucky)
- Higher average scale score than Kentucky (9 jurisdictions)
- Not significantly different from Kentucky (nation and 22 jurisdictions)
- Lower average scale score than Kentucky (20 jurisdictions)

¹ Department of Defense Education Activity (overseas and domestic schools).

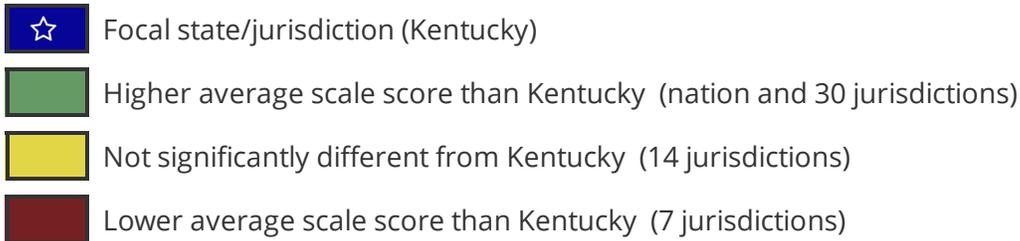
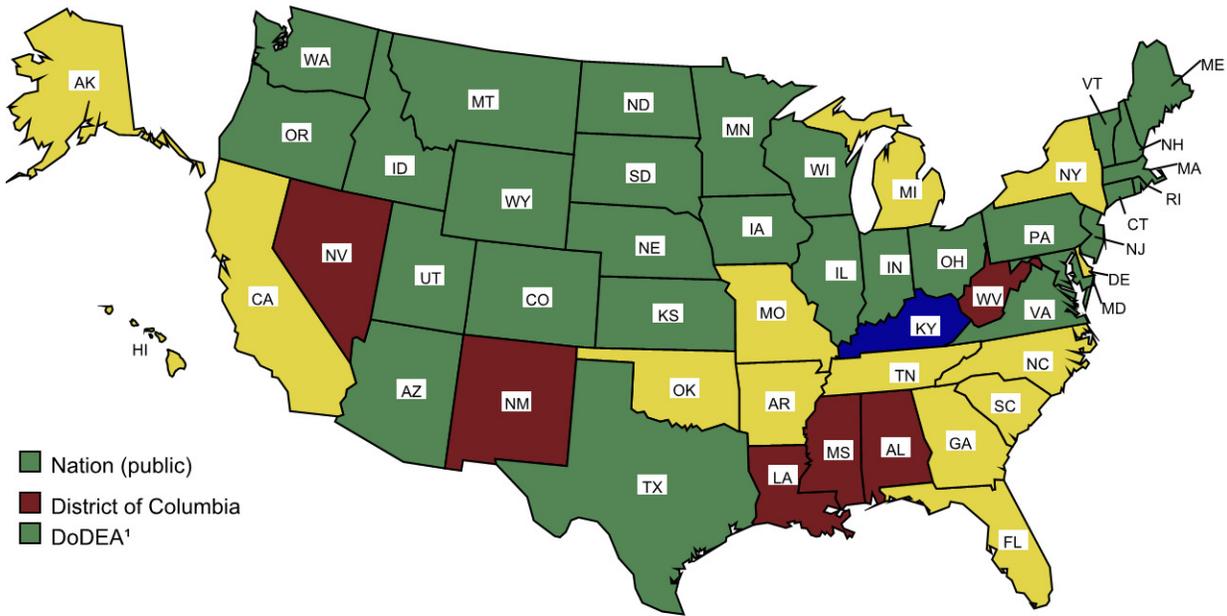
NOTE: Significance tests used a multiple-comparison procedure based on all jurisdictions that participated.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 Mathematics Assessment.

Figure 2-B

The Nation's Report Card 2015 State Assessment

Kentucky's average scale score in NAEP mathematics for eighth-grade public school students compared with scores for the nation and other participating jurisdictions: 2015



¹ Department of Defense Education Activity (overseas and domestic schools).

NOTE: NOTE: Significance tests used a multiple-comparison procedure based on all jurisdictions that participated.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 Mathematics Assessment.

Comparisons by Achievement Levels

Figures 3-A and 3-B permit comparisons of all jurisdictions (and the nation) participating in the NAEP 2015 mathematics assessment in terms of percentages of grades 4 and 8 students performing at or above *Proficient*. The participating states and jurisdictions are grouped into categories that reflect whether the percentage of their students performing at or above *Proficient* (including *Advanced*) was found to be higher than, not significantly different from, or lower than the percentage in Kentucky .

Note that the selected state is listed first in its category, and the other states and jurisdictions within each category are listed alphabetically; statistical comparisons among jurisdictions in each of the three categories are not included in this report. However, statistical comparisons among states by achievement level can be calculated online by using the NAEP Data Explorer at <http://nces.ed.gov/nationsreportcard/naepdata/>.

Grade 4 Achievement-Level Comparison Results

- The percentage of students performing at or above the *Proficient* level in Kentucky was greater than the percentage in 13 jurisdictions, not significantly different from those in 29 jurisdictions, and smaller than those in 9 jurisdictions.
- The percentage of students performing at or above the *Basic* level in Kentucky was greater than the percentage in 21 jurisdictions, not significantly different from those in 24 jurisdictions, and smaller than those in 6 jurisdictions (data not shown).

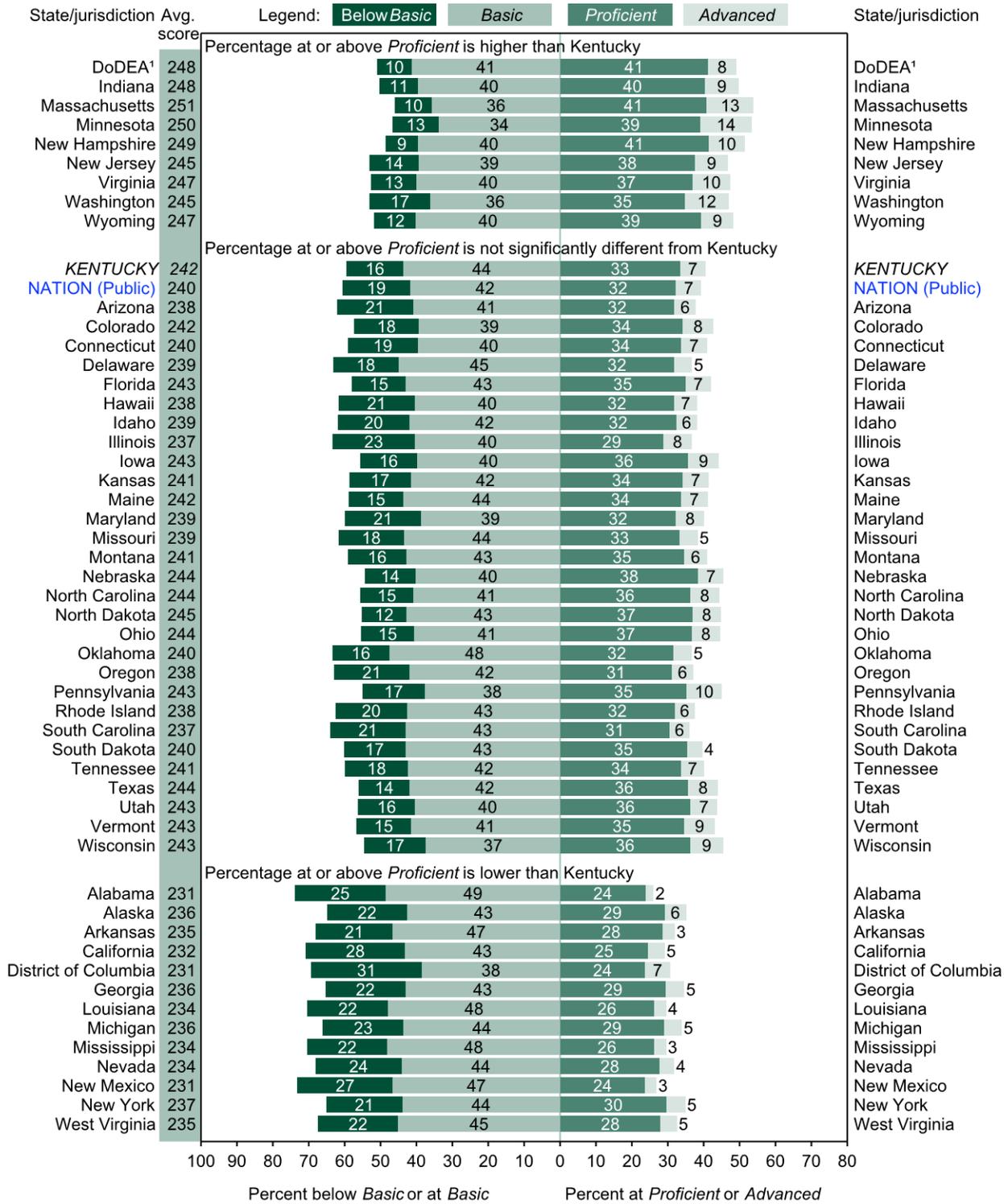
Grade 8 Achievement-Level Comparison Results

- The percentage of students performing at or above the *Proficient* level in Kentucky was greater than the percentage in 7 jurisdictions, not significantly different from those in 12 jurisdictions, and smaller than those in 32 jurisdictions.
- The percentage of students performing at or above the *Basic* level in Kentucky was greater than the percentage in 6 jurisdictions, not significantly different from those in 17 jurisdictions, and smaller than those in 28 jurisdictions (data not shown).

Figure 3-A

The Nation's Report Card 2015 State Assessment

Average scale scores in NAEP mathematics for fourth-grade public school students, percentage within each achievement level, and Kentucky's percentage at or above *Proficient* compared with the nation and other participating jurisdictions: 2015



¹ Department of Defense Education Activity (overseas and domestic schools).

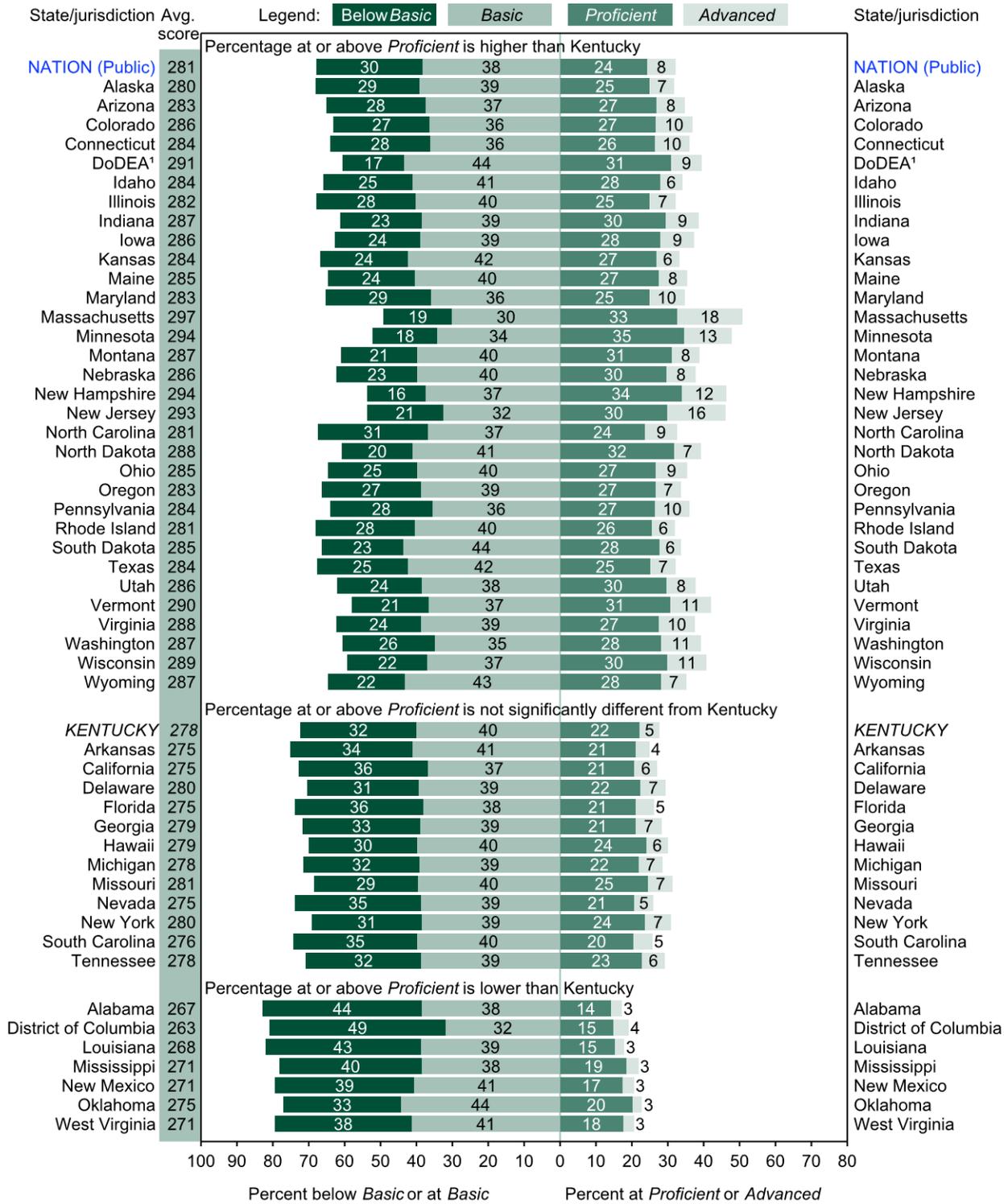
NOTE: The bars above contain percentages of students in each NAEP Mathematics achievement level. Achievement levels corresponding to each population of students are aligned at the point where the *Proficient* category begins, so that they may be compared at *Proficient* and above. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers. The shaded bars are graphed using unrounded numbers. Significance tests used a multiple-comparison procedure based on all jurisdictions that participated.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 Mathematics Assessment.

Figure 3-B

The Nation's Report Card 2015 State Assessment

Average scale scores in NAEP mathematics for eighth-grade public school students, percentage within each achievement level, and Kentucky's percentage at or above *Proficient* compared with the nation and other participating jurisdictions: 2015



¹ Department of Defense Education Activity (overseas and domestic schools).

NOTE: The bars above contain percentages of students in each NAEP Mathematics achievement level. Achievement levels corresponding to each population of students are aligned at the point where the *Proficient* category begins, so that they may be compared at *Proficient* and above. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers. The shaded bars are graphed using unrounded numbers. Significance tests used a multiple-comparison procedure based on all jurisdictions that participated.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 Mathematics Assessment.

Mathematics Performance of Selected Student Groups

This section of the report presents trend results for public school students in Kentucky and the nation by demographic characteristics. Student performance data are reported for

- race/ethnicity
- gender
- student eligibility for the National School Lunch Program
- type of school location (for 2007, 2009, 2011, 2013, and 2015)
- parents' highest level of education

Results for each of the variables are reported in tables that include the percentage of students in each group in the first column, and the average scale score in the second column. The columns to the right show the percentage of students below *Basic* and at or above each achievement level.

Results by students' race/ethnicity and gender include statements about score point differences between student groups (e.g., between White and Black or White and Hispanic students, or between male and female students) in 2015 and in the first assessment year. Because these differences are calculated using unrounded values, they may differ slightly from what would be obtained by subtracting the rounded values that appear in the tables. Statements indicating a narrowing or widening of the gap in students' scores are only made if the change in the gap from the first assessment year to 2015 was found to be statistically significant.

The reader is cautioned against making simple causal inferences about group differences, as a complex mix of educational and socioeconomic factors may affect student performance. NAEP collects information on many additional variables, including school and home factors related to achievement. This information is in an interactive database available on the NAEP website <http://nces.ed.gov/nationsreportcard/naepdata/>.

Race/Ethnicity

Prior to 2011, student race/ethnicity was obtained from school records and reported for the six mutually exclusive categories shown below:

- White
- Black
- Hispanic
- Asian/Pacific Islander
- American Indian/Alaska Native
- Unclassified (not shown in tables)

Students who identified with more than one of the other five categories were classified as "Other" and were included as part of the "Unclassified" category along with students who had a background other than the ones listed or whose race/ethnicity could not be determined.

In compliance with new standards from the U.S. Office of Management and Budget for collecting and reporting data on race/ethnicity, additional information was collected in 2011 so that results could be reported separately for Asian students, Native Hawaiian/Other Pacific Islander students, and students identifying with two or more races. Beginning in 2011, all of the students participating in NAEP were identified as one of the seven racial/ethnic categories listed below:

- White
- Black or African American
- Hispanic
- Asian
- American Indian/Alaska Native
- Native Hawaiian/Other Pacific Islander
- Two or more races

As in earlier years, students identified as Hispanic were classified as Hispanic in 2011, 2013, and 2015 even if they were also identified with another racial/ethnic group. Students who identified with two or more of the other racial/ethnic groups (e.g., White and Black) would have been classified as "Other" and reported as part of the "Unclassified" category prior to 2011, and classified as "Two or more races" in 2011, 2013, and 2015.

When comparing the results for racial/ethnic groups prior to 2011, data for Asian and Native Hawaiian/Other Pacific Islander students are combined into a single Asian/Pacific Islander category.

Tables 3-A and 3-B show average scale scores and percentage of students by achievement-level data for public school students at grades 4 and 8 in Kentucky and the nation, by race/ethnicity.

Grade 4 Scale Score Results by Race/Ethnicity

- In 2015, White students in Kentucky had an average scale score that was higher than the average scores of Black and Hispanic students, but not significantly different from the average score of Asian/Pacific Islander students.
- In 2015, the average scale score of White students in Kentucky was higher than their respective scores in 1992, 1996, 2000, 2003, 2005, and 2007, but not significantly different from their respective scores in 2009, 2011, and 2013.
- In 2015, the average scale score of Black students in Kentucky was higher than their respective scores in 1992, 1996, 2000, 2003, 2005, 2007, and 2009, but not significantly different from their respective scores in 2011 and 2013.
- In 2015, the average scale score of Hispanic students in Kentucky was higher than their respective score in 2007, but not significantly different from their respective scores in 2009, 2011, and 2013.
- In 2015, the average scale score of Asian/Pacific Islander students in Kentucky was not significantly different from their respective scores in 2009, 2011, and 2013.
- In 2015, Black students in Kentucky had an average score that was lower than that of White students by 18 points. In 1992, the average score for Black students was lower than that of White students by 17 points.
- In 2015, Hispanic students in Kentucky had an average score that was lower than that of White students by 9 points. Data are not reported for Hispanic students in 1992, because reporting standards were not met.

Grade 4 Achievement-Level Results by Race/Ethnicity

- In 2015 in Kentucky, the percentage of White students performing at or above *Proficient* was greater than the corresponding percentages of Black and Hispanic students, but not significantly different from the percentage of Asian/Pacific Islander students.
- In 2015, the percentage of White students in Kentucky performing at or above *Proficient* was greater than the percentages of their respective peers in 1992, 1996, 2000, 2003, 2005, and 2007, but not significantly different from the percentages of their respective peers in 2009, 2011, and 2013.
- In 2015, the percentage of Black students in Kentucky performing at or above *Proficient* was greater than the percentages of their respective peers in 1992, 1996, 2000, 2003, and 2005, but not significantly different from the percentages of their respective peers in 2007, 2009, 2011, and 2013.
- In 2015, the percentage of Hispanic students in Kentucky performing at or above *Proficient* was greater than the percentage in 2007, but not significantly different from the percentages of their respective peers in 2009, 2011, and 2013.
- In 2015, the percentage of Asian/Pacific Islander students in Kentucky performing at or above *Proficient* was not significantly different from the percentages of their respective peers in 2009, 2011, and 2013.

Table
3-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: Various years, 1992–2015

Race/ethnicity, year, and jurisdiction	Percentage of students	Average scale score	Percent			
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
White						
1992 ¹ Nation (public)	72*	227*	32*	68*	22*	2*
Kentucky	90*	217*	47*	53*	13*	1*
1996 ¹ Nation (public)	71*	230*	27*	73*	25*	3*
Kentucky	89*	222*	37*	63*	17*	1*
2000 ¹ Nation (public)	67*	234*	22*	78*	32*	3*
Kentucky	87*	224*	35*	65*	19*	2*
2000 Nation (public)	62*	233*	24*	76*	30*	3*
Kentucky	86*	223*	36*	64*	19*	2*
2003 Nation (public)	58*	243*	13*	87*	42*	5*
Kentucky	85*	231*	25*	75*	24*	2*
2005 Nation (public)	57*	246*	11	89	47*	7*
Kentucky	84*	234*	22*	78*	29*	3*
2007 Nation (public)	55*	248	9*	91*	51	8*
Kentucky	84*	238*	18*	82*	34*	4*
2009 Nation (public)	54*	248	10	90	50	8*
Kentucky	83*	241	16	84	39	6
2011 Nation (public)	52*	249	9*	91*	52	9
Kentucky	84*	243	13	87	41	6
2013 Nation (public)	51*	250*	9*	91*	54*	10
Kentucky	79	244	13	87	45	7
2015 Nation (public)	49	248	10	90	51	10
Kentucky	78	244	14	86	44	7

See notes at end of table.

Table
3-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: Various years, 1992–2015
—Continued

Race/ethnicity, year, and jurisdiction	Percentage of students	Average scale score	Percent			
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Black						
1992 ¹ Nation (public)	18*	192*	78*	22*	2*	#
Kentucky	9	200*	71*	29*	3*	#
1996 ¹ Nation (public)	17	199*	70*	30*	4*	#
Kentucky	10	203*	63*	37*	4*	#
2000 ¹ Nation (public)	17*	204*	64*	36*	5*	#
Kentucky	11	199*	72*	28*	2*	#
2000 Nation (public)	17	203*	65*	35*	4*	#*
Kentucky	12	196*	73*	27*	2*	#
2003 Nation (public)	17*	216*	46*	54*	10*	#*
Kentucky	12	214*	47*	53*	8*	#
2005 Nation (public)	17*	220*	40*	60*	13*	1*
Kentucky	12	217*	44*	56*	9*	#
2007 Nation (public)	17*	222*	37	63	15*	1*
Kentucky	11	219*	41	59	12	#
2009 Nation (public)	16*	222*	37	63	15*	1*
Kentucky	10	220*	41	59	14	1
2011 Nation (public)	16	224	34	66	17	1
Kentucky	9	225	31	69	17	1
2013 Nation (public)	16	224	34	66	18	1
Kentucky	11	224	35	65	19	1
2015 Nation (public)	15	224	35	65	19	1
Kentucky	10	226	32	68	20	1

See notes at end of table.

Table
3-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: Various years, 1992–2015
—Continued

Race/ethnicity, year, and jurisdiction	Percentage of students	Average scale score	Percent				
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>	
Hispanic							
1992 ¹ Nation (public)	7*	201*	68*	32*	5*	#	
Kentucky	#*	‡	‡	‡	‡	‡	
1996 ¹ Nation (public)	9*	204*	63*	37*	7*	#	
Kentucky	#*	‡	‡	‡	‡	‡	
2000 ¹ Nation (public)	11*	209*	55*	45*	8*	#	
Kentucky	1*	‡	‡	‡	‡	‡	
2000 Nation (public)	16*	207*	59*	41*	7*	#*	
Kentucky	1*	‡	‡	‡	‡	‡	
2003 Nation (public)	19*	221*	38*	62*	15*	1*	
Kentucky	1*	‡	‡	‡	‡	‡	
2005 Nation (public)	20*	225*	33*	67*	19*	1*	
Kentucky	2*	‡	‡	‡	‡	‡	
2007 Nation (public)	21*	227*	31*	69*	22*	1*	
Kentucky	2*	221*	38*	62*	15*	1	
2009 Nation (public)	22*	227*	30	70	21*	1*	
Kentucky	3*	227	33	67	22	2	
2011 Nation (public)	24*	229	28	72	24	2	
Kentucky	4*	236	18	82	30	3	
2013 Nation (public)	25*	230	27	73	26	2	
Kentucky	5	234	24	76	30	4	
2015 Nation (public)	26	230	27	73	26	3	
Kentucky	6	234	23	77	30	4	

See notes at end of table.

Table
3-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: Various years, 1992–2015
—Continued

Race/ethnicity, year, and jurisdiction	Percentage of students	Average scale score	Percent			
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Asian/Pacific Islander						
1992 ¹ Nation (public)	3*	231*	26*	74*	27*	4*
Kentucky	#*	‡	‡	‡	‡	‡
1996 ¹ Nation (public)	3*	225*	35*	65*	20*	5*
Kentucky	#*	‡	‡	‡	‡	‡
2000 ¹ Nation (public)	‡	‡	‡	‡	‡	‡
Kentucky	1*	‡	‡	‡	‡	‡
2000 Nation (public)	‡	‡	‡	‡	‡	‡
Kentucky	1*	‡	‡	‡	‡	‡
2003 Nation (public)	4*	246*	13*	87*	48*	10*
Kentucky	1*	‡	‡	‡	‡	‡
2005 Nation (public)	4*	251*	11	89	54*	14*
Kentucky	1*	‡	‡	‡	‡	‡
2007 Nation (public)	5*	254	9	91	59	16*
Kentucky	1*	‡	‡	‡	‡	‡
2009 Nation (public)	5	255	9	91	61	18
Kentucky	1	265	7	93	69	35
2011 Nation (public)	5	256	9	91	62	20
Kentucky	1	261	6	94	66	27
2013 Nation (public)	5	258	9	91	64	23
Kentucky	2	260	10	90	68	27
2015 Nation (public)	5	256	10	90	61	22
Kentucky	2	258	12	88	62	32

See notes at end of table.

Table
3-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: Various years, 1992–2015
—Continued

Race/ethnicity, year, and jurisdiction	Percentage of students	Average scale score	Percent			
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
American Indian/Alaska Native						
1992 ¹ Nation (public)	1	‡	‡	‡	‡	‡
Kentucky	#	‡	‡	‡	‡	‡
1996 ¹ Nation (public)	1*	‡	‡	‡	‡	‡
Kentucky	#	‡	‡	‡	‡	‡
2000 ¹ Nation (public)	1	‡	‡	‡	‡	‡
Kentucky	#	‡	‡	‡	‡	‡
2000 Nation (public)	1	207*	61*	39*	8*	#
Kentucky	#	‡	‡	‡	‡	‡
2003 Nation (public)	1	224*	35*	65*	18*	1
Kentucky	#	‡	‡	‡	‡	‡
2005 Nation (public)	1	227	31	69	22	2
Kentucky	#	‡	‡	‡	‡	‡
2007 Nation (public)	1	229	28	72	26	3
Kentucky	#	‡	‡	‡	‡	‡
2009 Nation (public)	1	227	32	68	23	2
Kentucky	#	‡	‡	‡	‡	‡
2011 Nation (public)	1	227	32	68	24	2
Kentucky	#	‡	‡	‡	‡	‡
2013 Nation (public)	1	228	30	70	24	2
Kentucky	#	‡	‡	‡	‡	‡
2015 Nation (public)	1	228	30	70	24	2
Kentucky	#	‡	‡	‡	‡	‡

Rounds to zero.

‡ Reporting standards not met.

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.¹ Accommodations were not permitted for this assessment.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2015 Mathematics Assessments.

Grade 8 Scale Score Results by Race/Ethnicity

- In 2015, White students in Kentucky had an average scale score that was higher than the average scores of Black and Hispanic students, but lower than the average score of Asian/Pacific Islander students.
- In 2015, the average scale score of White students in Kentucky was higher than their respective scores in 1990, 1992, 1996, 2000, 2003, and 2005, but lower than their respective score in 2011, and not significantly different from their respective scores in 2007, 2009, and 2013.
- In 2015, the average scale score of Black students in Kentucky was higher than their respective scores in 1990, 1992, 1996, and 2003, but not significantly different from their respective scores in 2000, 2005, 2007, 2009, 2011, and 2013.
- In 2015, the average scale score of Hispanic students in Kentucky was not significantly different from their respective scores in 2009, 2011, and 2013.
- In 2015, the average scale score of Asian/Pacific Islander students in Kentucky was not significantly different from their respective score in 2013.
- In 2015, Black students in Kentucky had an average score that was lower than that of White students by 23 points. In 1990, the average score for Black students was lower than that of White students by 18 points.
- In 2015, Hispanic students in Kentucky had an average score that was lower than that of White students by 7 points. Data are not reported for Hispanic students in 1990, because reporting standards were not met.

Grade 8 Achievement-Level Results by Race/Ethnicity

- In 2015 in Kentucky, the percentage of White students performing at or above *Proficient* was greater than the percentage of Black students, but smaller than the percentage of Asian/Pacific Islander students, and not significantly different from the percentage of Hispanic students.
- In 2015, the percentage of White students in Kentucky performing at or above *Proficient* was greater than the percentages of their respective peers in 1990, 1992, 1996, 2000, 2003, and 2005, but not significantly different from the percentages of their respective peers in 2007, 2009, 2011, and 2013.
- In 2015, the percentage of Black students in Kentucky performing at or above *Proficient* was greater than the percentages of their respective peers in 1990, 1992, 2000, and 2003, but not significantly different from the percentages of their respective peers in 2005, 2007, 2009, 2011, and 2013.
- In 2015, the percentage of Hispanic students in Kentucky performing at or above *Proficient* was not significantly different from the percentages of their respective peers in 2009, 2011, and 2013.
- In 2015, the percentage of Asian/Pacific Islander students in Kentucky performing at or above *Proficient* was not significantly different from the percentage in 2013.

Table
3-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: Various years, 1990–2015

Race/ethnicity, year, and jurisdiction	Percentage of students	Average scale score	Percent				
			Below Basic	At or above Basic	At or above Proficient	At Advanced	
White							
1990 ¹	Nation (public)	73*	269*	41*	59*	18*	3*
	Kentucky	90*	259*	55*	45*	11*	1*
1992 ¹	Nation (public)	72*	276*	34*	66*	25*	3*
	Kentucky	90*	264*	46*	54*	15*	2*
1996 ¹	Nation (public)	70*	280*	28*	72*	29*	5*
	Kentucky	89*	269*	41*	59*	17*	2*
2000 ¹	Nation (public)	69*	284*	24*	76*	33*	6*
	Kentucky	87*	274*	34	66	22*	3*
2000	Nation (public)	63*	283*	25*	75*	33*	6*
	Kentucky	87*	272*	36*	64*	22*	3*
2003	Nation (public)	62*	287*	21*	79*	36*	7*
	Kentucky	88*	277*	32	68	25*	4*
2005	Nation (public)	60*	288*	21*	79*	37*	7*
	Kentucky	86*	276*	33	67	24*	4*
2007	Nation (public)	58*	290	19	81	41	9*
	Kentucky	86*	282	27	73	29	5
2009	Nation (public)	56*	292*	18*	82*	43	10
	Kentucky	85*	282	27	73	29	5
2011	Nation (public)	54*	293*	17*	83*	43*	10
	Kentucky	84	284*	25	75	33	7
2013	Nation (public)	53*	293*	17*	83*	44*	11
	Kentucky	83	283	25	75	33	7
2015	Nation (public)	51	291	19	81	42	10
	Kentucky	82	281	29	71	30	6

See notes at end of table.

Table
3-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: Various years, 1990–2015
—Continued

Race/ethnicity, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Black							
1990 ¹	Nation (public)	16	236*	79*	21*	5*	#
	Kentucky	9	240*	77*	23*	2*	#
1992 ¹	Nation (public)	17*	236*	81*	19*	2*	#
	Kentucky	9	241*	77*	23*	4*	#
1996 ¹	Nation (public)	16	241*	74*	26*	4*	#
	Kentucky	9	247*	70*	30*	2	#
2000 ¹	Nation (public)	14*	245*	70*	30*	5*	#*
	Kentucky	11	251	63	37	7	#
2000	Nation (public)	17	243*	70*	30*	5*	#*
	Kentucky	11	250	65	35	6*	1
2003	Nation (public)	17*	252*	61*	39*	7*	#*
	Kentucky	9	250*	62	38	5*	#
2005	Nation (public)	17*	254*	59*	41*	8*	1*
	Kentucky	10	255	57	43	9	#
2007	Nation (public)	17*	259	53	47	11*	1*
	Kentucky	10	257	58	42	11	1
2009	Nation (public)	16	260	51	49	12	1
	Kentucky	10	258	55	45	8	#
2011	Nation (public)	16	262*	50*	50*	13	1
	Kentucky	10	261	53	47	12	1
2013	Nation (public)	15	263*	49*	51*	14*	2
	Kentucky	10	260	51	49	11	1
2015	Nation (public)	15	260	53	47	12	1
	Kentucky	10	257	57	43	12	1

See notes at end of table.

Table
3-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: Various years, 1990–2015
—Continued

Race/ethnicity, year, and jurisdiction	Percentage of students	Average scale score	Percent				
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>	
Hispanic							
1990 ¹ Nation (public)	7*	245*	67*	33*	7*	1*	
Kentucky	#*	‡	‡	‡	‡	‡	
1992 ¹ Nation (public)	8*	247*	67*	33*	6*	#*	
Kentucky	#*	‡	‡	‡	‡	‡	
1996 ¹ Nation (public)	9*	250*	62*	38*	8*	1	
Kentucky	1*	‡	‡	‡	‡	‡	
2000 ¹ Nation (public)	11*	252*	60*	40*	8*	#*	
Kentucky	#*	‡	‡	‡	‡	‡	
2000 Nation (public)	14*	252*	60*	40*	8*	#*	
Kentucky	1*	‡	‡	‡	‡	‡	
2003 Nation (public)	15*	258*	53*	47*	11*	1*	
Kentucky	1*	‡	‡	‡	‡	‡	
2005 Nation (public)	17*	261*	50*	50*	13*	1*	
Kentucky	1*	‡	‡	‡	‡	‡	
2007 Nation (public)	19*	264*	46*	54*	15*	2*	
Kentucky	2*	‡	‡	‡	‡	‡	
2009 Nation (public)	21*	266*	44*	56*	17	2*	
Kentucky	2*	272	37	63	22	3	
2011 Nation (public)	23*	269	40	60	20	3	
Kentucky	3*	269	39	61	18	1	
2013 Nation (public)	23*	271	38	62	21	3	
Kentucky	4	269	40	60	17	3	
2015 Nation (public)	25	269	40	60	19	3	
Kentucky	4	274	36	64	21	4	

See notes at end of table.

Table
3-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: Various years, 1990–2015
—Continued

Race/ethnicity, year, and jurisdiction	Percentage of students	Average scale score	Percent			
			Below Basic	At or above Basic	At or above Proficient	At Advanced
Asian/Pacific Islander						
1990 ¹ Nation (public)	2*	275*	36*	64*	30*	6*
Kentucky	1*	‡	‡	‡	‡	‡
1992 ¹ Nation (public)	2*	290	25	75	43	14
Kentucky	1*	‡	‡	‡	‡	‡
1996 ¹ Nation (public)	‡	‡	‡	‡	‡	‡
Kentucky	1	‡	‡	‡	‡	‡
2000 ¹ Nation (public)	4*	286*	27*	73*	40*	12*
Kentucky	1	‡	‡	‡	‡	‡
2000 Nation (public)	4*	287*	27*	73*	40*	12*
Kentucky	1	‡	‡	‡	‡	‡
2003 Nation (public)	4*	289*	23*	77*	42*	12*
Kentucky	1	‡	‡	‡	‡	‡
2005 Nation (public)	5*	294*	19*	81*	46*	16*
Kentucky	1	‡	‡	‡	‡	‡
2007 Nation (public)	5*	296*	18*	82*	49*	17*
Kentucky	1	‡	‡	‡	‡	‡
2009 Nation (public)	5	300*	16	84	53	20
Kentucky	1	‡	‡	‡	‡	‡
2011 Nation (public)	6	302	15	85	55	22
Kentucky	1	‡	‡	‡	‡	‡
2013 Nation (public)	5	306	13	87	60	25
Kentucky	1	307	15	85	58	31
2015 Nation (public)	6	305	14	86	58	25
Kentucky	1	304	14	86	58	24

See notes at end of table.

Table
3-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: Various years, 1990–2015
—Continued

Race/ethnicity, year, and jurisdiction	Percentage of students	Average scale score	Percent			
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
American Indian/Alaska Native						
1990 ¹ Nation (public)	1	‡	‡	‡	‡	‡
Kentucky	#	‡	‡	‡	‡	‡
1992 ¹ Nation (public)	1	‡	‡	‡	‡	‡
Kentucky	#	‡	‡	‡	‡	‡
1996 ¹ Nation (public)	1	‡	‡	‡	‡	‡
Kentucky	#	‡	‡	‡	‡	‡
2000 ¹ Nation (public)	1	264	47	53	14	2
Kentucky	#	‡	‡	‡	‡	‡
2000 Nation (public)	1	263	47	53	13	3
Kentucky	#	‡	‡	‡	‡	‡
2003 Nation (public)	1	265	46	54	16	2
Kentucky	#	‡	‡	‡	‡	‡
2005 Nation (public)	1	266	45	55	14*	2
Kentucky	#	‡	‡	‡	‡	‡
2007 Nation (public)	1*	265	44	56	17	2
Kentucky	#	‡	‡	‡	‡	‡
2009 Nation (public)	1	267	43	57	20	3
Kentucky	#	‡	‡	‡	‡	‡
2011 Nation (public)	1	266	45	55	17	4
Kentucky	#	‡	‡	‡	‡	‡
2013 Nation (public)	1	270	40	60	21	3
Kentucky	#	‡	‡	‡	‡	‡
2015 Nation (public)	1	267	43	57	19	3
Kentucky	#	‡	‡	‡	‡	‡

Rounds to zero.

‡ Reporting standards not met.

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.¹ Accommodations were not permitted for this assessment.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2015 Mathematics Assessments.

Tables 4-A and 4-B show average scale scores and percentage of students by achievement-level data for the seven racial/ethnic categories used in 2011, 2013, and 2015: White, Black, Hispanic, Asian, American Indian/Alaska Native, Native Hawaiian/Other Pacific Islander, and Two or more races at grades 4 and 8 in Kentucky and the nation.

Table
4-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: 2011, 2013 and 2015

Race/ethnicity, year, and jurisdiction	Percentage of students	Average scale score	Percent				
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>	
White							
2011	Nation (public)	52*	249	9*	91*	52	9
	Kentucky	84*	243	13	87	41	6
2013	Nation (public)	51*	250*	9*	91*	54*	10
	Kentucky	79	244	13	87	45	7
2015	Nation (public)	49	248	10	90	51	10
	Kentucky	78	244	14	86	44	7
Black							
2011	Nation (public)	16	224	34	66	17	1
	Kentucky	9	225	31	69	17	1
2013	Nation (public)	16	224	34	66	18	1
	Kentucky	11	224	35	65	19	1
2015	Nation (public)	15	224	35	65	19	1
	Kentucky	10	226	32	68	20	1
Hispanic							
2011	Nation (public)	24*	229	28	72	24	2
	Kentucky	4*	236	18	82	30	3
2013	Nation (public)	25*	230	27	73	26	2
	Kentucky	5	234	24	76	30	4
2015	Nation (public)	26	230	27	73	26	3
	Kentucky	6	234	23	77	30	4
Asian							
2011	Nation (public)	5	257	8	92	64	21
	Kentucky	1	262	6	94	67	27
2013	Nation (public)	5	260	7	93	67	24
	Kentucky	2	260	9	91	68	28
2015	Nation (public)	5	259	8	92	64	23
	Kentucky	2	258	12	88	61	33

See notes at end of table.

Table
4-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: 2011, 2013 and 2015—Continued

Race/ethnicity, year, and jurisdiction	Percentage of students	Average scale score	Percent			
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
American Indian/Alaska Native						
2011 Nation (public)	1	227	32	68	24	2
Kentucky	#	‡	‡	‡	‡	‡
2013 Nation (public)	1	228	30	70	24	2
Kentucky	#	‡	‡	‡	‡	‡
2015 Nation (public)	1	228	30	70	24	2
Kentucky	#	‡	‡	‡	‡	‡
Native Hawaiian/Other Pacific Islander						
2011 Nation (public)	#	235	24	76	33	7
Kentucky	#	‡	‡	‡	‡	‡
2013 Nation (public)	#	235*	23	77	32	4
Kentucky	#	‡	‡	‡	‡	‡
2015 Nation (public)	#	226	35	65	24	3
Kentucky	#	‡	‡	‡	‡	‡
Two or more races						
2011 Nation (public)	2*	244	15	85	43	9
Kentucky	2*	237	17	83	35	2
2013 Nation (public)	3*	244	14	86	45	9
Kentucky	3*	240	14	86	36	5
2015 Nation (public)	3	244	15	85	44	9
Kentucky	4	243	15	85	40	10

Rounds to zero.

‡ Reporting standards not met.

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011, 2013 and 2015 Mathematics Assessments.

Table
4-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: 2011, 2013 and 2015

Race/ethnicity, year, and jurisdiction	Percentage of students	Average scale score	Percent				
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>	
White							
2011	Nation (public)	54*	293*	17*	83*	43*	10
	Kentucky	84	284*	25	75	33	7
2013	Nation (public)	53*	293*	17*	83*	44*	11
	Kentucky	83	283	25	75	33	7
2015	Nation (public)	51	291	19	81	42	10
	Kentucky	82	281	29	71	30	6
Black							
2011	Nation (public)	16	262*	50*	50*	13	1
	Kentucky	10	261	53	47	12	1
2013	Nation (public)	15	263*	49*	51*	14*	2
	Kentucky	10	260	51	49	11	1
2015	Nation (public)	15	260	53	47	12	1
	Kentucky	10	257	57	43	12	1
Hispanic							
2011	Nation (public)	23*	269	40	60	20	3
	Kentucky	3*	269	39	61	18	1
2013	Nation (public)	23*	271	38	62	21	3
	Kentucky	4	269	40	60	17	3
2015	Nation (public)	25	269	40	60	19	3
	Kentucky	4	274	36	64	21	4
Asian							
2011	Nation (public)	5	305	12	88	58	24
	Kentucky	1	‡	‡	‡	‡	‡
2013	Nation (public)	5	308	12	88	62	27
	Kentucky	1	313	12	88	62	33
2015	Nation (public)	5	307	12	88	60	26
	Kentucky	1	‡	‡	‡	‡	‡

See notes at end of table.

Table
4-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by race/ethnicity, year, and jurisdiction: 2011, 2013 and 2015—Continued

Race/ethnicity, year, and jurisdiction	Percentage of students	Average scale score	Percent			
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
American Indian/Alaska Native						
2011 Nation (public)	1	266	45	55	17	4
Kentucky	#	‡	‡	‡	‡	‡
2013 Nation (public)	1	270	40	60	21	3
Kentucky	#	‡	‡	‡	‡	‡
2015 Nation (public)	1	267	43	57	19	3
Kentucky	#	‡	‡	‡	‡	‡
Native Hawaiian/Other Pacific Islander						
2011 Nation (public)	#	265*	45	55	19	3
Kentucky	#	‡	‡	‡	‡	‡
2013 Nation (public)	#	274	34	66	24	4
Kentucky	#	‡	‡	‡	‡	‡
2015 Nation (public)	#	277	35	65	30	6
Kentucky	#	‡	‡	‡	‡	‡
Two or more races						
2011 Nation (public)	2*	286	24	76	37	10
Kentucky	1*	‡	‡	‡	‡	‡
2013 Nation (public)	2*	286	24	76	37	10
Kentucky	2	272	41	59	26	3
2015 Nation (public)	2	283	28	72	35	9
Kentucky	2	266	47	53	19	4

Rounds to zero.

‡ Reporting standards not met.

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011, 2013 and 2015 Mathematics Assessments.

Gender

Information on student gender is reported by the student's school when rosters of the students eligible to be assessed are submitted to NAEP.

Tables 5-A and 5-B show average scale scores and percentage of students by achievement-level data for public school students at grades 4 and 8 in Kentucky and the nation, by gender.

Grade 4 Scale Score Results by Gender

- In 2015, male students in Kentucky had an average score in mathematics (243) that was not significantly different from that of female students (240). In 1992, male students in Kentucky had an average score in mathematics (215) that was not significantly different from that of female students (215).
- In 2015, male students in Kentucky had an average scale score in mathematics (243) that was not significantly different from that of male students in public schools across the nation (241). Similarly, female students in Kentucky had an average scale score (240) that was not significantly different from that of female students across the nation (239).
- In Kentucky, the average scale score of male students in 2015 was higher than the scores of male students in 1992, 1996, 2000, 2003, 2005, and 2007, but not significantly different from the scores of male students in 2009, 2011, and 2013.
- In Kentucky, the average scale score of female students in 2015 was higher than the scores of female students in 1992, 1996, 2000, 2003, 2005, and 2007, but not significantly different from the scores of female students in 2009, 2011, and 2013.

Grade 4 Achievement-Level Results by Gender

- In the 2015 assessment, 43 percent of male students and 38 percent of female students performed at or above *Proficient* in Kentucky. The difference between these percentages was not statistically significant.
- The percentage of male students in Kentucky's public schools who were at or above *Proficient* in 2015 (43 percent) was not significantly different from that of male students in the nation (41 percent).
- The percentage of female students in Kentucky's public schools who were at or above *Proficient* in 2015 (38 percent) was not significantly different from that of female students in the nation (38 percent).
- In Kentucky, the percentage of male students performing at or above *Proficient* in 2015 was greater than the corresponding percentages of students in 1992, 1996, 2000, 2003, 2005, and 2007, but not significantly different from the corresponding percentages of students in 2009, 2011, and 2013.
- In Kentucky, the percentage of female students performing at or above *Proficient* in 2015 was greater than the corresponding percentages of students in 1992, 1996, 2000, 2003, 2005, and 2007, but not significantly different from the corresponding percentages of students in 2009, 2011, and 2013.

Table
5-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by gender, year, and jurisdiction: Various years, 1992–2015

Gender, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Male							
1992 ¹	Nation (public)	50	220*	41*	59*	19*	2*
	Kentucky	49	215*	49*	51*	14*	1*
1996 ¹	Nation (public)	51	224*	37*	63*	22*	3*
	Kentucky	52	220*	40*	60*	17*	2*
2000 ¹	Nation (public)	51	227*	32*	68*	27*	3*
	Kentucky	49	222*	38*	62*	19*	2*
2000	Nation (public)	51	225*	35*	65*	25*	3*
	Kentucky	50	220*	40*	60*	19*	2*
2003	Nation (public)	51	235*	23*	77*	34*	5*
	Kentucky	52	230*	26*	74*	24*	2*
2005	Nation (public)	51	238*	20*	80*	37*	6*
	Kentucky	51	233*	24*	76*	29*	3*
2007	Nation (public)	51	240	18	82	41	7*
	Kentucky	50	237*	19	81	33*	4*
2009	Nation (public)	51	240	19	81	40	7*
	Kentucky	51	240	18	82	39	7
2011	Nation (public)	51	241	18	82	41	7*
	Kentucky	51	242	14	86	39	6
2013	Nation (public)	51	242*	18*	82*	42*	8
	Kentucky	51	242	17	83	43	7
2015	Nation (public)	51	241	19	81	41	8
	Kentucky	50	243	16	84	43	9

See notes at end of table.

Table
5-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by gender, year, and jurisdiction: Various years, 1992–2015—Continued

Gender, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Female							
1992 ¹	Nation (public)	50	218*	44*	56*	16*	1*
	Kentucky	51	215*	49*	51*	12*	1*
1996 ¹	Nation (public)	49	221*	39*	61*	17*	1*
	Kentucky	48	220*	40*	60*	14*	1*
2000 ¹	Nation (public)	49	225*	34*	66*	22*	2*
	Kentucky	51	220*	41*	59*	16*	1*
2000	Nation (public)	49	223*	38*	62*	20*	1*
	Kentucky	50	219*	42*	58*	15*	1*
2003	Nation (public)	49	233*	25*	75*	29*	3*
	Kentucky	48	227*	30*	70*	20*	1*
2005	Nation (public)	49	236*	21*	79*	33*	4*
	Kentucky	49	230*	26*	74*	24*	2*
2007	Nation (public)	49	238*	19	81	36	4*
	Kentucky	50	234*	22*	78*	29*	3*
2009	Nation (public)	49	238	19	81	37	5*
	Kentucky	49	238	20	80	34	5
2011	Nation (public)	49	239	18	82	39	6
	Kentucky	49	240	16	84	38	5
2013	Nation (public)	49	241*	18*	82*	40*	7*
	Kentucky	49	241	16	84	40	5
2015	Nation (public)	49	239	19	81	38	6
	Kentucky	50	240	16	84	38	5

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.¹ Accommodations were not permitted for this assessment.NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2015 Mathematics Assessments.

Grade 8 Scale Score Results by Gender

- In 2015, male students in Kentucky had an average score in mathematics (277) that was not significantly different from that of female students (279). This performance gap was narrower than that of 1990 (3 points in favor of males).
- In 2015, male students in Kentucky had an average scale score in mathematics (277) that was lower than that of male students in public schools across the nation (281). However, female students in Kentucky had an average scale score (279) that was not significantly different from that of female students across the nation (281).
- In Kentucky, the average scale score of male students in 2015 was higher than the scores of male students in 1990, 1992, 1996, and 2000, but lower than the scores of male students in 2009, 2011, and 2013, and not significantly different from the scores of male students in 2003, 2005, and 2007.
- In Kentucky, the average scale score of female students in 2015 was higher than the scores of female students in 1990, 1992, 1996, 2000, 2003, and 2005, but not significantly different from the scores of female students in 2007, 2009, 2011, and 2013.

Grade 8 Achievement-Level Results by Gender

- In the 2015 assessment, 27 percent of male students and 28 percent of female students performed at or above *Proficient* in Kentucky. The difference between these percentages was not statistically significant.
- The percentage of male students in Kentucky's public schools who were at or above *Proficient* in 2015 (27 percent) was smaller than that of male students in the nation (32 percent).
- The percentage of female students in Kentucky's public schools who were at or above *Proficient* in 2015 (28 percent) was smaller than that of female students in the nation (32 percent).
- In Kentucky, the percentage of male students performing at or above *Proficient* in 2015 was greater than the corresponding percentages of students in 1990, 1992, and 1996, but not significantly different from the corresponding percentages of students in 2000, 2003, 2005, 2007, 2009, 2011, and 2013.
- In Kentucky, the percentage of female students performing at or above *Proficient* in 2015 was greater than the corresponding percentages of students in 1990, 1992, 1996, 2000, 2003, and 2005, but not significantly different from the corresponding percentages of students in 2007, 2009, 2011, and 2013.

Table
5-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by gender, year, and jurisdiction: Various years, 1990–2015

Gender, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below Basic	At or above Basic	At or above Proficient	At Advanced
Male							
1990 ¹	Nation (public)	51	262*	49*	51*	17*	2*
	Kentucky	51	259*	56*	44*	11*	2*
1992 ¹	Nation (public)	52	266*	45*	55*	20*	3*
	Kentucky	50	263*	48*	52*	15*	2*
1996 ¹	Nation (public)	52	270*	40*	60*	24*	4*
	Kentucky	51	267*	43*	57*	17*	2*
2000 ¹	Nation (public)	50	276*	34*	66*	29*	6*
	Kentucky	49	274	35	65	23	4
2000	Nation (public)	50	273*	38*	62*	26*	5*
	Kentucky	51	271*	39	61	22	4
2003	Nation (public)	50	277*	33*	67*	29*	6*
	Kentucky	50	275	35	65	25	4
2005	Nation (public)	51	278*	32*	68*	30*	6*
	Kentucky	51	275	34	66	24	4
2007	Nation (public)	51	281	29	71	33	8*
	Kentucky	51	280	30	70	30	6
2009	Nation (public)	51*	283*	28*	72*	34*	8
	Kentucky	50	281*	29	71	30	6
2011	Nation (public)	51	283*	28*	72*	34*	9
	Kentucky	51	282*	29*	71*	32	7
2013	Nation (public)	51	284*	27*	73*	35*	9
	Kentucky	51	281*	29*	71*	31	7
2015	Nation (public)	51	281	30	70	32	8
	Kentucky	51	277	34	66	27	5

See notes at end of table.

Table
5-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by gender, year, and jurisdiction: Various years, 1990–2015—Continued

Gender, year, and jurisdiction	Percentage of students	Average scale score	Percent				
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>	
Female							
1990 ¹	Nation (public)	49	261*	49*	51*	14*	2*
	Kentucky	49	256*	58*	42*	9*	1*
1992 ¹	Nation (public)	48	267*	44*	56*	20*	3*
	Kentucky	50	261*	49*	51*	13*	1*
1996 ¹	Nation (public)	48	271*	39*	61*	21*	3*
	Kentucky	49	266*	44*	56*	15*	1*
2000 ¹	Nation (public)	50	273*	36*	64*	24*	4*
	Kentucky	51	270*	39*	61*	18*	2*
2000	Nation (public)	50	271*	38*	62*	23*	4*
	Kentucky	49	269*	41*	59*	18*	2*
2003	Nation (public)	50	275*	34*	66*	26*	4*
	Kentucky	50	274*	34	66	23*	3*
2005	Nation (public)	49	277*	33*	67*	27*	5*
	Kentucky	49	273*	37*	63*	21*	3*
2007	Nation (public)	49	279*	30	70	29*	6*
	Kentucky	49	277	32	68	24	4
2009	Nation (public)	49*	281	29	71	31	7
	Kentucky	50	278	30	70	25	4
2011	Nation (public)	49	282*	28*	72*	33	7
	Kentucky	49	281	28	72	29	5
2013	Nation (public)	49	283*	27*	73*	34*	7
	Kentucky	49	280	28	72	29	5
2015	Nation (public)	49	281	29	71	32	7
	Kentucky	49	279	30	70	28	6

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.¹ Accommodations were not permitted for this assessment.NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2015 Mathematics Assessments.

Student Eligibility for the National School Lunch Program

NAEP collects data on eligibility for the federal program providing free or reduced-price school lunches. The free/reduced-price lunch component of the National School Lunch Program (NSLP) offered through the U.S. Department of Agriculture (USDA) is designed to ensure that children near or below the poverty line receive nourishing meals. Eligibility is determined through the USDA's Income Eligibility Guidelines, and data for this category of students are included as an indicator of lower family income. NAEP first collected information on participation in this program in 1996; therefore, cross-year comparisons to assessments prior to 1996 cannot be made.

Tables 6-A and 6-B show average scale scores and percentage of students by achievement-level data for public school students at grades 4 and 8 in Kentucky and the nation, by student eligibility for the NSLP.

Grade 4 Scale Score Results by Free/Reduced-Price School Lunch Eligibility

- In 2015, students in Kentucky eligible for free/reduced-price lunch had an average mathematics scale score of 234. This was lower than that of students in Kentucky not eligible for this program (255).
- In 2015, students in Kentucky who were eligible for free/reduced-price school lunch had an average score that was lower than that of students who were not eligible by 21 points. In 1996, the average score for students in Kentucky who were eligible for free/reduced-price school lunch was lower than the score of those not eligible by 21 points.
- Students in Kentucky eligible for free/reduced-price lunch had an average scale score (234) in 2015 that was higher than that of students in the nation who were eligible (229).
- In Kentucky, students eligible for free/reduced-price lunch had an average mathematics scale score in 2015 that was higher than that of eligible students in 1996, 2000, 2003, 2005, 2007, and 2009, but not significantly different from that of eligible students in 2011 and 2013.

Grade 4 Achievement-Level Results by Free/Reduced-Price School Lunch Eligibility

- In Kentucky, 29 percent of students who were eligible for free/reduced-price lunch and 59 percent of those who were not eligible for this program performed at or above *Proficient* in 2015. These percentages were significantly different from one another.
- For students in Kentucky in 2015 who were eligible for free/reduced-price lunch, the percentage at or above *Proficient* (29 percent) was greater than the corresponding percentage for their counterparts around the nation (24 percent).
- In Kentucky, the percentage of students eligible for free/reduced-price lunch who performed at or above *Proficient* in 2015 was greater than the corresponding percentages in 1996, 2000, 2003, 2005, 2007, and 2009, but not significantly different from the corresponding percentages in 2011 and 2013.

Table
6-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by National School Lunch Program eligibility status, year, and jurisdiction: Various years, 1996–2015

Eligibility status, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Eligible							
1996 ¹	Nation (public)	34*	207*	59*	41*	8*	#*
	Kentucky	47*	209*	54*	46*	7*	#
2000 ¹	Nation (public)	35*	210*	54*	46*	9*	#*
	Kentucky	47*	210*	54*	46*	7*	#
2000	Nation (public)	40*	208*	57*	43*	7*	#*
	Kentucky	47*	207*	56*	44*	6*	#
2003	Nation (public)	44*	222*	38*	62*	15*	1*
	Kentucky	51*	220*	38*	62*	12*	#*
2005	Nation (public)	46*	225*	33*	67*	19*	1*
	Kentucky	52*	224*	35*	65*	16*	1*
2007	Nation (public)	46*	227*	30*	70*	22*	1*
	Kentucky	53*	226*	30*	70*	18*	1*
2009	Nation (public)	48*	228*	29*	71*	22*	1*
	Kentucky	51*	229*	28*	72*	21*	1
2011	Nation (public)	52*	229	27	73	24	2*
	Kentucky	55*	232	23	77	26	2
2013	Nation (public)	54*	230*	27	73	26*	2
	Kentucky	52*	232	24	76	28	2
2015	Nation (public)	55	229	28	72	24	2
	Kentucky	62	234	22	78	29	3

See notes at end of table.

Table
6-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by National School Lunch Program eligibility status, year, and jurisdiction: Various years, 1996–2015—Continued

Eligibility status, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Not eligible							
1996 ¹	Nation (public)	52*	231*	27*	73*	25*	3*
	Kentucky	51*	230*	27*	73*	24*	2*
2000 ¹	Nation (public)	52*	236*	21*	79*	33*	4*
	Kentucky	48*	231*	26*	74*	26*	3*
2000	Nation (public)	49*	235*	23*	77*	32*	4*
	Kentucky	48*	230*	28*	72*	26*	3*
2003	Nation (public)	52*	244*	12*	88*	45*	6*
	Kentucky	47*	237*	17*	83*	32*	3*
2005	Nation (public)	52*	248*	10*	90*	50*	8*
	Kentucky	47*	240*	14*	86*	37*	4*
2007	Nation (public)	53*	249*	9*	91*	53*	9*
	Kentucky	47*	245*	10*	90*	46*	6*
2009	Nation (public)	51*	250*	9*	91*	54*	10*
	Kentucky	49*	249*	10*	90*	53*	11
2011	Nation (public)	47*	252	8	92	57	12*
	Kentucky	45*	251	6	94	55	10
2013	Nation (public)	46*	254	7	93	60	14
	Kentucky	48*	251	8	92	56	11
2015	Nation (public)	44	253	8	92	58	13
	Kentucky	38	255	5	95	59	14

See notes at end of table.

Table
6-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by National School Lunch Program eligibility status, year, and jurisdiction: Various years, 1996–2015—Continued

Eligibility status, year, and jurisdiction	Percentage of students	Average scale score	Percent				
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>	
Information not available							
1996 ¹	Nation (public)	13*	230*	28*	72*	28*	3*
	Kentucky	3	218	42	58	9	#
2000 ¹	Nation (public)	13*	235*	23*	77*	35*	3*
	Kentucky	5	226	31	69	28	2
2000	Nation (public)	11*	236*	22	78	35*	4*
	Kentucky	5	226	29	71	28	1
2003	Nation (public)	4*	235*	23*	77*	34*	4*
	Kentucky	2	‡	‡	‡	‡	‡
2005	Nation (public)	2*	237*	21*	79*	36*	5
	Kentucky	1	‡	‡	‡	‡	‡
2007	Nation (public)	1	243	17	83	44	8
	Kentucky	#	‡	‡	‡	‡	‡
2009	Nation (public)	1	240	22	78	42	7
	Kentucky	#	‡	‡	‡	‡	‡
2011	Nation (public)	#*	247	12	88	49	10
	Kentucky	#	‡	‡	‡	‡	‡
2013	Nation (public)	1	255	9	91	60	18
	Kentucky	#	‡	‡	‡	‡	‡
2015	Nation (public)	1	246	15	85	49	11
	Kentucky	#	‡	‡	‡	‡	‡

Rounds to zero.

‡ Reporting standards not met.

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.¹ Accommodations were not permitted for this assessment.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1996–2015 Mathematics Assessments.

Grade 8 Scale Score Results by Free/Reduced-Price School Lunch Eligibility

- In 2015, students in Kentucky eligible for free/reduced-price lunch had an average mathematics scale score of 268. This was lower than that of students in Kentucky not eligible for this program (291).
- In 2015, students in Kentucky who were eligible for free/reduced-price school lunch had an average score that was lower than that of students who were not eligible by 23 points. In 1996, the average score for students in Kentucky who were eligible for free/reduced-price school lunch was lower than the score of those not eligible by 23 points.
- Students in Kentucky eligible for free/reduced-price lunch had an average scale score (268) in 2015 that was not significantly different from that of students in the nation who were eligible (268).
- In Kentucky, students eligible for free/reduced-price lunch had an average mathematics scale score in 2015 that was higher than that of eligible students in 1996, 2000, and 2003, but not significantly different from that of eligible students in 2005, 2007, 2009, 2011, and 2013.

Grade 8 Achievement-Level Results by Free/Reduced-Price School Lunch Eligibility

- In Kentucky, 17 percent of students who were eligible for free/reduced-price lunch and 41 percent of those who were not eligible for this program performed at or above *Proficient* in 2015. These percentages were significantly different from one another.
- For students in Kentucky in 2015 who were eligible for free/reduced-price lunch, the percentage at or above *Proficient* (17 percent) was not significantly different from the corresponding percentage for their counterparts around the nation (18 percent).
- In Kentucky, the percentage of students eligible for free/reduced-price lunch who performed at or above *Proficient* in 2015 was greater than the corresponding percentages in 1996, 2000, and 2003, but not significantly different from the corresponding percentages in 2005, 2007, 2009, 2011, and 2013.

Table
6-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by National School Lunch Program eligibility status, year, and jurisdiction: Various years, 1996–2015

Eligibility status, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Eligible							
1996 ¹	Nation (public)	30*	252*	61*	39*	8*	1*
	Kentucky	34*	252*	62*	38*	4*	#
2000 ¹	Nation (public)	28*	255*	56*	44*	10*	1*
	Kentucky	40*	257*	55*	45*	8*	1*
2000	Nation (public)	31*	253*	59*	41*	10*	1*
	Kentucky	41*	255*	58*	42*	8*	1*
2003	Nation (public)	36*	258*	53*	47*	11*	1*
	Kentucky	42*	261*	49*	51*	11*	1
2005	Nation (public)	39*	261*	49*	51*	13*	1*
	Kentucky	46*	264	48	52	14	2
2007	Nation (public)	41*	265*	45*	55*	15*	2*
	Kentucky	46*	267	43	57	15	1
2009	Nation (public)	43*	266*	43	57	17*	2*
	Kentucky	48*	268	42	58	15	1
2011	Nation (public)	48*	269*	41*	59*	19	2
	Kentucky	52*	271	39	61	18	2
2013	Nation (public)	50*	270*	39*	61*	20*	3
	Kentucky	49*	268	41	59	16	2
2015	Nation (public)	52	268	42	58	18	2
	Kentucky	56	268	43	57	17	2

See notes at end of table.

Table
6-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by National School Lunch Program eligibility status, year, and jurisdiction: Various years, 1996–2015—Continued

Eligibility status, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Not eligible							
1996 ¹	Nation (public)	56*	279*	29*	71*	29*	5*
	Kentucky	58*	276*	32*	68*	23*	2*
2000 ¹	Nation (public)	55*	285*	24*	76*	35*	7*
	Kentucky	58*	281*	25*	75*	29*	4*
2000	Nation (public)	54*	283*	26*	74*	34*	7*
	Kentucky	57*	280*	27*	73*	29*	4*
2003	Nation (public)	58*	287*	22*	78*	37*	7*
	Kentucky	55*	284*	24*	76*	33*	6*
2005	Nation (public)	59*	288*	21*	79*	39*	8*
	Kentucky	53*	283*	25*	75*	31*	5*
2007	Nation (public)	58*	291*	19*	81*	42*	10*
	Kentucky	54*	288	21	79	37	8
2009	Nation (public)	56*	293*	17*	83*	45*	12*
	Kentucky	52*	290	19	81	38	8
2011	Nation (public)	52*	295	16	84	47	13
	Kentucky	48*	294	16	84	44	11
2013	Nation (public)	50*	297*	14*	86*	49*	14
	Kentucky	51*	293	17	83	44	10
2015	Nation (public)	47	296	16	84	48	13
	Kentucky	44	291	18	82	41	9

See notes at end of table.

Table
6-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by National School Lunch Program eligibility status, year, and jurisdiction: Various years, 1996–2015—Continued

Eligibility status, year, and jurisdiction	Percentage of students	Average scale score	Percent				
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>	
Information not available							
1996 ¹	Nation (public)	14*	278*	31	69	29*	5*
	Kentucky	8*	261	50	50	12	1
2000 ¹	Nation (public)	16*	273*	37*	63*	26*	4*
	Kentucky	1	‡	‡	‡	‡	‡
2000	Nation (public)	15*	271*	38*	62*	24*	4*
	Kentucky	1	‡	‡	‡	‡	‡
2003	Nation (public)	6*	278*	32*	68*	29*	6*
	Kentucky	2	‡	‡	‡	‡	‡
2005	Nation (public)	3*	277*	34*	66*	28*	6*
	Kentucky	1	‡	‡	‡	‡	‡
2007	Nation (public)	1	274*	36*	64*	28*	6*
	Kentucky	#	‡	‡	‡	‡	‡
2009	Nation (public)	1	284*	28	72	35	10
	Kentucky	#	‡	‡	‡	‡	‡
2011	Nation (public)	#*	275*	37*	63*	26*	6*
	Kentucky	#	‡	‡	‡	‡	‡
2013	Nation (public)	1*	285	29	71	39	13
	Kentucky	#	‡	‡	‡	‡	‡
2015	Nation (public)	1	293	21	79	45	17
	Kentucky	#	‡	‡	‡	‡	‡

Rounds to zero.

‡ Reporting standards not met.

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.¹ Accommodations were not permitted for this assessment.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1996–2015 Mathematics Assessments.

Type of Location

Schools that participated in the assessment were classified as being located in four mutually exclusive types of communities: city, suburb, town, and rural. These categories indicate the geographic locations of schools. "City" is a geographical term meaning the principal city of a U.S. Census Bureau-defined Core-Based Statistical Area and is not synonymous with "inner city." The criteria for classifying schools with respect to type of location changed for 2007; therefore, only results for 2007, 2009, 2011, 2013, and 2015 are available. More detail on the changes for the classification of type of location is available at http://nces.ed.gov/ccd/Rural_Locales.asp.

Tables 7-A and 7-B show average scale scores and percentage of students by achievement-level data for public school students at grades 4 and 8 in Kentucky and the nation, by type of location (for 2007, 2009, 2011, 2013, and 2015 only).

Grade 4 Scale Score Results by Type of Location

- In 2015, the average scale score of students in Kentucky attending public schools in city locations was not significantly different from the scores of students in suburban, town, and rural schools.
- In 2015, students attending public schools in city, suburban, and rural locations in Kentucky had average scale scores that were not significantly different from the average scale scores of students in city, suburban, and rural locations in the nation.
- In 2015, students attending public schools in town locations in Kentucky had an average scale score that was higher than the average scale score of students in town locations in the nation.
- In 2015, students attending public schools in city and rural locations in Kentucky had average scale scores that were higher than the average scale scores of students in city and rural locations in 2007 in Kentucky, but not significantly different from the average scale scores of students in city and rural locations in 2009, 2011, and 2013 in Kentucky.
- In 2015, students attending public schools in suburban and town locations in Kentucky had average scale scores that were not significantly different from the average scale scores of students in suburban and town locations in 2007, 2009, 2011, and 2013 in Kentucky.

Grade 4 Achievement-Level Results by Type of Location

- In 2015, the percentage of students in Kentucky's public schools in city locations who performed at or above *Proficient* was not significantly different from the corresponding percentages of students in suburban, town, and rural schools.
- The percentage of students in Kentucky's public schools in city locations who performed at or above *Proficient* in 2015 was greater than those of students in city locations in the nation.
- The percentages of students in Kentucky's public schools in suburban, town, and rural locations who performed at or above *Proficient* in 2015 were not significantly different from those of students in suburban, town, and rural locations in the nation.
- The percentages of students in Kentucky's public schools in city and rural locations who performed at or above *Proficient* in 2015 were greater than those of students in city and rural locations in 2007 in Kentucky, but not significantly different from those of students in city and rural locations in 2009, 2011, and 2013 in Kentucky.
- The percentages of students in Kentucky's public schools in suburban and town locations who performed at or above *Proficient* in 2015 were not significantly different from those of students in suburban and town locations in 2007, 2009, 2011, and 2013 in Kentucky.

Table
7-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by type of location, year, and jurisdiction: Various years, 2007–2015

Type of location, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below Basic	At or above Basic	At or above Proficient	At Advanced
City							
2007	Nation (public)	29	233*	26*	74*	32*	5*
	Kentucky	24	232*	27	73	30*	4
2009	Nation (public)	30	234	25	75	32	5*
	Kentucky	21	237	24	76	36	7
2011	Nation (public)	29*	235	24	76	33	5
	Kentucky	19	239	19	81	36	6
2013	Nation (public)	30	236	24	76	35	7
	Kentucky	20	236	24	76	35	5
2015	Nation (public)	31	236	24	76	35	7
	Kentucky	22	240	20	80	40	7
Suburb							
2007	Nation (public)	37*	243	15	85	44	7*
	Kentucky	15	241	15	85	39	5
2009	Nation (public)	36*	243	16	84	44	7*
	Kentucky	15	242	16	84	42	9
2011	Nation (public)	36*	244	15	85	45	8
	Kentucky	15	243	15	85	42	7
2013	Nation (public)	35*	244	15	85	46	9
	Kentucky	16	246	13	87	51	8
2015	Nation (public)	41	243	16	84	44	9
	Kentucky	14	249	11	89	51	12
Town							
2007	Nation (public)	12	238	18	82	36	4*
	Kentucky	15	236	18	82	30	2
2009	Nation (public)	12	237	19	81	35	4*
	Kentucky	20	237	21	79	33	4
2011	Nation (public)	13*	237	19	81	35	4
	Kentucky	20	240	14	86	38	4
2013	Nation (public)	11	240*	17	83	39*	6
	Kentucky	18	238	20	80	37	5
2015	Nation (public)	11	237	20	80	35	5
	Kentucky	21	243	14	86	42	7

See notes at end of table.

Table
7-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by type of location, year, and jurisdiction: Various years, 2007–2015
—Continued

Type of location, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Rural							
2007	Nation (public)	22*	240	16	84	39	5*
	Kentucky	45	235*	20	80	29*	3
2009	Nation (public)	22*	240	16	84	39	5*
	Kentucky	44	240	17	83	36	5
2011	Nation (public)	23*	243	15	85	42	6
	Kentucky	46	241	14	86	39	5
2013	Nation (public)	25*	243*	14	86	44*	7*
	Kentucky	46	244	13	87	43	7
2015	Nation (public)	18	241	16	84	40	6
	Kentucky	43	240	16	84	37	5

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2007–2015 Mathematics Assessments.

Grade 8 Scale Score Results by Type of Location

- In 2015, the average scale score of students in Kentucky attending public schools in city locations was lower than the score of students in suburban schools, but was not significantly different from the scores of students in town and rural schools.
- In 2015, students attending public schools in city, suburban, and town locations in Kentucky had average scale scores that were not significantly different from the average scale scores of students in city, suburban, and town locations in the nation.
- In 2015, students attending public schools in rural locations in Kentucky had an average scale score that was lower than the average scale score of students in rural locations in the nation.
- In 2015, students attending public schools in city, suburban, and rural locations in Kentucky had average scale scores that were not significantly different from the average scale scores of students in city, suburban, and rural locations in 2007, 2009, 2011, and 2013 in Kentucky.
- In 2015, students attending public schools in town locations in Kentucky had an average scale score that was lower than the average scale score of students in town locations in 2013 in Kentucky, but not significantly different from the average scale score of students in town locations in 2007, 2009, and 2011 in Kentucky.

Grade 8 Achievement-Level Results by Type of Location

- In 2015, the percentage of students in Kentucky's public schools in city locations who performed at or above *Proficient* was not significantly different from the corresponding percentages of students in suburban, town, and rural schools.
- The percentages of students in Kentucky's public schools in city, suburban, and town locations who performed at or above *Proficient* in 2015 were not significantly different from those of students in city, suburban, and town locations in the nation.
- The percentage of students in Kentucky's public schools in rural locations who performed at or above *Proficient* in 2015 was smaller than those of students in rural locations in the nation.
- The percentages of students in Kentucky's public schools in city, suburban, town, and rural locations who performed at or above *Proficient* in 2015 were not significantly different from those of students in city, suburban, town, and rural locations in 2007, 2009, 2011, and 2013 in Kentucky.

Table
7-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by type of location, year, and jurisdiction: Various years, 2007–2015

Type of location, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below Basic	At or above Basic	At or above Proficient	At Advanced
City							
2007	Nation (public)	28*	273*	38*	62*	25*	5*
	Kentucky	21	281	30	70	32	8
2009	Nation (public)	27*	276	36	64	28	6
	Kentucky	21	277	35	65	28	6
2011	Nation (public)	29	277	34	66	29	7
	Kentucky	19	278	33	67	29	6
2013	Nation (public)	28*	278	34	66	29	7
	Kentucky	19	277	35	65	26	7
2015	Nation (public)	29	276	35	65	28	7
	Kentucky	20	276	37	63	29	7
Suburb							
2007	Nation (public)	36*	285	26	74	36	9*
	Kentucky	16	280	31	69	31	6
2009	Nation (public)	36*	286	25	75	37	10
	Kentucky	13	283	26	74	33	7
2011	Nation (public)	36*	286	25	75	37	9
	Kentucky	16	284	26	74	34	8
2013	Nation (public)	35*	288*	24*	76*	39*	10
	Kentucky	17	285	25	75	37	8
2015	Nation (public)	41	285	26	74	37	10
	Kentucky	16	286	24	76	36	8
Town							
2007	Nation (public)	13*	280	29	71	29	5
	Kentucky	29	276	34	66	24	3
2009	Nation (public)	14*	279	30	70	29	5
	Kentucky	21*	277	31	69	23	4
2011	Nation (public)	13*	281*	28	72	31*	6
	Kentucky	25	281	28	72	29	6
2013	Nation (public)	13*	281*	28	72	32*	6
	Kentucky	25	282*	27	73	30	5
2015	Nation (public)	12	279	30	70	28	5
	Kentucky	29	276	34	66	25	4

See notes at end of table.

Table
7-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by type of location, year, and jurisdiction: Various years, 2007–2015
—Continued

Type of location, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Rural							
2007	Nation (public)	22*	282	26	74	32	6
	Kentucky	35	279	29	71	26	4
2009	Nation (public)	23*	284*	25*	75*	33	7
	Kentucky	45*	280	28	72	27	4
2011	Nation (public)	23*	286*	23*	77*	35*	7
	Kentucky	40	283	27	73	31	6
2013	Nation (public)	24*	286*	24*	76*	36*	8*
	Kentucky	39	280	28	72	29	5
2015	Nation (public)	19	282	27	73	31	6
	Kentucky	34	277	32	68	25	4

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2007–2015 Mathematics Assessments.

Parents' Highest Level of Education

Eighth- and twelfth-grade students who participated in the NAEP 2015 assessment were asked to indicate the highest level of education they thought their father and their mother had completed. Five response options—did not finish high school, graduated from high school, some education after high school, graduated from college, and "I don't know"—were offered. The highest level of education reported for either parent was used in the analysis. Fourth-graders were not asked about their parents' education level because their responses in previous NAEP assessments were not reliable, and a large percentage of them chose the "I don't know" option.

The results by highest level of parental education are shown in Table 8.

Grade 8 Scale Score Results by Parents' Highest Level of Education

- In 2015, students in Kentucky who reported that a parent had graduated from college had an average scale score that was higher than the average scores of students with a parent in any of the following education categories: some education after high school, graduated from high school, and did not finish high school.
- In 2015, the average scale scores for students in Kentucky who reported that a parent had graduated from college or had not finished high school were lower than the corresponding scores of students in the nation.
- In 2015, the average scale scores for students in Kentucky who reported that a parent had some education after high school or had graduated from high school were not significantly different from the corresponding scores of students in the nation.
- In 2015, the average scale score for students in Kentucky who reported that a parent had graduated from college was higher than the score of students in 1990, 1992, and 1996, but lower than the score of students in 2011, and not significantly different from the score of students in 2000, 2003, 2005, 2007, 2009, and 2013.
- In 2015, the average scale scores for students in Kentucky who reported that a parent had some education after high school or had graduated from high school were higher than the corresponding scores of students in 1990, 1992, 1996, and 2000, but not significantly different from the corresponding scores of students in 2003, 2005, 2007, 2009, 2011, and 2013.
- In 2015, the average scale score for students in Kentucky who reported that a parent had not finished high school was higher than the score of students in 1990, 1992, 1996, and 2000, but lower than the score of students in 2011, and not significantly different from the score of students in 2003, 2005, 2007, 2009, and 2013.

Grade 8 Achievement-Level Results by Parents' Highest Level of Education

- In 2015, the percentage of students performing at or above *Proficient* in Kentucky who reported that a parent had graduated from college was greater than the percentage for students whose parents' highest level of education was in any of the following education categories: some education after high school, graduated from high school, and did not finish high school.
- In 2015, the percentage of students in Kentucky reporting that a parent had graduated from college and who performed at or above *Proficient* was smaller than the percentage of students in the nation.
- In 2015, the percentages of students in Kentucky reporting that a parent had some education after high school, had graduated from high school, or had not finished high school and who performed at or above *Proficient* were not significantly different from the corresponding percentages of students in the nation.
- In 2015 in Kentucky, the respective percentages of students reporting that a parent had graduated from college, had some education after high school, had graduated from high school, or had not finished high school and who performed at or above *Proficient* were greater than the corresponding percentages of students in 1990, 1992, and 1996, but were not significantly different from the corresponding percentages of students in 2000, 2003, 2005, 2007, 2009, 2011, and 2013.

Table
8

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by highest parental education level, year, and jurisdiction: Various years, 1990–2015

Highest parental education level, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Did not finish high school							
1990 ¹	Nation (public)	10	241*	76*	24*	3*	#
	Kentucky	16*	240*	77*	23*	2*	#
1992 ¹	Nation (public)	8	249*	66*	34*	6*	1
	Kentucky	15*	247*	69*	31*	3*	#
1996 ¹	Nation (public)	8	254*	56*	44*	8*	1
	Kentucky	13*	251*	63	37	3*	#
2000 ¹	Nation (public)	7*	255*	55*	45*	8*	1
	Kentucky	11*	255	59	41	5	1
2000	Nation (public)	8	253*	57*	43*	7*	#*
	Kentucky	11*	250*	63	37	5	1
2003	Nation (public)	7*	256*	56*	44*	9*	1
	Kentucky	8	258	56	44	9	#
2005	Nation (public)	8*	259*	52*	48*	11*	1
	Kentucky	8	256	57	43	6	#
2007	Nation (public)	8	263*	48	52	12	1
	Kentucky	9*	265	46	54	11	1
2009	Nation (public)	8	265	45	55	14	1
	Kentucky	8	262	49	51	10	1
2011	Nation (public)	8	265	44	56	15	2
	Kentucky	9	267*	44	56	16	2
2013	Nation (public)	8	267*	42	58	16	2
	Kentucky	7	262	50	50	11	1
2015	Nation (public)	8	265	44	56	14	1
	Kentucky	7	260	52	48	9	#

See notes at end of table.

Table
8

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by highest parental education level, year, and jurisdiction: Various years, 1990–2015—Continued

Highest parental education level, year, and jurisdiction	Percentage of students	Average scale score	Percent				
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>	
Graduated from high school							
1990 ¹ Nation (public)	25*	255*	59*	41*	8*	#	
Kentucky	32*	253*	62*	38*	6*	1*	
1992 ¹ Nation (public)	25*	257*	55*	45*	10*	1*	
Kentucky	32*	255*	56*	44*	7*	#	
1996 ¹ Nation (public)	23*	260*	50*	50*	12*	1	
Kentucky	31*	260*	51	49	10*	#*	
2000 ¹ Nation (public)	21*	263*	47*	53*	16	1	
Kentucky	26*	264	46	54	11	1	
2000 Nation (public)	21*	260*	49*	51*	15*	1	
Kentucky	27*	262*	49	51	12	1	
2003 Nation (public)	18*	267	42	58	16	2*	
Kentucky	23*	266	43	57	14	1	
2005 Nation (public)	18*	267	42	58	17	2	
Kentucky	24*	264	47	53	11	1	
2007 Nation (public)	18*	270*	40*	60*	19	2	
Kentucky	22	272	36	64	17	1	
2009 Nation (public)	17*	270*	38*	62*	19	2	
Kentucky	21	271	37	63	17	2	
2011 Nation (public)	17*	271*	38*	62*	20*	2	
Kentucky	20	272	38	62	19	3	
2013 Nation (public)	17	270*	39*	61*	19*	2	
Kentucky	19	270	40	60	20	3	
2015 Nation (public)	16	268	42	58	17	2	
Kentucky	19	268	42	58	18	2	

See notes at end of table.

Table
8

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by highest parental education level, year, and jurisdiction: Various years, 1990–2015—Continued

Highest parental education level, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Some education after high school							
1990 ¹	Nation (public)	17*	267*	43*	57*	15*	3*
	Kentucky	18	269*	43*	57*	18*	1*
1992 ¹	Nation (public)	18*	270*	40*	60*	20*	3*
	Kentucky	19	268*	40*	60*	16*	1*
1996 ¹	Nation (public)	19*	279*	29	71	26	4
	Kentucky	17*	271*	36	64	16*	1
2000 ¹	Nation (public)	18*	279*	28	72	27	3
	Kentucky	23*	275	32	68	21	2
2000	Nation (public)	18*	277*	30*	70*	26*	3*
	Kentucky	22*	274*	33	67	22	2
2003	Nation (public)	18*	280*	27*	73*	28*	4
	Kentucky	21*	278	28	72	23	2
2005	Nation (public)	18*	280*	27	73	28*	4*
	Kentucky	21	277	30	70	24	2
2007	Nation (public)	17*	283	24	76	32	5
	Kentucky	21	283	25	75	31	4
2009	Nation (public)	17*	283*	24	76	32	5
	Kentucky	22*	283	23	77	29	4
2011	Nation (public)	16*	285*	22*	78*	33*	5
	Kentucky	20	281	26	74	27	5
2013	Nation (public)	15	285*	22*	78*	33*	6
	Kentucky	20	281	26	74	28	4
2015	Nation (public)	15	282	25	75	30	5
	Kentucky	19	281	28	72	29	6

See notes at end of table.

Table
8

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by highest parental education level, year, and jurisdiction: Various years, 1990–2015—Continued

Highest parental education level, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Graduated from college							
1990 ¹	Nation (public)	39*	274*	34*	66*	25*	4*
	Kentucky	26*	268*	42*	58*	18*	2*
1992 ¹	Nation (public)	40*	279*	30*	70*	31*	5*
	Kentucky	28*	279*	31*	69*	28*	5*
1996 ¹	Nation (public)	40*	281*	28*	72*	34*	7*
	Kentucky	30*	281*	27	73	30*	4*
2000 ¹	Nation (public)	43*	286*	24*	76*	39*	9*
	Kentucky	33*	284	22	78	36	6
2000	Nation (public)	41*	285*	25*	75*	38*	9*
	Kentucky	32*	285	24	76	35	6
2003	Nation (public)	45*	287*	23*	77*	39*	8*
	Kentucky	39*	286	24	76	37	7
2005	Nation (public)	45*	289*	22*	78*	41*	10*
	Kentucky	39*	285	23	77	35	7
2007	Nation (public)	46*	291*	20	80	43*	11*
	Kentucky	38*	288	23	77	38	9
2009	Nation (public)	46*	294	18	82	46	13
	Kentucky	41*	289	21	79	39	9
2011	Nation (public)	47*	294	18	82	46	13
	Kentucky	42	293*	18	82	44	11
2013	Nation (public)	49	295*	17*	83*	47*	14
	Kentucky	45	291	18	82	42	10
2015	Nation (public)	49	293	19	81	45	13
	Kentucky	45	288	23	77	38	8

See notes at end of table.

Table
8

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by highest parental education level, year, and jurisdiction: Various years, 1990–2015—Continued

Highest parental education level, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Unknown							
1990 ¹	Nation (public)	9*	240*	71*	29*	5*	#
	Kentucky	8	242*	78*	22*	4	#
1992 ¹	Nation (public)	9*	251*	62*	38*	9*	#
	Kentucky	6*	243*	70*	30*	5	#
1996 ¹	Nation (public)	11	253*	59*	41*	10*	1*
	Kentucky	9	256	59	41	7	1
2000 ¹	Nation (public)	11	255*	55*	45*	11*	1*
	Kentucky	8*	257	53	47	8	#
2000	Nation (public)	12	253*	59*	41*	9*	1*
	Kentucky	8*	254	56	44	8	#
2003	Nation (public)	11*	258*	53*	47*	12*	1*
	Kentucky	9	257	54	46	10	1
2005	Nation (public)	11*	260*	51	49	13*	1*
	Kentucky	7*	260	54	46	10	1
2007	Nation (public)	12	263	48	52	15	2
	Kentucky	10	264	48	52	17	2
2009	Nation (public)	12	264	47	53	16	2
	Kentucky	9	260	50	50	10	1
2011	Nation (public)	12	265*	46*	54*	16	2
	Kentucky	9	268*	42	58	16	2
2013	Nation (public)	12	266*	45*	55*	17*	2
	Kentucky	9	265	46	54	15	2
2015	Nation (public)	12	263	49	51	15	2
	Kentucky	10	259	52	48	10	1

Rounds to zero.

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.¹ Accommodations were not permitted for this assessment.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2015 Mathematics Assessments.

A More Inclusive NAEP: Students With Disabilities and/or English Language Learners

To ensure that the samples are representative, NAEP has established policies and procedures to maximize the inclusion of all students in the assessment. Every effort is made to ensure that all selected students who are capable of participating meaningfully in the assessment are assessed. While some students with disabilities (SD) and/or English language learners (ELL) can be assessed without any special procedures, others require accommodations to participate in NAEP. Still other SD and/or ELL students selected by NAEP may not be able to participate. Local school staff who are familiar with these students are asked a series of questions to help them decide whether each student should participate in the assessment and whether the student needs accommodations.

Within any assessment year, exclusion and accommodation rates may vary across jurisdictions. In addition, exclusion and accommodation rates may increase or decrease between assessment administrations, making it difficult to interpret comparisons over time within jurisdictions. Since SD and/or ELL students tend to score below average on assessments, the exclusion of students from these groups may result in a higher average score than if those students had taken the assessment. On the other hand, providing appropriate testing accommodations (e.g., providing extended time for some SD and/or ELL students to take the assessment) removes barriers that would otherwise prevent them from demonstrating their knowledge and skills.

Prior to 2000, testing accommodations were not provided for students with special needs in NAEP state mathematics assessments. For 2000, results are displayed for both the sample in which accommodations were permitted and the sample in which they were not permitted. Subsequent assessment results were based on the more inclusive samples.

Tables 9-A and 9-B display data for 4th and 8th grade students in Kentucky who were identified as SD and/or ELL, by whether they were excluded, assessed with accommodations, or assessed under standard conditions, as a percent of all 4th and 8th grade students in the state.

Tables 10-A and 10-B show the percentages of students assessed in Kentucky by disability status and their performance on the NAEP assessment in terms of average scores and percentages performing below *Basic*, at or above *Basic*, at or above *Proficient*, and at *Advanced* for grades 4 and 8.

Tables 11-A and 11-B present the percentages of students assessed in Kentucky by ELL status, their average scores, and their performance in terms of the percentages below *Basic*, at or above *Basic*, at or above *Proficient*, and at *Advanced* for grades 4 and 8.

Tables 12-A and 12-B present the total number of grades 4 and 8 students assessed in each of the participating states and the percentage of students sampled who were excluded.

Table
9-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students identified as students with disabilities (SD) and/or English language learners (ELL) excluded and assessed in NAEP mathematics as a percentage of all students, by assessment year and testing status: Various years, 1992–2015

Year and testing status		SD and/or ELL		SD		ELL	
		Kentucky	Nation (public)	Kentucky	Nation (public)	Kentucky	Nation (public)
1992 ¹	Identified	8	10	8	7	#	3
	Excluded	3	7	3	5	#	2
	Assessed without accommodations	5	4	5	3	#	1
1996 ¹	Identified	10	16	10	12	#	4
	Excluded	6	6	6	5	#	2
	Assessed without accommodations	4	9	4	7	#	2
2000	Identified	12	19	11	13	1	7
	Excluded	3	4	3	3	#	1
	Assessed without accommodations	4	10	3	5	#	5
	Assessed with accommodations	5	5	5	4	#	1
2003	Identified	14	22	13	14	2	11
	Excluded	3	4	3	3	1	1
	Assessed without accommodations	5	10	4	4	1	7
	Assessed with accommodations	7	8	7	7	#	2
2005	Identified	15	23	14	14	1	10
	Excluded	3	3	2	3	#	1
	Assessed without accommodations	3	10	3	4	#	7
	Assessed with accommodations	9	10	9	8	1	3
2007	Identified	17	23	15	14	2	11
	Excluded	3	3	2	3	#	1
	Assessed without accommodations	6	10	5	3	1	7
	Assessed with accommodations	8	10	7	8	1	3
2009	Identified	17	23	15	13	2	10
	Excluded	3	2	3	2	#	1
	Assessed without accommodations	5	9	5	3	1	6
	Assessed with accommodations	8	11	7	8	1	4
2011	Identified	16	23	15	13	2	11
	Excluded	3	2	3	2	1	#
	Assessed without accommodations	5	9	4	3	#	6
	Assessed with accommodations	9	12	8	9	1	4
2013	Identified	15	23	13	14	3	11
	Excluded	1	2	1	1	#	#
	Assessed without accommodations	3	7	2	2	#	5
	Assessed with accommodations	11	14	9	10	2	5
2015	Identified	19	24	16	14	4	12
	Excluded	2	2	2	1	#	1
	Assessed without accommodations	5	8	4	3	1	6
	Assessed with accommodations	12	14	10	11	3	5

Rounds to zero.

¹ Accommodations were not permitted for this assessment year.

NOTE: Students identified as both SD and ELL were counted only once under the combined SD and/or ELL category, but were counted separately under the SD and ELL categories. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2015 Mathematics Assessments.

Table
9-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students identified as students with disabilities (SD) and/or English language learners (ELL) excluded and assessed in NAEP mathematics as a percentage of all students, by assessment year and testing status: Various years, 1990–2015

Year and testing status		SD and/or ELL		SD		ELL	
		Kentucky	Nation (public)	Kentucky	Nation (public)	Kentucky	Nation (public)
1990 ¹	Identified	7	—	7	—	#	—
	Excluded	5	—	5	—	#	—
	Assessed without accommodations	3	—	3	—	#	—
1992 ¹	Identified	9	10	9	8	#	2
	Excluded	5	6	5	5	#	2
	Assessed without accommodations	4	4	4	3	#	1
1996 ¹	Identified	9	11	9	9	#	3
	Excluded	5	5	4	4	#	1
	Assessed without accommodations	5	7	5	5	#	2
2000	Identified	14	14	12	11	1	4
	Excluded	4	4	4	3	1	1
	Assessed without accommodations	5	7	4	5	1	3
	Assessed with accommodations	4	3	4	2	#	1
2003	Identified	14	19	13	14	1	6
	Excluded	4	4	4	3	1	1
	Assessed without accommodations	4	8	4	5	1	4
	Assessed with accommodations	5	7	5	6	#	1
2005	Identified	12	19	11	13	1	6
	Excluded	3	4	3	3	#	1
	Assessed without accommodations	2	7	2	3	#	4
	Assessed with accommodations	6	8	6	7	1	1
2007	Identified	14	18	13	13	2	7
	Excluded	7	4	6	4	#	1
	Assessed without accommodations	2	6	2	2	#	4
	Assessed with accommodations	6	8	5	6	1	2
2009	Identified	13	18	12	13	1	6
	Excluded	5	3	4	3	#	#
	Assessed without accommodations	2	5	1	2	#	3
	Assessed with accommodations	7	10	6	8	1	2
2011	Identified	13	18	12	13	1	6
	Excluded	3	3	3	2	#	#
	Assessed without accommodations	2	5	1	2	#	3
	Assessed with accommodations	8	10	7	9	1	2
2013	Identified	13	17	11	13	2	6
	Excluded	2	2	2	1	#	#
	Assessed without accommodations	1	3	#	1	#	2
	Assessed with accommodations	10	12	9	10	1	3
2015	Identified	14	19	13	13	1	7
	Excluded	1	2	1	1	#	#
	Assessed without accommodations	1	5	1	1	#	3
	Assessed with accommodations	11	13	11	11	1	3

— Not available.

Rounds to zero.

¹ Accommodations were not permitted for this assessment year.

NOTE: Students identified as both SD and ELL were counted only once under the combined SD and/or ELL category, but were counted separately under the SD and ELL categories. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2015 Mathematics Assessments.

Table
10-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by students with disabilities (SD) status, year, and jurisdiction: Various years, 2000–2015

SD status, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
SD							
2000	Nation (public)	10*	198*	71*	29*	6*	1*
	Kentucky	9*	199*	65*	35*	11	2
2003	Nation (public)	11*	214*	50*	50*	12*	1*
	Kentucky	11*	208*	60*	40*	8*	1
2005	Nation (public)	12*	218	44	56	16	2*
	Kentucky	12*	215*	48	52	12*	1
2007	Nation (public)	11*	220*	40*	60*	19*	2
	Kentucky	13	223	37	63	19	2
2009	Nation (public)	12*	220*	41*	59*	19*	2
	Kentucky	13*	226	35	65	21	3
2011	Nation (public)	12*	218	45	55	17	2
	Kentucky	12*	224	37	63	21	3
2013	Nation (public)	13*	218	45	55	18*	2
	Kentucky	12*	218	46	54	17	1
2015	Nation (public)	13	217	46	54	16	2
	Kentucky	14	222	40	60	19	2

See notes at end of table.

Table
10-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by students with disabilities (SD) status, year, and jurisdiction: Various years, 2000–2015—Continued

SD status, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Not SD							
2000	Nation (public)	90*	227*	33*	67*	24*	3*
	Kentucky	91*	221*	39*	61*	18*	1*
2003	Nation (public)	89*	236*	21*	79*	34*	4*
	Kentucky	89*	231*	24*	76*	24*	2*
2005	Nation (public)	88*	240*	17*	83*	38*	5*
	Kentucky	88*	234*	22*	78*	28*	3*
2007	Nation (public)	89*	241*	16*	84*	41*	6*
	Kentucky	87	237*	18*	82*	33*	4*
2009	Nation (public)	88*	242*	16*	84*	41*	6*
	Kentucky	87*	241*	17*	83*	39	6
2011	Nation (public)	88*	243	15	85	43	7*
	Kentucky	88*	243	12	88	41	6
2013	Nation (public)	87*	244*	14*	86*	45*	8
	Kentucky	88*	245	12	88	45	7
2015	Nation (public)	87	243	15	85	43	8
	Kentucky	86	245	12	88	44	8

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Performance comparisons may be affected by differences in exclusion rates for students with disabilities in the NAEP samples and by differences in sample sizes. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2000–2015 Mathematics Assessments.

Table
10-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by students with disabilities (SD) status, year, and jurisdiction: Various years, 2000–2015

SD status, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
SD							
2000	Nation (public)	8*	229*	80*	20*	4*	#*
	Kentucky	9*	230*	80	20	4	#
2003	Nation (public)	11*	242*	71*	29*	6*	1*
	Kentucky	9*	230*	83*	17*	3	#
2005	Nation (public)	11*	244*	69	31	7	1*
	Kentucky	8*	243	75	25	5	#
2007	Nation (public)	9*	246	67	33	8	1
	Kentucky	7*	249	65	35	7	#
2009	Nation (public)	10*	249*	64*	36*	9*	1
	Kentucky	8*	250	67	33	7	1
2011	Nation (public)	11*	249*	65*	35*	9	2
	Kentucky	9*	253	62	38	10	2
2013	Nation (public)	12*	248*	66*	34*	8	1
	Kentucky	10*	246	68	32	7	1
2015	Nation (public)	12	246	68	32	8	1
	Kentucky	12	247	70	30	7	1

See notes at end of table.

Table
10-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by students with disabilities (SD) status, year, and jurisdiction: Various years, 2000–2015—Continued

SD status, year, and jurisdiction	Percentage of students	Average scale score	Percent			
			Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Not SD						
2000 Nation (public)	92*	275*	35*	65*	26*	5*
Kentucky	91*	274*	36*	64*	22*	3*
2003 Nation (public)	89*	280*	29*	71*	30*	5*
Kentucky	91*	279*	30	70	26	4*
2005 Nation (public)	89*	281*	28*	72*	31*	6*
Kentucky	92*	277*	32	68	24*	4*
2007 Nation (public)	91*	284*	26*	74*	33*	7*
Kentucky	93*	281	28	72	29	5
2009 Nation (public)	90*	285	24	76	35	8
Kentucky	92*	282	27	73	29	5
2011 Nation (public)	89*	287	23	77	36	9
Kentucky	91*	284	25	75	33	7
2013 Nation (public)	88*	288*	22*	78*	38*	9
Kentucky	90*	284	25	75	33	7
2015 Nation (public)	88	286	24	76	36	9
Kentucky	88	282	27	73	30	6

Rounds to zero.

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Performance comparisons may be affected by differences in exclusion rates for students with disabilities in the NAEP samples and by differences in sample sizes. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2000–2015 Mathematics Assessments.

Table
11-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by English language learner (ELL) status, year, and jurisdiction: Various years, 2000–2015

ELL status, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
ELL							
2000	Nation (public)	6*	199*	70*	30*	4*	#
	Kentucky	#*	‡	‡	‡	‡	‡
2003	Nation (public)	9*	214*	51*	49*	9*	#*
	Kentucky	1*	‡	‡	‡	‡	‡
2005	Nation (public)	10*	216*	46*	54*	11*	1
	Kentucky	1*	‡	‡	‡	‡	‡
2007	Nation (public)	10*	217	44	56	13	1
	Kentucky	2*	221	38	62	16	1
2009	Nation (public)	10*	218	43	57	12*	1*
	Kentucky	2*	232*	28	72	28	8
2011	Nation (public)	11	219	42	58	14	1
	Kentucky	1*	225	28	72	11	1
2013	Nation (public)	11	219	41	59	14	1
	Kentucky	3	223	37	63	19	2
2015	Nation (public)	11	218	43	57	15	1
	Kentucky	4	220	42	58	16	3

See notes at end of table.

Table
11-A

The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by English language learner (ELL) status, year, and jurisdiction: Various years, 2000–2015—Continued

ELL status, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Not ELL							
2000	Nation (public)	94*	226*	34*	66*	24*	3*
	Kentucky	100*	220*	41*	59*	17*	1*
2003	Nation (public)	91*	236*	21*	79*	34*	4*
	Kentucky	99*	229*	27*	73*	22*	2*
2005	Nation (public)	90*	239*	18*	82*	38*	5*
	Kentucky	99*	232*	25*	75*	26*	3*
2007	Nation (public)	90*	242*	16	84	42	6*
	Kentucky	98*	235*	20*	80*	31*	3*
2009	Nation (public)	90*	242*	16	84	41*	6*
	Kentucky	98*	239*	19*	81*	37	6
2011	Nation (public)	89	243	15	85	43	7
	Kentucky	99*	241	15	85	39	5
2013	Nation (public)	89	244*	15*	85*	45*	8
	Kentucky	97	242	16	84	42	6
2015	Nation (public)	89	243	16	84	43	8
	Kentucky	96	243	15	85	41	7

Rounds to zero.

‡ Reporting standards not met.

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.

NOTE: The NAEP grade 4 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 213 or lower; *Basic*, 214–248; *Proficient*, 249–281; and *Advanced*, 282 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Performance comparisons may be affected by differences in exclusion rates for English language learners in the NAEP samples and by differences in sample sizes. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2000–2015 Mathematics Assessments.

Table
11-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by English language learner (ELL) status, year, and jurisdiction: Various years, 2000–2015

ELL status, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
ELL							
2000	Nation (public)	3*	234*	80*	20*	2*	#
	Kentucky	1	‡	‡	‡	‡	‡
2003	Nation (public)	5*	241*	74*	26*	5	1
	Kentucky	1	‡	‡	‡	‡	‡
2005	Nation (public)	6*	244	71	29	6	1
	Kentucky	1	‡	‡	‡	‡	‡
2007	Nation (public)	6	245	70	30	6	1
	Kentucky	1	‡	‡	‡	‡	‡
2009	Nation (public)	6*	243*	72	28	5	1
	Kentucky	1	‡	‡	‡	‡	‡
2011	Nation (public)	6*	244	72	28	5	1
	Kentucky	1	238	79	21	2	#
2013	Nation (public)	5*	245	69	31	5	1
	Kentucky	2	243	70	30	1	#
2015	Nation (public)	6	246	69	31	5	1
	Kentucky	1	‡	‡	‡	‡	‡

See notes at end of table.

Table
11-B

The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP mathematics, by English language learner (ELL) status, year, and jurisdiction: Various years, 2000–2015—Continued

ELL status, year, and jurisdiction		Percentage of students	Average scale score	Percent			
				Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At <i>Advanced</i>
Not ELL							
2000	Nation (public)	97*	273*	37*	63*	26*	5*
	Kentucky	99	270*	39*	61*	20*	3*
2003	Nation (public)	95*	278*	31*	69*	29*	5*
	Kentucky	99	275*	34	66	24*	4*
2005	Nation (public)	94*	280*	30*	70*	30*	6*
	Kentucky	99	274*	35	65	23*	3*
2007	Nation (public)	94	282*	27	73	33*	7*
	Kentucky	99	279	31	69	28	5
2009	Nation (public)	94*	284	26*	74*	34	8
	Kentucky	99	280	29	71	27	5
2011	Nation (public)	94*	285*	25*	75*	35*	8
	Kentucky	99	282*	28*	72*	31	6
2013	Nation (public)	95*	286*	25*	75*	36*	9
	Kentucky	98	281*	28*	72*	30	6
2015	Nation (public)	94	284	27	73	34	8
	Kentucky	99	278	32	68	28	6

Rounds to zero.

‡ Reporting standards not met.

* Value is significantly different ($p < .05$) from the value for the same jurisdiction and student group in 2015.

NOTE: The NAEP grade 8 mathematics scale ranges from 0 to 500. Achievement levels correspond to the following points on the NAEP mathematics scales: below *Basic*, 261 or lower; *Basic*, 262–298; *Proficient*, 299–332; and *Advanced*, 333 and above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Performance comparisons may be affected by differences in exclusion rates for English language learners in the NAEP samples and by differences in sample sizes. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2000–2015 Mathematics Assessments.

Table
12-A

The Nation's Report Card 2015 State Assessment

Number of fourth-grade public school students assessed in NAEP mathematics and weighted percentage excluded, by state/jurisdiction: 2015

State/jurisdiction	Number assessed	Weighted percentage excluded
Nation (public)	134,700	2
Alabama	2,100	1
Alaska	2,100	1
Arizona	2,400	1
Arkansas	2,200	1
California	5,900	2
Colorado	2,200	2
Connecticut	2,400	1
Delaware	2,400	2
Florida	5,500	2
Georgia	3,300	2
Hawaii	2,300	2
Idaho	2,400	2
Illinois	3,500	1
Indiana	2,200	1
Iowa	2,400	1
Kansas	2,200	1
Kentucky	3,000	2
Louisiana	2,300	2
Maine	2,200	2
Maryland	3,100	1
Massachusetts	3,200	2
Michigan	3,000	3
Minnesota	2,500	2
Mississippi	2,300	1
Missouri	2,200	1
Montana	2,300	1
Nebraska	2,400	1
Nevada	2,200	2
New Hampshire	2,200	1
New Jersey	2,000	2
New Mexico	2,700	2
New York	2,900	1
North Carolina	3,300	1
North Dakota	2,500	2
Ohio	2,900	2
Oklahoma	2,300	2
Oregon	2,400	2
Pennsylvania	2,900	2
Rhode Island	2,300	2
South Carolina	2,300	1
South Dakota	2,400	1
Tennessee	2,200	2
Texas	5,700	3
Utah	2,200	1
Vermont	1,900	2
Virginia	2,300	2
Washington	2,500	1
West Virginia	2,200	1
Wisconsin	2,500	1
Wyoming	2,200	1
Other jurisdictions		
District of Columbia	2,200	2
DoDEA ¹	1,900	1

¹ Department of Defense Education Activity (overseas and domestic schools).

NOTE: The number of students assessed is rounded to the nearest hundred.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 Mathematics Assessment.

Table
12-B

The Nation's Report Card 2015 State Assessment

Number of eighth-grade public school students assessed in NAEP mathematics and weighted percentage excluded, by state/jurisdiction: 2015

State/jurisdiction	Number assessed	Weighted percentage excluded
Nation (public)	132,500	2
Alabama	2,100	1
Alaska	2,000	2
Arizona	2,400	1
Arkansas	2,300	2
California	6,000	1
Colorado	2,300	1
Connecticut	2,300	1
Delaware	2,200	2
Florida	5,400	2
Georgia	3,500	1
Hawaii	2,300	2
Idaho	2,300	2
Illinois	3,300	1
Indiana	2,100	1
Iowa	2,300	1
Kansas	2,300	1
Kentucky	3,100	1
Louisiana	2,300	2
Maine	2,200	1
Maryland	2,900	2
Massachusetts	3,100	2
Michigan	3,200	2
Minnesota	2,400	2
Mississippi	2,200	1
Missouri	2,100	2
Montana	2,300	1
Nebraska	2,300	2
Nevada	2,300	1
New Hampshire	2,300	1
New Jersey	2,000	1
New Mexico	2,600	2
New York	2,800	1
North Carolina	3,300	1
North Dakota	2,300	2
Ohio	3,000	2
Oklahoma	2,100	2
Oregon	2,200	2
Pennsylvania	2,900	2
Rhode Island	2,300	2
South Carolina	2,200	1
South Dakota	2,300	1
Tennessee	2,000	2
Texas	5,800	2
Utah	2,400	1
Vermont	1,800	1
Virginia	2,200	2
Washington	2,500	1
West Virginia	2,100	2
Wisconsin	2,300	1
Wyoming	2,000	1
Other jurisdictions		
District of Columbia	1,800	3
DoDEA ¹	1,400	1

¹ Department of Defense Education Activity (overseas and domestic schools).

NOTE: The number of students assessed is rounded to the nearest hundred.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 Mathematics Assessment.

Where to Find More Information

The NAEP Mathematics Assessment

The latest news about the NAEP 2015 mathematics assessment and the results can be found on the NAEP website at <http://nces.ed.gov/nationsreportcard/mathematics>. The individual snapshot reports for each participating state and other jurisdictions are also available in the state results section of the website at <http://nces.ed.gov/nationsreportcard/states/>.

The *Mathematics Framework for the 2015 National Assessment of Educational Progress*, on which this assessment is based, is available at the National Assessment Governing Board website at <https://www.nagb.org/content/nagb/assets/documents/publications/frameworks/mathematics/2015-mathematics-framework.pdf>.

The NAEP Data Explorer (NDE)

The interactive database at <http://nces.ed.gov/nationsreportcard/naepdata/> includes student, teacher, and school variables for all participating districts, the nation, and public schools in large cities. Data tables are also available for districts, with all contextual questions cross-tabulated with the major demographic variables. Users can design and create tables and can perform tests of statistical significance at this website.

Technical Documentation on the Web (TDW)

Technical documentation section of the NAEP website <http://nces.ed.gov/nationsreportcard/tdw/> contains information about the technical procedures and methods of NAEP. The TDW site is organized by topic (from Item Development through Analysis and Scaling) with subtopics, including information specific to a particular assessment. The content is written for researchers and assumes knowledge of educational measurement and testing.

Publications on the inclusion of students with disabilities and English language learners

References for a variety of research publications related to the assessment of students with special needs may be found at <http://nces.ed.gov/nationsreportcard/about/inclusion.asp#research>.

To order publications

Recent NAEP publications related to mathematics are listed on the mathematics page of the NAEP website and are available electronically. Publications can also be ordered from

Education Publications Center (ED Pubs)
U.S. Department of Education
P.O. Box 22207
Alexandria, VA 22304

Call toll free: 1-877-4ED-Pubs (1-877-433-7827)
TTY/TDD: 1-877-576-7734
FAX: 1-703-605-6794
Order online at: <http://www.edpubs.gov>.

The NAEP State Report Generator was developed for the NAEP 2015 reports by Phillip Leung, Bobby Rampey, Rick Hasney, and Ming Kuang.

What is the Nation's Report Card™?

The Nation's Report Card™ informs the public about the academic achievement of elementary and secondary students in the United States. Report cards communicate the findings of the National Assessment of Educational Progress (NAEP), a continuing and nationally representative measure of achievement in various subjects over time.

Since 1969, NAEP assessments have been conducted periodically in reading, mathematics, science, writing, U.S. history, civics, geography, and other subjects. NAEP collects and reports information on student performance at the national, state, and local levels, making the assessment an integral part of our nation's evaluation of the condition and progress of education. Only academic achievement data and related background information are collected. The privacy of individual students and their families is protected.

NAEP is a congressionally authorized project of the National Center for Education Statistics (NCES) within the Institute of Education Sciences of the U.S. Department of Education. The Commissioner of Education Statistics is responsible for carrying out the NAEP project. The National Assessment Governing Board oversees and sets policy for NAEP.

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