

Rhode Island

Grade 4 and 8 Public Schools State Mathematics 2015

This report provides selected results for Rhode Island'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 Rhode Island was 238. This was lower than that for the nation's public schools (240).
- The average score for students in Rhode Island in 2015 (238) was higher than that in 1992 (215) and was lower than that in 2013 (241).
- In 2015, the percentage of students in Rhode Island who performed at or above *Proficient* was 37 percent. This was not significantly different from that for the nation's public schools (39 percent).
- The percentage of students in Rhode Island who performed at or above *Proficient* in 2015 (37 percent) was greater than that in 1992 (13 percent) and was smaller than that in 2013 (42 percent).
- In 2015, the percentage of students in Rhode Island who performed at or above *Basic* was 80 percent. This was not significantly different from that for the nation's public schools (81 percent).
- The percentage of students in Rhode Island who performed at or above *Basic* in 2015 (80 percent) was greater than that in 1992 (54 percent) and was not significantly different from that in 2013 (83 percent).

Grade 8:

- In 2015, the average mathematics score for eighth-grade students in Rhode Island was 281. This was not significantly different from that for the nation's public schools (281).
- The average score for students in Rhode Island in 2015 (281) was higher than that in 1990 (260) and was lower than that in 2013 (284).
- In 2015, the percentage of students in Rhode Island who performed at or above *Proficient* was 32 percent. This was not significantly different from that for the nation's public schools (32 percent).
- The percentage of students in Rhode Island who performed at or above *Proficient* in 2015 (32 percent) was greater than that in 1990 (15 percent) and was smaller than that in 2013 (36 percent).
- In 2015, the percentage of students in Rhode Island who performed at or above *Basic* was 72 percent. This was greater than that for the nation's public schools (70 percent).
- The percentage of students in Rhode Island who performed at or above *Basic* in 2015 (72 percent) was greater than that in 1990 (49 percent) and was not significantly different from that in 2013 (74 percent).

The U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, and National Assessment of Educational Progress (NAEP) have 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, estimate with numbers, and the ability to deal with proportions (including percent).
- **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 students' 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 National Assessment 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 analytic skills appropriate to the subject matter.
- *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 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 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 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 SD and/or ELL 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 Rhode Island 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 SD and/or ELL students 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.

[Table xx shows] the overall performance results of grades 4 and 8 public school students in Rhode Island, the nation, 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 Rhode Island was 238. This was lower than that for students across the nation (240).
- In Rhode Island, the average scale score for students in 2015 was lower than that in 2013 (241). Similarly, the average scale score for students in public schools across the nation in 2015 was lower than that in 2013 (241).
- In Rhode Island, the average scale score for students in 2015 was higher than the scores in 1992, 1996, 2000, 2003, and 2005. However, it was lower than the scores in 2011 and 2013.

Grade 8 Scale Score Results

- In 2015, the average scale score for students in Rhode Island was 281. This was not significantly different from that for students across the nation (281).
- In Rhode Island, the average scale score for students in 2015 was lower than that in 2013 (284). Similarly, the average scale score for students in public schools across the nation in 2015 was lower than that in 2013 (284).
- In Rhode Island, the average scale score for students in 2015 was higher than the scores in 1990, 1992, 1996, 2000, 2003, 2005, 2007, and 2009. However, it was lower than the score in 2013.

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.

[Table xx shows] 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 Rhode Island's students who performed at or above *Proficient* was 37 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 Rhode Island, 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 smaller than the percentages in 2011 and 2013.
- In 2015, the percentage of Rhode Island's students who performed at or above *Basic* was 80 percent. This was not significantly different from the percentage of the nation's public school students who performed at or above *Basic* (81 percent).
- In Rhode Island, the percentage of students who performed at or above *Basic* in 2015 was greater than the percentages in 1992, 1996, 2000, 2003, and 2005, but was smaller than the percentage in 2011.

Grade 8 Achievement-Level Results

- In 2015, the percentage of Rhode Island's students who performed at or above *Proficient* was 32 percent. This was not significantly different from the percentage of the nation's public school students who performed at or above *Proficient* (32 percent).
- In Rhode Island, the percentage of students who performed at or above *Proficient* in 2015 was greater than the percentages in 1990, 1992, 1996, 2000, 2003, 2005, 2007, and 2009, but was smaller than the percentage in 2013.
- In 2015, the percentage of Rhode Island's students who performed at or above *Basic* was 72 percent. This was greater than the percentage of the nation's public school students who performed at or above *Basic* (70 percent).
- In Rhode Island, the percentage of students who performed at or above *Basic* in 2015 was greater than the percentages in 1990, 1992, 1996, 2000, 2003, 2005, 2007, and 2009, but was not significantly different from the percentages in 2011 and 2013.

Comparisons Between Rhode Island, 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 Rhode Island'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 Rhode Island in the NAEP 2015 mathematics assessment.

Grade 4 Scale Score Comparison Results

- The average score for students in Rhode Island was higher than 9 jurisdictions, not significantly different from 17 jurisdictions, and lower than 25 jurisdictions.

Grade 8 Scale Score Comparison Results

- The average score for students in Rhode Island was higher than 14 jurisdictions, not significantly different from 18 jurisdictions, and lower than 19 jurisdictions.

Figure
2-A

The Nation's Report Card 2015 State Assessment

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

Figure
2-B

The Nation's Report Card 2015 State Assessment

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

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 Rhode Island.

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 conducted 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 Rhode Island was greater than the percentage in 9 jurisdictions, not significantly different from those in 22 jurisdictions, and smaller than those in 20 jurisdictions.
- The percentage of students performing at or above the *Basic* level in Rhode Island was greater than the percentage in 5 jurisdictions, not significantly different from those in 25 jurisdictions, and smaller than those in 21 jurisdictions (data not shown).

Grade 8 Achievement-Level Comparison Results

- The percentage of students performing at or above the *Proficient* level in Rhode Island was greater than the percentage in 13 jurisdictions, not significantly different from those in 20 jurisdictions, and smaller than those in 18 jurisdictions.
- The percentage of students performing at or above the *Basic* level in Rhode Island was greater than the percentage in 17 jurisdictions, not significantly different from those in 17 jurisdictions, and smaller than those in 17 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 Rhode Island's percentage at or above *Proficient* compared with the nation and other participating jurisdictions: 2015

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 Rhode Island's percentage at or above *Proficient* compared with the nation and other participating jurisdictions: 2015

Mathematics Performance of Selected Student Groups

This section of the report presents trend results for public school students in Rhode Island 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 were 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.

[Table xx shows] average scale scores and percentage of students by achievement level for public school students at grades 4 and 8 in Rhode Island and the nation, by race/ethnicity.

Grade 4 Scale Score Results by Race/Ethnicity

- In 2015, White students in Rhode Island 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 Rhode Island was higher than their respective scores in 1992, 1996, 2000, 2003, 2005, and 2007, but lower than their respective scores in 2011 and 2013, and not significantly different from their respective score in 2009.
- In 2015, the average scale scores of Black and Hispanic students in Rhode Island were higher than their respective scores in 1992, 1996, 2000, 2003, and 2005, but not significantly different from their respective scores in 2007, 2009, 2011, and 2013.
- In 2015, the average scale score of Asian/Pacific Islander students in Rhode Island was higher than their respective scores in 1992, 1996, 2000, and 2003, but lower than their respective score in 2011, and not significantly different from their respective scores in 2005, 2007, 2009, and 2013.
- In 2015, Black students in Rhode Island had an average score that was lower than that of White students by 24 points. In 1992, the average score for Black students was lower than that of White students by 30 points.
- In 2015, Hispanic students in Rhode Island had an average score that was lower than that of White students by 23 points. This performance gap was narrower than that of 1992 (35 points).

Grade 4 Achievement-Level Results by Race/Ethnicity

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

Grade 8 Scale Score Results by Race/Ethnicity

- In 2015, White students in Rhode Island 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 Rhode Island was higher than their respective scores in 1990, 1992, 1996, 2000, 2003, 2005, 2007, and 2009, but lower than their respective score in 2013, and not significantly different from their respective score in 2011.
- In 2015, the average scale score of Black students in Rhode Island was higher than their respective scores in 1990, 1992, 1996, 2000, 2003, and 2005, but not significantly different from their respective scores in 2007, 2009, 2011, and 2013.
- In 2015, the average scale score of Hispanic students in Rhode Island was higher than their respective scores in 1990, 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 Asian/Pacific Islander students in Rhode Island was higher than their respective scores in 1996, 2000, 2003, 2005, 2007, and 2013, but not significantly different from their respective scores in 2009 and 2011.
- In 2015, Black students in Rhode Island had an average score that was lower than that of White students by 32 points. In 1990, the average score for Black students was lower than that of White students by 37 points.
- In 2015, Hispanic students in Rhode Island had an average score that was lower than that of White students by 26 points. This performance gap was narrower than that of 1990 (38 points).

Grade 8 Achievement-Level Results by Race/Ethnicity

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

[Table xx shows] 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 Rhode Island and the nation.

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.

[Table xx shows] average scale scores and percentage of students by achievement-level data for public school students at grades 4 and 8 in Rhode Island and the nation, by gender.

Grade 4 Scale Score Results by Gender

- In 2015, male students in Rhode Island had an average score in mathematics (238) that was not significantly different from that of female students (238). In 1992, male students in Rhode Island had an average score in mathematics (216) that was not significantly different from that of female students (215).
- In 2015, male students in Rhode Island had an average scale score in mathematics (238) that was lower than that of male students in public schools across the nation (241). However, female students in Rhode Island had an average scale score (238) that was not significantly different from that of female students across the nation (239).
- In Rhode Island, the average scale score of male students in 2015 was higher than the scores of male students in 1992, 1996, 2000, 2003, and 2005, but lower than the scores of male students in 2011 and 2013, and not significantly different from the scores of male students in 2007 and 2009.
- In Rhode Island, the average scale score of female students in 2015 was higher than the scores of female students in 1992, 1996, 2000, 2003, and 2005, but lower than the scores of female students in 2011 and 2013, and not significantly different from the scores of female students in 2007 and 2009.

Grade 4 Achievement-Level Results by Gender

- In the 2015 assessment, 39 percent of male students and 36 percent of female students performed at or above *Proficient* in Rhode Island. The difference between these percentages was not statistically significant.
- The percentage of male students in Rhode Island's public schools who were at or above *Proficient* in 2015 (39 percent) was not significantly different from that of male students in the nation (41 percent).
- The percentage of female students in Rhode Island's public schools who were at or above *Proficient* in 2015 (36 percent) was not significantly different from that of female students in the nation (38 percent).
- In Rhode Island, 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, and 2005, but smaller than the percentage of students in 2013, and not significantly different from the corresponding percentages of students in 2007, 2009, and 2011.
- In Rhode Island, 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, and 2005, but smaller than the percentage of students in 2011, and not significantly different from the corresponding percentages of students in 2007, 2009, and 2013.

Grade 8 Scale Score Results by Gender

- In 2015, male students in Rhode Island had an average score in mathematics (280) that was not significantly different from that of female students (283). This performance gap was narrower than that of 1990 (3 points in favor of males).
- In 2015, male students in Rhode Island had an average scale score in mathematics (280) that was not significantly different from that of male students in public schools across the nation (281). Similarly, female students in Rhode Island had an average scale score (283) that was not significantly different from that of female students across the nation (281).
- In Rhode Island, the average scale score of male students in 2015 was higher than the scores of male students in 1990, 1992, 1996, 2000, 2003, 2005, and 2007, but lower than the score of male students in 2013, and not significantly different from the scores of male students in 2009 and 2011.
- In Rhode Island, the average scale score of female students in 2015 was higher than the scores of female students in 1990, 1992, 1996, 2000, 2003, 2005, 2007, and 2009, but not significantly different from the scores of female students in 2011 and 2013.

Grade 8 Achievement-Level Results by Gender

- In the 2015 assessment, 31 percent of male students and 33 percent of female students performed at or above *Proficient* in Rhode Island. The difference between these percentages was not statistically significant.
- The percentage of male students in Rhode Island's public schools who were at or above *Proficient* in 2015 (31 percent) was not significantly different from that of male students in the nation (32 percent).
- The percentage of female students in Rhode Island's public schools who were at or above *Proficient* in 2015 (33 percent) was not significantly different from that of female students in the nation (32 percent).
- In Rhode Island, the percentage of male 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 smaller than the percentage of students in 2013, and not significantly different from the corresponding percentages of students in 2007, 2009, and 2011.
- In Rhode Island, 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, 2005, 2007, and 2009, but not significantly different from the corresponding percentages of students in 2011 and 2013.

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.

[Table xx shows] average scale scores and percentage of students by achievement-level data for public school students at grades 4 and 8 in Rhode Island 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 Rhode Island eligible for free/reduced-price lunch had an average mathematics scale score of 226. This was lower than that of students in Rhode Island not eligible for this program (249).
- In 2015, students in Rhode Island 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 Rhode Island who were eligible for free/reduced-price school lunch was lower than the score of those not eligible by 25 points.
- Students in Rhode Island eligible for free/reduced-price lunch had an average scale score (226) in 2015 that was lower than that of students in the nation who were eligible (229).
- In Rhode Island, 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, and 2007, but lower than that of eligible students in 2011 and 2013, and not significantly different from that of eligible students in 2009.

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

- In Rhode Island, 21 percent of students who were eligible for free/reduced-price lunch and 52 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 Rhode Island in 2015 who were eligible for free/reduced-price lunch, the percentage at or above *Proficient* (21 percent) was smaller than the corresponding percentage for their counterparts around the nation (24 percent).
- In Rhode Island, 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, and 2005, but smaller than the corresponding percentages in 2011 and 2013, and not significantly different from the corresponding percentages in 2007 and 2009.

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

- In 2015, students in Rhode Island eligible for free/reduced-price lunch had an average mathematics scale score of 267. This was lower than that of students in Rhode Island not eligible for this program (294).
- In 2015, students in Rhode Island 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 27 points. In 1996, the average score for students in Rhode Island who were eligible for free/reduced-price school lunch was lower than the score of those not eligible by 27 points.
- Students in Rhode Island eligible for free/reduced-price lunch had an average scale score (267) in 2015 that was not significantly different from that of students in the nation who were eligible (268).
- In Rhode Island, 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 8 Achievement-Level Results by Free/Reduced-Price School Lunch Eligibility

- In Rhode Island, 15 percent of students who were eligible for free/reduced-price lunch and 46 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 Rhode Island in 2015 who were eligible for free/reduced-price lunch, the percentage at or above *Proficient* (15 percent) was smaller than the corresponding percentage for their counterparts around the nation (18 percent).
- In Rhode Island, 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, and 2007, but not significantly different from the corresponding percentages in 2009, 2011, and 2013.

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.

[Table xx shows] average scale scores and percentage of students by achievement-level data for public school students at grades 4 and 8 in Rhode Island 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 Rhode Island attending public schools in city locations was lower than the scores of students in suburban and rural schools.
- In 2015, students attending public schools in city and suburban locations in Rhode Island had average scale scores that were lower than the average scale scores of students in city and suburban locations in the nation.
- In 2015, students attending public schools in rural locations in Rhode Island had an average scale score that was higher than the average scale score of students in rural locations in the nation.
- In 2015, students attending public schools in city and suburban locations in Rhode Island had average scale scores that were lower than the average scale scores of students in city and suburban locations in 2011 and 2013 in Rhode Island, but not significantly different from the average scale scores of students in city and suburban locations in 2007 and 2009 in Rhode Island.
- In 2015, students attending public schools in rural locations in Rhode Island had an average scale score that was not significantly different from the average scale score of students in rural locations in 2007, 2009, 2011, and 2013 in Rhode Island.

Grade 4 Achievement-Level Results by Type of Location

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

Grade 8 Scale Score Results by Type of Location

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

Grade 8 Achievement-Level Results by Type of Location

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

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 xx shows] .

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

- In 2015, students in Rhode Island 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 Rhode Island who reported that a parent had graduated from college, had some education after high school, had graduated from high school, or had not finished high school were not significantly different from the corresponding scores of students in the nation.
- In 2015, the average scale score for students in Rhode Island who reported that a parent had graduated from college was higher than the score of students in 1990, 1992, 1996, 2000, 2003, 2005, 2007, and 2009, but lower than the score of students in 2013, and not significantly different from the score of students in 2011.
- In 2015, the average scale scores for students in Rhode Island who reported that a parent had some education after high school or had not finished high school were higher than the corresponding scores of students in 1990, 1992, 1996, 2000, 2003, 2005, 2007, and 2009, but not significantly different from the corresponding scores of students in 2011 and 2013.
- In 2015, the average scale score for students in Rhode Island who reported that a parent had graduated from high school was higher than the score of students in 1990, 1992, 1996, 2000, 2005, and 2007, but not significantly different from the score of students in 2003, 2009, 2011, 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 Rhode Island 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 percentages of students in Rhode Island 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 not significantly different from the corresponding percentages of students in the nation.
- In 2015 in Rhode Island, the percentage of students reporting that a parent had graduated from college and who performed at or above *Proficient* was greater than the percentage of students in 1990, 1992, 1996, 2000, 2003, and 2005, but was not significantly different from the percentage of students in 2007, 2009, 2011, and 2013.
- In 2015 in Rhode Island, the percentage of students reporting that a parent had some education after high school and who performed at or above *Proficient* was greater than the percentage of students in 1990, 1992, 1996, 2000, and 2003, but was not significantly different from the percentage of students in 2005, 2007, 2009, 2011, and 2013.
- In 2015 in Rhode Island, the percentage of students reporting that a parent had graduated from high school and who performed at or above *Proficient* was greater than the percentage of students in 1990 and 1992, but was not significantly different from the percentage of students in 1996, 2000, 2003, 2005, 2007, 2009, 2011, and 2013.
- In 2015 in Rhode Island, the percentage of students reporting that a parent had not finished high school and who performed at or above *Proficient* was greater than the percentage of students in 1990, but was not significantly different from the percentage of students in 1992, 1996, 2000, 2003, 2005, 2007, 2009, 2011, and 2013.

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 SD and/or ELL students 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 grades 4 and 8 grade students in Rhode Island 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 grades 4 and 8 students in the state.

[Table xx shows] the percentages of students assessed in Rhode Island 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.

[Table xx shows] the percentages of students assessed in Rhode Island 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	
		Rhode Island	Nation (public)	Rhode Island	Nation (public)	Rhode Island	Nation (public)
1992 ¹	Identified	15	10	10	7	6	3
	Excluded	6	7	4	5	3	2
	Assessed without accommodations	10	4	7	3	3	1
1996 ¹	Identified	18	16	13	12	5	4
	Excluded	6	6	5	5	2	2
	Assessed without accommodations	12	9	8	7	4	2
2000	Identified	23	19	16	13	7	7
	Excluded	3	4	2	3	1	1
	Assessed without accommodations	10	10	6	5	4	5
	Assessed with accommodations	10	5	8	4	2	1
2003	Identified	27	22	20	14	10	11
	Excluded	3	4	2	3	2	1
	Assessed without accommodations	9	10	5	4	4	7
	Assessed with accommodations	15	8	13	7	3	2
2005	Identified	26	23	20	14	7	10
	Excluded	3	3	2	3	1	1
	Assessed without accommodations	8	10	6	4	2	7
	Assessed with accommodations	15	10	12	8	4	3
2007	Identified	25	23	19	14	7	11
	Excluded	2	3	2	3	1	1
	Assessed without accommodations	7	10	5	3	3	7
	Assessed with accommodations	16	10	12	8	4	3
2009	Identified	22	23	17	13	6	10
	Excluded	2	2	2	2	1	1
	Assessed without accommodations	5	9	3	3	2	6
	Assessed with accommodations	15	11	13	8	3	4
2011	Identified	19	23	14	13	6	11
	Excluded	1	2	1	2	#	#
	Assessed without accommodations	5	9	1	3	4	6
	Assessed with accommodations	13	12	12	9	2	4
2013	Identified	19	23	14	14	7	11
	Excluded	1	2	1	1	#	#
	Assessed without accommodations	3	7	1	2	2	5
	Assessed with accommodations	15	14	12	10	4	5
2015	Identified	20	24	14	14	8	12
	Excluded	2	2	1	1	1	1
	Assessed without accommodations	5	8	1	3	4	6
	Assessed with accommodations	13	14	11	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	
		Rhode Island	Nation (public)	Rhode Island	Nation (public)	Rhode Island	Nation (public)
1990 ¹	Identified	14	—	11	—	4	—
	Excluded	6	—	5	—	2	—
	Assessed without accommodations	8	—	6	—	2	—
1992 ¹	Identified	14	10	10	8	4	2
	Excluded	5	6	4	5	2	2
	Assessed without accommodations	8	4	7	3	2	1
1996 ¹	Identified	17	11	13	9	4	3
	Excluded	7	5	5	4	2	1
	Assessed without accommodations	10	7	7	5	2	2
2000	Identified	20	14	16	11	4	4
	Excluded	3	4	3	3	1	1
	Assessed without accommodations	12	7	10	5	2	3
	Assessed with accommodations	4	3	4	2	1	1
2003	Identified	23	19	20	14	5	6
	Excluded	4	4	3	3	2	1
	Assessed without accommodations	7	8	5	5	2	4
	Assessed with accommodations	13	7	12	6	2	1
2005	Identified	21	19	17	13	5	6
	Excluded	3	4	3	3	1	1
	Assessed without accommodations	7	7	6	3	2	4
	Assessed with accommodations	11	8	9	7	2	1
2007	Identified	20	18	17	13	4	7
	Excluded	3	4	2	4	1	1
	Assessed without accommodations	5	6	3	2	2	4
	Assessed with accommodations	12	8	12	6	1	2
2009	Identified	21	18	18	13	3	6
	Excluded	2	3	2	3	1	#
	Assessed without accommodations	4	5	3	2	1	3
	Assessed with accommodations	14	10	13	8	2	2
2011	Identified	19	18	16	13	3	6
	Excluded	1	3	1	2	#	#
	Assessed without accommodations	4	5	3	2	1	3
	Assessed with accommodations	13	10	12	9	2	2
2013	Identified	19	17	15	13	5	6
	Excluded	1	2	1	1	#	#
	Assessed without accommodations	2	3	1	1	1	2
	Assessed with accommodations	16	12	13	10	4	3
2015	Identified	20	19	16	13	5	7
	Excluded	2	2	1	1	1	#
	Assessed without accommodations	4	5	2	1	2	3
	Assessed with accommodations	14	13	13	11	3	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
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, states, and the nation. 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 Instruments 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 SD and/or ELL students 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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