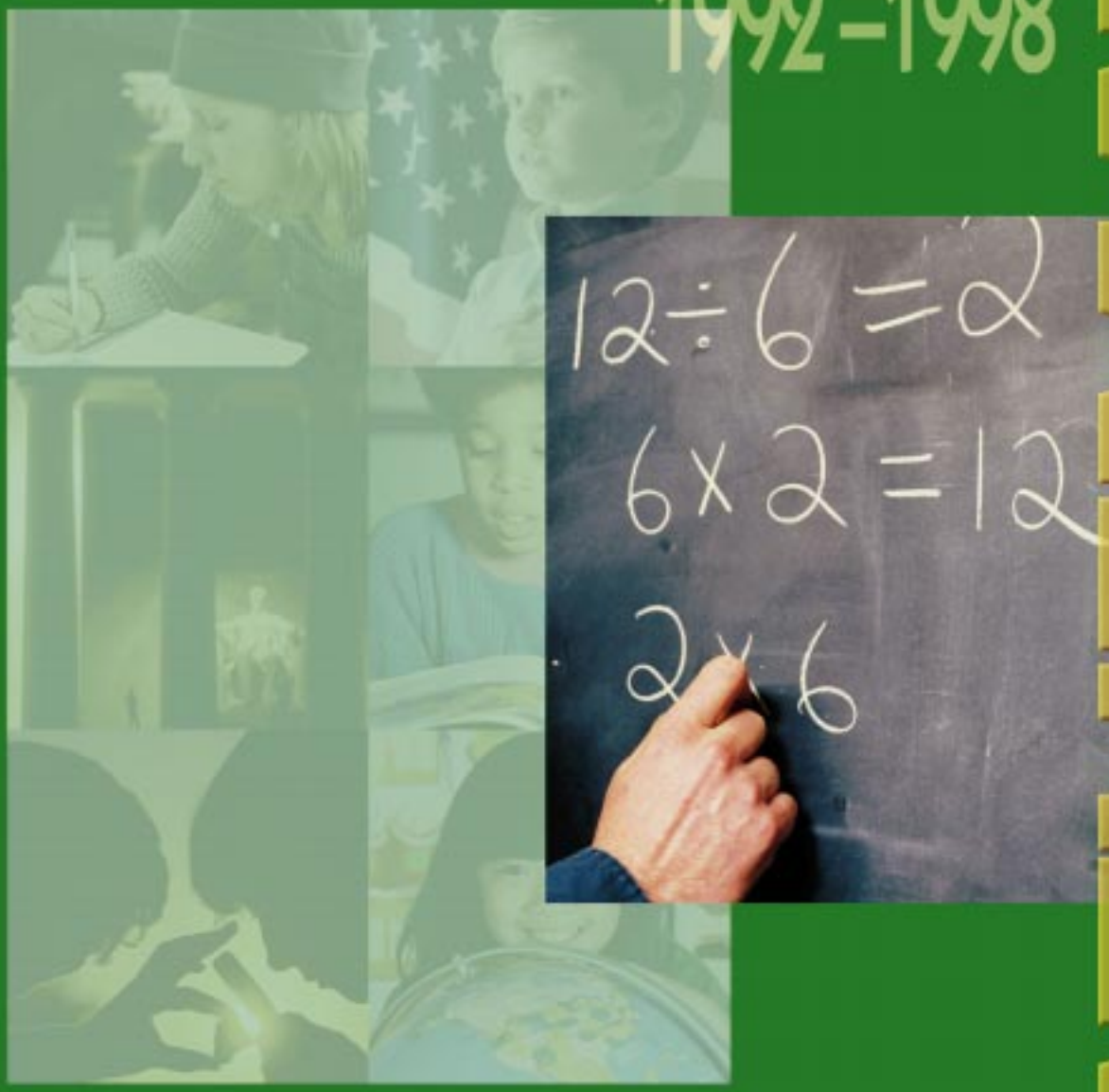
MATHEMATICS

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

ACHIEVEMENT LEVELS

1992–1998



THE NATION'S REPORT CARD

National Assessment of Educational Progress
National Assessment Governing Board
U.S. Department of Education

The National Assessment Governing Board

The National Assessment Governing Board (NAGB) was created by Congress to formulate policy for the National Assessment of Educational Progress (NAEP). Among the Board's responsibilities are developing objectives and test specifications and designing the assessment methodology for NAEP.

Members

Mark D. Musick, Chair
President
Southern Regional Education Board
Atlanta, Georgia

Michael T. Nettles, Vice Chair
Professor of Education
University of Michigan
Ann Arbor, Michigan

Moses Barnes
Principal
Hallandale High School
Hallandale, Florida

Melanie A. Campbell
Fourth-Grade Teacher
West Indianola Elementary School
Topeka, Kansas

Honorable Wilmer Cody
Former Commissioner of Education
State of Kentucky
New Orleans, Louisiana

Daniel Domenech
Superintendent of Schools
Fairfax County Public Schools
Fairfax, Virginia

Edward Donley
Former Chairman
Air Products & Chemicals, Inc.
Allentown, Pennsylvania

Thomas H. Fisher
Director, Student Assessment Services
Florida Department of Education
Tallahassee, Florida

Edward H. Haertel
Professor, School of Education
Stanford University
Stanford, California

Juanita Haugen
Local School Board Member
Pleasanton, California

Honorable Nancy K. Kopp
State Legislator
Annapolis, Maryland

Honorable Ronnie Musgrove
Governor of Mississippi
Jackson, Mississippi

Roy M. Nageak, Sr.
First Vice-Chair
Alaska State Board of Education and Early Development
Barrow, Alaska

Debra Paulson
Eighth-Grade Mathematics Teacher
Dr. Hornedo Middle School
El Paso, Texas

Honorable Jo Ann Pottorff
State Legislator
Wichita, Kansas

Diane Ravitch
Senior Research Scholar
New York University
New York, New York

Sister Lourdes Sheehan, R.S.M.
Secretary for Education
United States Catholic Conference
Washington, D.C.

John H. Stevens
Executive Director
Texas Business and Education Coalition
Austin, Texas

Adam Urbanski
President
Rochester Teachers Association
Rochester, New York

Migdania D. Vega
Principal
Coral Way Elementary Bilingual School
Dade County Public Schools
Miami, Florida

Deborah Voltz
Assistant Professor
Department of Special Education
University of Louisville
Louisville, Kentucky

Honorable Michael Ward
State Superintendent of Public Instruction
North Carolina Public Schools
Raleigh, North Carolina

Marilyn A. Whirry
Twelfth-Grade English Teacher
Mira Costa High School
Manhattan Beach, California

Dennie Palmer Wolf
Senior Research Associate
Harvard Graduate School of Education
Cambridge, Massachusetts

Roy Truby
Executive Director, NAGB
Washington, D.C.

National Assessment of Educational Progress Achievement Levels 1992–1998 for Mathematics

Edited by

Susan Cooper Loomis

Mary Lyn Bourque

July 2001

National Assessment of Educational Progress
National Assessment Governing Board
U.S. Department of Education

THE NATION'S REPORT CARD

July 2001

Developed for the National Assessment Governing Board
under contract number ZA97001001
by ACT and Aspen Systems Corporation

Suggested Citation
Loomis, S.C. and Bourque, M.L. (Eds.)
National Assessment of Educational Progress
Achievement Levels, 1992–1998 for Mathematics,
Washington, DC: National Assessment Governing Board, 2001.

For More Information
National Assessment Governing Board
800 North Capitol Street, NW, Suite 825
Washington, DC 20002–4233
877–464–3796
www.nagb.org

To Order This Report
Call tollfree 1–877–4ED–Pubs
or visit www.ed.gov/pubs/edpubs.html

Table of Contents

Understanding Achievement Levels for the Mathematics National Assessment of Educational Progress 1

Overview of the Framework for the National Assessment of Educational Progress in Mathematics.....4

Achievement Levels: Descriptions and Cutscores.....7

Achievement Levels: Sample Items 10

Performance Data 32

Understanding Achievement Levels for the Mathematics National Assessment of Educational Progress

Purpose of This Report

The purpose of this report is to increase understanding of the achievement levels for the National Assessment of Educational Progress (NAEP): what they are, and what they are **not.** The report is a reference for the American public, especially educators, parents, students, and policymakers. Seven booklets make up the report; each booklet focuses on one of the subjects for which NAEP achievement levels have been set. These include mathematics, science, reading, writing, civics, U.S. history, and geography.

The information in this report will be helpful in interpreting accurately the meaning of the *Mathematics* NAEP achievement levels and student performance relative to the levels. The information will also aid in understanding the NAEP reports, commonly known as *The Nation's Report Card*.

What Is the National Assessment of Educational Progress?

NAEP is a survey of American students' knowledge and skills in different subjects at grades 4, 8, and 12. NAEP combines the samples of performances to provide information about the knowledge and skills of students in the nation as a whole, in each participating state, and in different demographic groupings.

What Are NAEP Achievement Levels?

Congress authorized the National Assessment Governing Board (NAGB) to set achievement goals for student performance on NAEP. NAGB identified and defined the goals in terms of three levels of achievement: Basic, Proficient, and Advanced. NAEP achievement levels define ***what students should know and be able to do*** at the Basic, Proficient, and Advanced levels established by NAGB.

There are three parts to NAEP achievement levels: descriptions, cutscores, and sample items. The achievement levels descriptions are statements of what students should know and be able to do at each level. The cutscores represent the minimum score required for performance at each NAEP achievement level and are usually reported along with the percentage of students who scored *at or above* the level. Sample items provide illustrations of student knowledge and skills required within each level of achievement.

What Constitutes Basic, Proficient, and Advanced Achievement?

Proficient achievement is defined by NAGB as ***"solid academic performance*** exhibiting competency over challenging subject matter." The Basic and Advanced achievement levels are defined relative to this central level. Basic achievement is performance that exhibits ***"partial mastery*** over skills fundamental to Proficient performance." Advanced achievement exhibits ***superior performance.*** Achievement that is less than partial mastery is referred to simply as "below Basic."

How Good Is Good Enough?

The overall achievement goal for American students is performance that qualifies at the Proficient level or higher. Meeting this goal for the nation as a whole will take time. Competency over challenging subject matter is not easily attained. The average performance score on NAEP in most subjects falls within the Basic achievement level.

How Should Achievement Levels Be Interpreted?

Unlike most assessments, there are no individual scores on NAEP. Achievement levels define performance, not students. Notice that there is no mention of "at grade level" performance in these achievement goals. In particular, it is important to understand clearly that the Proficient achievement level does not refer to "at grade" performance. Nor is performance at the Proficient level synonymous with "proficiency" in the subject. That is, students who may be considered proficient in a subject, given the common usage of the term, might not satisfy the requirements for performance at the NAEP achievement level. Further, Basic achievement is more than minimal competency. Basic achievement is less than mastery but more than the lowest level of performance on NAEP. Finally, even the best students you know may not meet the requirements for Advanced performance on NAEP.

How Are the Achievement Levels Developed?

The achievement levels-setting process is carefully designed, implemented, and evaluated with great attention to detail and technical precision. The process of developing achievement levels involves the judgments of informed, well-qualified people from throughout the nation and its territories. Approximately 20 persons served on each of three grade-level panels to develop the Mathematics NAEP achievement levels in 1992. These 60 people included teachers (about 55 percent), other educators (about 15 percent), and members of the general public (about 30 percent). To the extent possible, the panels were proportionally representative of the nation's population with respect to region, race/ethnicity, and gender.

Panelists participate in a five-day process that includes training and instruction to prepare them for the standard-setting tasks. Panelists make three separate sets of judgments regarding student performance on NAEP items, and they receive a variety of feedback information regarding the implications of their judgments. Sophisticated psychometric methods were used to produce the feedback and guide the process.

Highly experienced staff and technical advisors carefully monitor the achievement levels-setting process. Panelists evaluate every conceivable aspect of the process, and their responses are fully

analyzed. Extensive analyses are conducted to determine whether panelists seemed to be making logical, informed judgments and whether similar panelists would make similar judgments. Yet, there is no way of knowing that the standards are "right" because there is no true standard against which to evaluate the panelists' judgments.

Who Sets the Achievement Levels?

Under the law, the National Assessment Governing Board is the final authority on determining the levels and their use for reporting NAEP performance results. The Board reviews information about the process for setting the achievement levels and panelists' opinions of it. NAGB considers the recommendations of panelists and technical advisors regarding the levels. The Board also considers additional information about student course-taking patterns in the subject area and student performance on other assessments in the subject. NAGB then judges whether the standards are reasonable and makes the final decisions for setting the standards.

The Board decided that the mathematics standards were too stringent. They took account of the statistical imprecision in estimating the cutscores from ratings and adjusted the cutscores. The cutscores for all grades and levels were set one standard error below the original overall composite cutscore computed from panelists' ratings.

The panels for mathematics were convened in March 1992, and NAGB set the Mathematics NAEP Achievement Levels in September 1992. The achievement levels set for the Mathematics NAEP in 1992 were used for reporting results for the 1990[1], 1996, and 2000 assessments in mathematics. They will be used until NAGB determines that a new framework is needed to guide the development of the assessment. At that time, new achievement levels may be developed and set.

[1]The 1990 Mathematics NAEP data were calibrated with the 1992 data so the cutscores set for 1992 could be used for reporting the 1990 assessment data. In any given year, NAEP data for the current assessment year are calibrated to the data for the previous assessment year to permit direct comparisons of performance.

Overview of the Framework for the National Assessment of Educational Progress in Mathematics

This overview of the Mathematics Framework for the National Assessment of Educational Progress (NAEP) details what the Mathematics NAEP assesses. The framework defines the structure, organization, and general content for the assessment. Many questions must be answered before an assessment can be developed, and answers to those questions are presented in the framework.

What Is the Mathematics NAEP Framework?

The framework is **the** guide to the assessment.[2] The framework delineates the aspects of mathematics to be assessed and the relative emphasis to be placed on each at each grade level. The framework suggests the mix of items in each content strand for each grade. In addition, the framework suggests the proportional mix of item formats—multiple choice, short constructed-response, and extended constructed response items—to be included at each grade level.

The mathematics achievement levels set in 1992 were based on the framework developed for the 1990 NAEP. The Mathematics NAEP Framework and assessment specifications have changed somewhat since the 1990 assessment. The modifications reflect changes in mathematics curriculum and goals for mathematics education. For example, the conceptual approach for the framework and assessment structure changed. Before 1996, each question or exercise was designed to represent both a content strand (such as algebra or geometry) and a cognitive level (conceptual understanding, procedural knowledge, or problem solving). The current framework, developed in 1996, recognizes that students generally need to draw on knowledge and skills from more than one area of mathematics to answer questions. The 1996 framework also specifies that the assessment include "families" of questions that focus more intensively on a student's understanding of mathematics within a particular content strand or across content strands. Further, the current framework combines communications and connections with the cognitive skills identified for the Mathematics NAEP (conceptual understanding, procedural knowledge, and problem solving).

Results of studies showed that 1990 and 1992 assessments of student performance developed under the earlier version of the Mathematics NAEP Framework and assessments developed according to the 1996 version could be reported on the same scale and compared from one assessment year to another.

How Was the Framework Developed?

A national consensus process was used to develop the content of the framework documents for the NAEP. Panels of content experts, practitioners, and professionals in related fields developed

[2]Frameworks are available on the Internet at *www.nagb.org*. Printed copies of the framework for Mathematics and for other NAEP subjects are available from the National Assessment Governing Board. Copies are also available through the U.S. Department of Education's ED Pubs information center at 1–877–4ED–Pubs.

the Mathematics NAEP Framework to reflect the input collected through the consensus process. The consensus committees were broad-based groups of mathematicians, educators, and other interested citizens.

The original framework committee gave special attention to state objectives and frameworks from throughout the country. They also incorporated ideas from draft versions of the National Council of Teachers of Mathematics standards being developed at the same time. In revising the original framework, a steering committee reviewed the direction and scope of the project, and a planning committee drafted the new framework. Both committees considered the status of national reform efforts in mathematics, evaluations of NAEP, and the fit between the Mathematics NAEP and mathematics education. The committees conducted several studies from which recommendations were derived. A national review of the recommendations was conducted by mail, and focus groups were held in six states throughout the country to gather input on the recommendations.

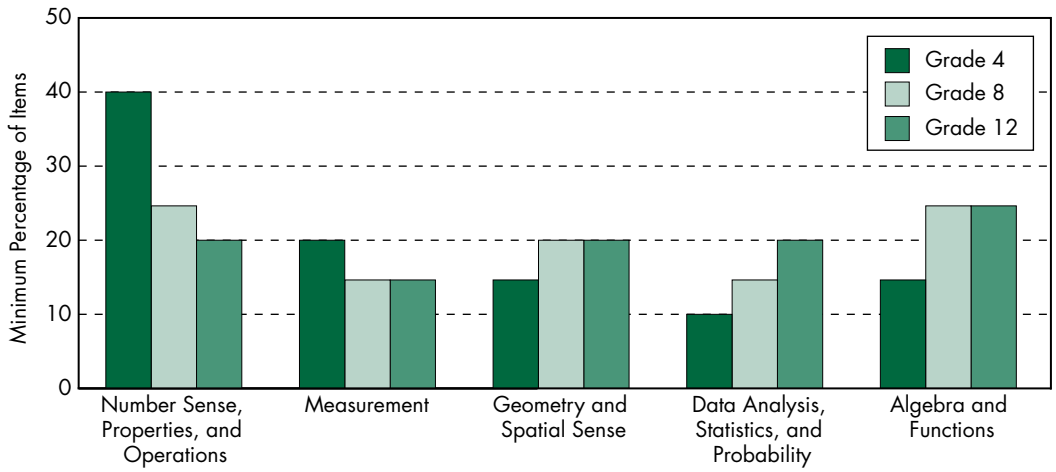
What Are the Components of the Assessment Framework?

Content Strands. Five mathematical content strands are identified for the Mathematics NAEP. For each content strand, several more specific subtopics are identified for the assessments. The appropriate grade level(s) for assessing the subtopics is noted as well. The content strands are:

- Number Sense, Properties, and Operations.
- Measurement.
- Geometry and Spatial Sense.
- Data Analysis, Statistics, and Probability.
- Algebra and Functions.

Figure 1 shows the percentage of content strands assessed at each grade level. The percentages of items in each content strand are the minimum recommended for each grade level, and each item may fit into more than one strand.

Figure 1. Content Strands Assessed in the Mathematics NAEP, by Grade Level



Mathematical Abilities. The original framework identified conceptual understanding, procedural knowledge, and problem solving as primary abilities to be assessed. In the 1996 framework, these abilities are a means of providing balance to the overall assessment. At each grade level, assessment items are developed such that students will likely use roughly equal amounts of conceptual understanding, procedural knowledge, and problem-solving abilities to process the information and respond correctly.

The Mix of Item Formats. Changes in the requirements of the frameworks have led to a shift in the types of items used in the assessments. In 1990, about three-quarters of the items at each grade were multiple-choice items. Although the remainder of the items that year required a short written response by the student, those items were scored as "correct/incorrect."

In 1992, only about 60 percent of the items were multiple-choice items. About 35 percent of the items at each grade required a short constructed response from students, but those were again scored as "correct/incorrect." That year, five to six items at each grade required an extended response from students, and those were scored for partial credit on a 1–5 point scale. These items measure students' ability to solve more complex mathematical problems. Those extended constructed-response items accounted for about 3 percent of the entire assessment in 1992.

By 1996, however, multiple-choice items accounted for only slightly over one-half of the items at each grade. About 40 percent of the items required a short constructed response, and the remainder required a longer response by students. All constructed-response items in the 1996 assessment were scored for partial credit.

Calculators and Manipulatives. Experiments with the use of calculators in the Mathematics NAEP have been conducted since 1990. By the 1996 assessment, students were allowed to use calculators for about one-third of the items. Students are provided with calculators for the assessment and are trained in their use. The framework committees recognize that calculators cannot be allowed for all blocks of items because many more problems should be solved without calculators and because it is necessary to maintain trends over assessment years.

In addition, students are given manipulatives to use in responding to several items on the assessments. For example, students at grade 4 were given rulers to use with certain items, and students in grades 8 and 12 were given rulers and protractors. Students may be given geometric shapes and three-dimensional models to use in responding to questions on the assessment.

Achievement Levels: Descriptions and Cutscores

Note: The performance of students on the Mathematics NAEP is reported on a scale of 0 to 500. The average score is 250 (anchored at Grade 8) with a standard deviation of 50 scale score points. Italicized text is a summary of the achievement level description.

GRADE 4

Basic (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 strands.

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 strands. Students at this level should be able to use—though not always accurately—four-function calculators, rulers, and geometric shapes. Their written responses are often minimal and presented without supporting information.

Proficient (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 strands.

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 strands; 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 (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 strands.

Fourth graders performing at the Advanced level should be able to solve complex and nonroutine real-world problems in all NAEP content strands. They should display mastery in the use of four-function calculators, rulers, and geometric shapes. The 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.

GRADE 8

Basic (262)

Eighth-grade students performing at the Basic level should exhibit evidence of conceptual and procedural understanding in the five NAEP content strands. 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 strands 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 (299)

Eighth-grade students performing at the Proficient level should apply mathematical concepts and procedures consistently to complex problems in the five NAEP content strands.

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 (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 strands.

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.

GRADE 12

Basic (288)

Twelfth-grade students performing at the Basic level should demonstrate procedural and conceptual knowledge in solving problems in the five NAEP content strands.

Twelfth graders performing at the Basic level should be able to use estimation to verify solutions and determine the reasonableness of results as applied to real-world problems. They are expected to use algebraic and geometric reasoning strategies to solve problems. Twelfth graders performing at the Basic level should recognize relationships presented in verbal, algebraic, tabular, and graphical forms; and demonstrate knowledge of geometric relationships and corresponding measurement skills.

They should be able to apply statistical reasoning in the organization and display of data and in reading tables and graphs. They also should be able to generalize from patterns and examples in the strands of algebra, geometry, and statistics. At this level, they should use correct mathematical language and symbols to communicate mathematical relationships and reasoning processes; and use calculators appropriately to solve problems.

Proficient (336)

Twelfth-grade students performing at the Proficient level should consistently integrate mathematical concepts and procedures to the solutions of more complex problems in the five NAEP content strands.

Twelfth graders performing at the Proficient level should demonstrate an understanding of algebraic, statistical, and geometric and spatial reasoning. They should be able to perform algebraic operations involving polynomials; justify geometric relationships and judge and defend the reasonableness of answers as applied to real-world situations. These students should be able to analyze and interpret data in tabular and graphical form; understand and use elements of the function concept in symbolic, graphical, and tabular form; and make conjectures, defend ideas, and give supporting examples.

Advanced (367)

Twelfth-grade students performing at the Advanced level should consistently demonstrate the integration of procedural and conceptual knowledge and the synthesis of ideas in the five NAEP content strands.

Twelfth-grade students performing at the Advanced level should understand the function concept and be able to compare and apply the numeric, algebraic, and graphical properties of functions. They should apply their knowledge of algebra, geometry, and statistics to solve problems in more advanced areas of continuous and discrete mathematics.

They should be able to formulate generalizations and create models through probing examples and counterexamples. They should be able to communicate their mathematical reasoning through the clear, concise, and correct use of mathematical symbolism and logical thinking.

Achievement Levels: Sample Items

Interpreting the Data

Because a representative sample of students at each grade level is selected to take the NAEP, each assessment exercise is administered to a relatively small subsample of students in each grade. Typically, around 10,000 students are assessed in each grade, and each item is administered to just under 2,000 students. The values reported in the tables accompanying each item are probability estimates of performance at each level of achievement for students at each grade level tested in NAEP. The data reported for the sample items show the probability of a correct response to multiple choice items and of a specific score on items requiring students to construct a response. The probabilities are estimates of how students scoring within each range of achievement on the NAEP score scale would perform on each item. These probabilities are, in fact, averages of performance within each achievement level. Some students who score within the Basic range of achievement, for example, will answer a specific multiple choice item correctly and some will not. Furthermore, student performance within the Basic range of achievement may be very near the lower boundary, around the middle, or very near the upper boundary, that is, approaching the Proficient level of achievement. The probabilities reported here are weighted averages to represent performance across the range, with more weight given to scores in the middle of the achievement ranges.

Here is a suggested way to read the data for multiple choice items: "Students performing in the (Basic/Proficient/Advanced) score range have (X) probability of answering this item correctly."

For constructed response items, here is a suggested way to read the data: "Students performing in the (Basic/Proficient/Advanced) score range have (X) probability of giving a response scored at the indicated level (1, 2, 3, etc.) for this sample item."

Grade 4 Sample 1 (1990)—Basic Performance

By how much would the value of 5,647 be decreased if the 5 were replaced by a 2?

(A) 3

(B) 300

(C) 3,000

(D) 30,000

Probability of correct response	
Basic	74%
Proficient	90%
Advanced	97%

Grade 4 Sample 2 (1992)—Basic Performance

A store sells 168 tapes each week. How many tapes does it sell in 24 weeks?

(A) 7

(B) 192

(C) 4,032

(D) 4,172

Probability of correct response	
Basic	64%
Proficient	93%
Advanced	99%

Students were permitted to use calculators to answer this question.

Grade 4 Sample 3 (1996)—Basic Performance

A whole number is multiplied by 5. Which of these could be the result?

(A) 652

(B) 562

(C) 526

(D) 265

Proficient	82%
Advanced	94%

Students were permitted to use calculators to answer this question.

Grade 4 Sample 4 (1996)—Basic Performance

How many fourths make a whole?

Answer: 4 fourths

Probability of correct response

Basic	52%
Proficient	73%
Advanced	88%

Scoring guide

1 = Correct: 4, or four fourths, or 4 fourths, etc.

0 = Incorrect: Any incorrect response

Grade 4 Sample 5 (1990)—Proficient Performance

Max bought 50 plants for his garden. He plans to put 8 plants in each row. How many complete rows of 8 can he plant?

(A) 6 rows

(B) 7 rows

(C) 8 rows

(D) 16 rows

Probability of correct response	
Basic	42%
Proficient	76%
Advanced	94%

Grade 4 Sample 6 (1992)—Proficient Performance

Product

2 x 2 = 4

2 x 2 x 2 = 8

2 x 2 x 2 x 2 = 16

2 x 2 x 2 x 2 x 2 = 32

If the pattern shown continues, could 375 be one of the products in this pattern?

○ YES ● NO

Explain why or why not.

Because if the pattern continued you would never get an odd number

Probability of correct response	
Basic	28%
Proficient	62%
Advanced	87%

Scoring guide

1 = Correct: Because 375 is not divisible by 2 (or is not even), OR because 375 is between two of the numbers in the pattern.

0 = Not a correct response.

Students were permitted to use calculators to answer this question.

Grade 4 Sample 7 (1996)—Proficient Performance

Ms. Hernandez formed teams of 8 students each from the 34 students in her class. She formed as many teams as possible, and the students left over were substitutes. How many students were substitutes?

Answer: 2 LEFT

Probability of correct response	
Basic	37%
Proficient	81%
Advanced	97%

Scoring guide

1 = Correct: 2.

0 = Incorrect: Any incorrect response.

Grade 4 Sample 8 (1996)—Proficient Performance

Every hour, a company makes 8,400 paper plates and puts them in packages of 15 plates each. How many packages are made in one hour?

● A 560

○ B 8,385

○ C 17,857

○ D 126,000

Probability of correct response	
Basic	45%
Proficient	79%
Advanced	97%

Students were permitted to use calculators to answer this question.

Grade 4 Sample 9 (1990)—Advanced Performance

What is the distance all the way around a rectangle that is 8 meters long and 5 meters wide?

(A) 13 meters

(B) 26 meters

(C) 40 meters

(D) 80 meters

(E) I don't know.

Probability of correct response	
Basic	23%
Proficient	46%
Advanced	82%

Grade 4 Sample 10 (1992)—Advanced Performance

A package of birdseed costs $2.58 for 2 pounds. A package of sunflower seeds costs $3.72 for 3 pounds. What is the difference in the cost *per pound*?

(A) $0.05

(B) $1.14

(C) $1.24

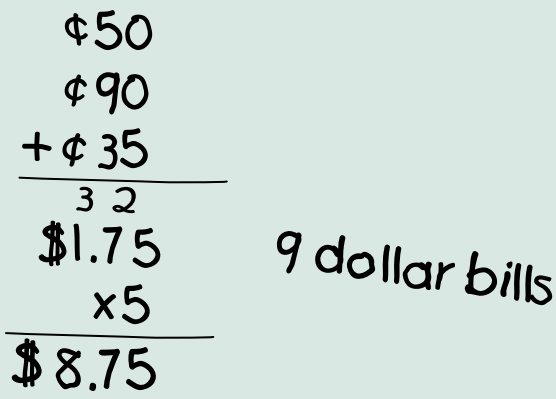
(D) $1.29

Probability of correct response	
Basic	6%
Proficient	18%
Advanced	77%

Students were permitted to use calculators to answer this question.

Grade 4 Sample 11 (1996)—Advanced Performance

Sam can purchase his lunch at school. Each day he wants to have juice that costs 50¢, a sandwich that costs 90¢, and fruit that costs 35¢. His mother has only $1.00 bills. What is the least number of $1.00 bills that his mother should give him so he will have enough money to buy lunch for 5 days?



Probability of a score of 2	
Basic	10%
Proficient	38%
Advanced	72%

Scoring guide

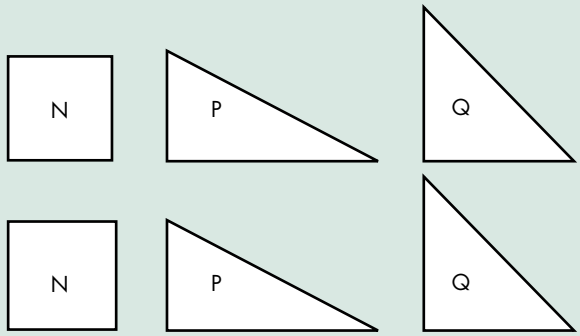
2= Correct: Nine $1 bills. For one day, the sum is $1.75. For 5 days, the sum is $8.75. Therefore, he should ask his mother for nine $1 bills.

1= Partial: $8.75 or 875, OR One day is $1.75 so he needs $2 each day, so $10 for a week, OR correct method but rounded down to $8 (this requires work to be shown), OR correct method but small error and incorrect response of $7 to $11, inclusive.

0= Incorrect: Any incorrect response including $1.75, $2, $875, or $875.00.

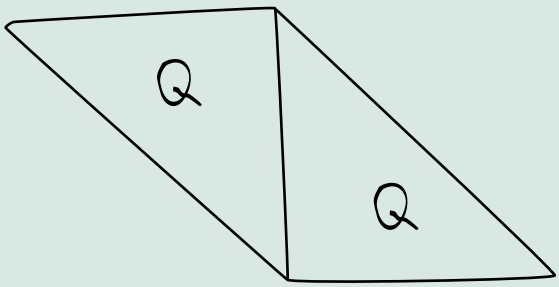
Students were permitted to use calculators to answer this question.

Grade 4 Sample 12 (1996)—Advanced Performance



Probability of correct response	
Basic	12%
Proficient	32%
Advanced	63%
Scoring guide	
1 = Correct: See Solution box below.	
0 = Incorrect: Any incorrect response.	

Use the 2 pieces labeled Q to make a 4–sided shape that is not a square.
Trace the shape and draw the line to show where the 2 pieces meet.

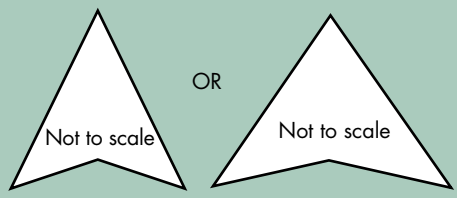


Solution

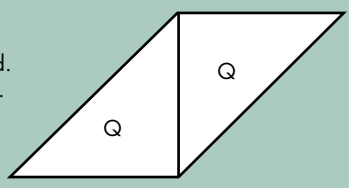
A correct shape without the line of separation shown.
(Figure is not a rhombus)

OR

A 4-sided shape (that is not a square) that results when part of two Q shapes overlap.
Examples:



The figure may be tilted.
Pieces may or may not be labeled.
Line of separation must be shown.



Grade 8 Sample 1 (1990)—Basic Performance

The average weight of 50 prize-winning tomatoes is 2.36 pounds. What is the combined weight, in pounds, of these 50 tomatoes?

(A) 0.0472

(B) 11.8

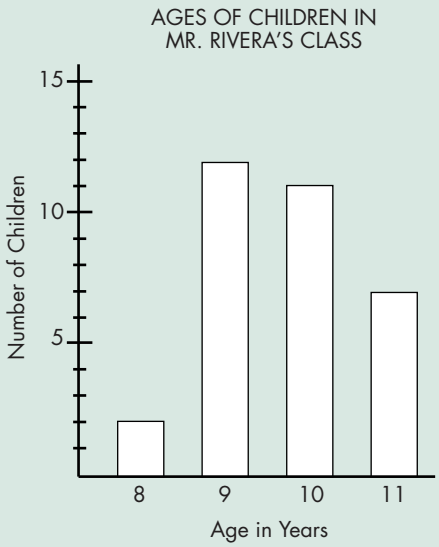
(C) 52.36

(D) 59

(E) 118

Proficient	90%
Advanced	98%

Grade 8 Sample 2 (1992)—Basic Performance



Probability of correct response	
Basic	64%
Proficient	85%
Advanced	96%

The graph above shows how many of the 32 children in Mr. Rivera's class are 8, 9, 10, and 11 years old. Which of the following is true?

(A) Most are younger than 9.

(B) Most are younger than 10.

(C) Most are 9 or older.

(D) None of the above is true.

Grade 8 Sample 3 (1996)—Basic Performance

From any vertex of a 4-sided polygon, 1 diagonal can be drawn.
From any vertex of a 5-sided polygon, 2 diagonals can be drawn.
From any vertex of a 6-sided polygon, 3 diagonals can be drawn.
From any vertex of a 7-sided polygon, 4 diagonals can be drawn.

How many diagonals can be drawn from any vertex of a 20-sided polygon?

Answer: 17 diagonal can be drawn

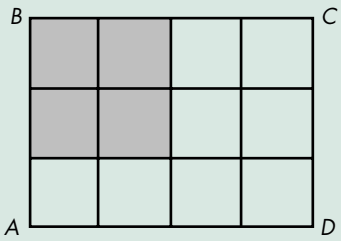
Probability of correct response	
Basic	56%
Proficient	79%
Advanced	92%

Scoring guide

1 = Correct: 17; number of diagonals is always 3 less than the number of sides.

0 = Incorrect: Any incorrect response.

Grade 8 Sample 4 (1996)—Basic Performance



Probability of correct response	
Basic	75%
Proficient	95%
Advanced	99%

In the figure above, what fraction of rectangle ABCD is shaded?

(A) 1/6

(B) 1/5

(C) 1/4

(D) 1/3

(E) 1/2

Grade 8 Sample 5 (1990)—Proficient Performance

Kate bought a book for $14.95, a record for $5.85, and a tape for $9.70. If the sales tax on these items is 6 percent and all 3 items are taxable, what is the total amount she must pay for the 3 items, including tax?

(A) $32.33

(B) $32.06

(C) $30.56

(D) $30.50

(E) $1.83

Basic	44%
Advanced	93%

Students were permitted to use calculators to answer this question.

Grade 8 Sample 6 (1992)—Proficient Performance

From a shipment of 500 batteries, a sample of 25 was selected at random and tested. If 2 batteries in the sample were found to be dead, how many dead batteries would be expected in the entire shipment?

(A) 10

(B) 20

(C) 30

(D) 40

(E) 50

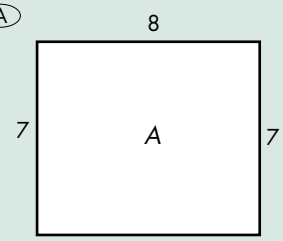
Probability of correct response	
Basic	34%
Proficient	74%
Advanced	96%

Grade 8 Sample 7 (1992)—Proficient Performance

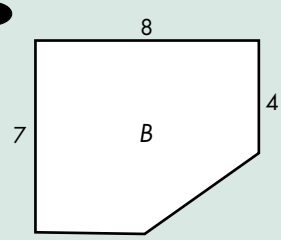
For each figure below, the lengths of 3 sides are given. Which figure could have a perimeter of 28?

Probability of correct response	
Basic	30%
Proficient	53%
Advanced	79%

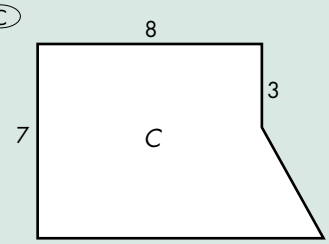
(A)



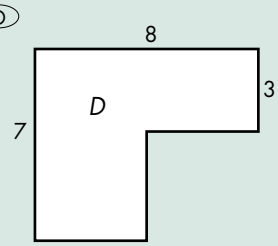
(B)



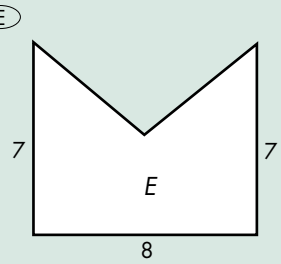
(C)



(D)



(E)



Grade 8 Sample 8 (1996)—Proficient Performance

Which of the following ordered pairs (x, y) is a solution to the equation $2x - 3y = 6$?

(A) (6, 3)

(B) (3, 0)

(C) (3, 2)

(D) (2, 3)

(E) (0, 3)

Probability of correct response	
Basic	37%
Proficient	71%
Advanced	93%

Grade 8 Sample 9 (1996)—Proficient Performance

(–5)(–7) =

–35

(B) –12

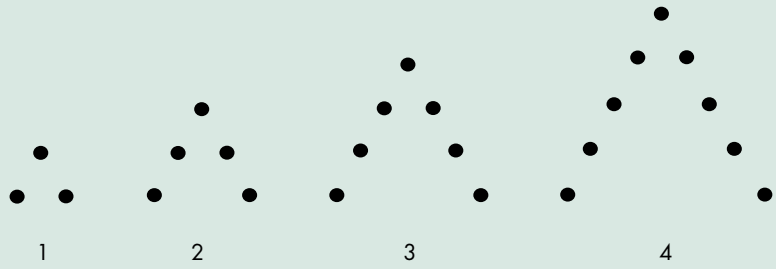
(C) –2

(D) 12

(E) 35

Probability of correct response	
Basic	47%
Proficient	75%
Advanced	92%

Grade 8 Sample 10 (1990)—Advanced Performance



If this pattern of dot figures is continued, how many dots will be in the 100th figure? Explain how you found your answer to the above question.

Answer: I multiplied 100 times 2 and got 200 then I Added one.

Probability of correct response	
Basic	9%
Proficient	28%
Advanced	63%

Scoring guide

1 = Correct: An explanation that leads to the correct response (201) for the previous question, such as:

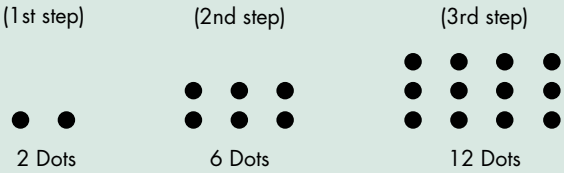
- Multiply the position of the figure by 2, then add 1 to that answer.
- It is the 101st odd number.
- 2 x 100 + 1
- Any statements equivalent to the previous ones.
- Extended the pattern and counted the dots.

0 = Incorrect: Incorrect answer to previous question and an explanation given, OR correct answer to previous question but incorrect explanation given, OR not a correct response.

Grade 8 Sample 11 (1992)—Advanced Performance

This question requires you to show your work and explain your reasoning. You may use drawings, words, and numbers in your explanation. Your answer should be clear enough so that another person could read it and understand your thinking. It is important that you show *all* your work.

A pattern of dots is shown below. At each step, more dots are added to the pattern. The number of dots added at each step is more than the number added in the previous step. The pattern continues infinitely.



Marcy has to determine the number of dots in the 20th step, but she does not want to draw all 20 pictures and then count the dots.

Explain or show how she could do this *and* give the answer that Marcy should get for the number of dots.

You can see that every step ~~is multiplied by three to~~ adds one across and up
& so on the 20th step it would have

$$\begin{array}{r} 20 \\ \times\ 21 \\ \hline 420 \end{array}$$

Probability of a score of 3	
Basic	7%
Proficient	27%
Advanced	60%

Scoring guide

3 = Complete: Identifies 420 and ties step 20 back to beginning of pattern in some specific form or generalization. See Solution box below.

2 = Acceptable: Explains the pattern correctly but omits the correct number of dots (420).

1 = Partial: Offers a partial or incomplete correct explanation.

0 = Incomplete: Attempts to generalize, or to draw all 20 pictures in the pattern (with a clear understanding of the pattern), OR not a correct response.

Students were permitted to use calculators to answer this question.

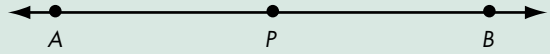
Solution

Explanation should include one of the following ideas with no false statements.

a. For each successive step, the number of rows and the number of columns is increasing by 1, forming a pattern. For example, the first step forms 1 by 2 rows and columns, the next step 2 by 3, the third step 3 x 4, and so on. Continuing this pattern would mean that the 20th step has 20 x 21 or 420 dots.

b. The successive differences between consecutive steps form a pattern. The differences 4, 6, 8, 10, … form a pattern. There are 19 differences forming the pattern 4, 6, 8, 10, …, 38, 40 and this sum is (9 x 44) + 22 or 418. However, 2 must be added for the 1st step, yielding a response of 420.

Grade 8 Sample 12 (1992)—Advanced Performance



Which of the following constructions at point *P* in the figure above will produce an angle of 45°?

(A) Constructing only the bisector of ∠*APB*

(B) Constructing only a circle with center at *P*

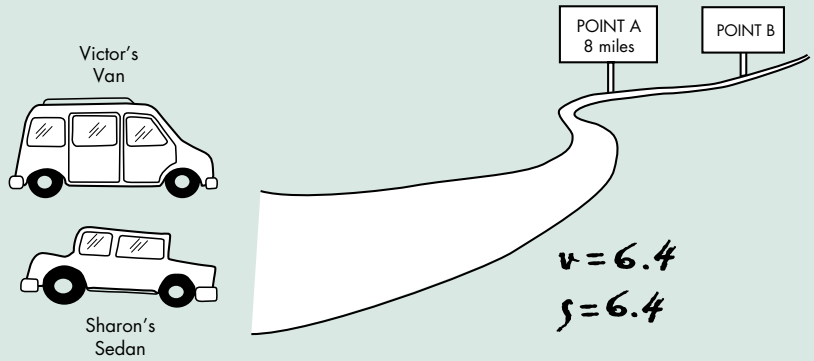
(C) Constructing one perpendicular line only

(D) Constructing a circle with center at *P* and a perpendicular line

(E) Constructing a perpendicular line and an angle bisector

Probability of correct response	
Basic	23%
Proficient	46%
Advanced	78%

Grade 8 Sample 13 (1996)—Advanced Performance



Victor's van travels at a rate of 8 miles every 10 minutes. Sharon's sedan travels at a rate of 20 miles every 25 minutes.

If both cars start at the same time, will Sharon's sedan reach point A, 8 miles away, before, at the same time, or after Victor's van?

Explain your reasoning.

the same time, they both travle 0.8 miles/minute

because: $\frac{8}{10} = 0.8$ + $\frac{20}{25} = 0.8$

If both cars start at the same time, will Sharon's sedan reach point B (at a distance further down the road) before, at the same time, or after Victor's van?

Explain your reasoning.

same time because they are both traveling 0.8 miles/min.

Probability of a score of 2	
Basic	5%
Proficient	26%
Advanced	66%

Scoring guide

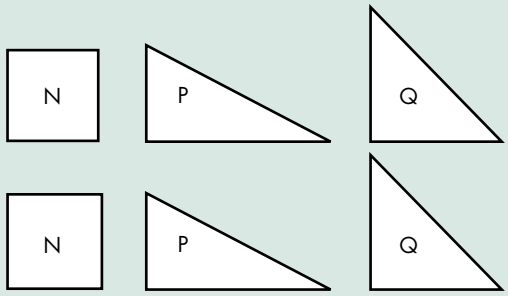
2 = Correct: They will both reach points A and B at the same time because their rates are equal.

1 = Partial: Response answers either part with correct justification, OR answers both parts correctly with no justification (For a score of 1, there cannot be two incorrect justifications or one incorrect and one missing justification).

0 = Incorrect: Any incorrect response.

Students were permitted to use calculators to answer this question.

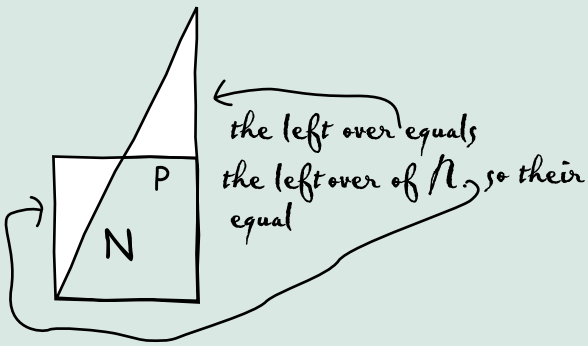
Grade 8 Sample 14 (1996)—Advanced Performance



Bob, Carmen, and Tyler were comparing the areas of *N* and *P*. Bob said that *N* and *P* have the same area. Carmen said that the area of *N* is larger. Tyler said the area of *P* is larger.

Who was correct? Bob

Use words or pictures (or both) to explain why.



Probability of correct response	
Basic	22%
Proficient	46%
Advanced	74%

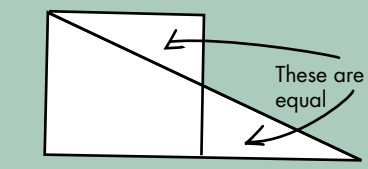
Scoring guide

1 = Correct: An adequate explanation with or without "Bob." May say "neither" or "both." See Solution box below.

0 = Incorrect: Indicates that Carmen or Tyler was correct, OR omits the name and gives no satisfactory explanation, OR indicates Bob was correct, but gives no or an inadequate explanation.

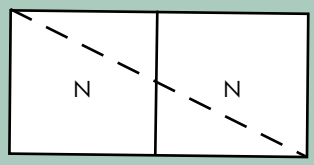
Note: The scoring guide for this item originally included separate scores for incorrect, partially correct, and completely correct. After scaling, partially correct and completely correct responses were combined as correct responses. The student response shown was originally scored as completely correct.

Solution



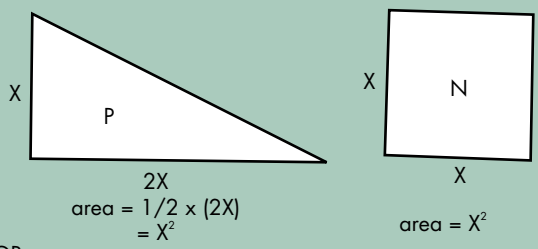
Part of P overlaps N and part does not. The part that extends beyond N is equal to the part of N not overlapped by P.

OR



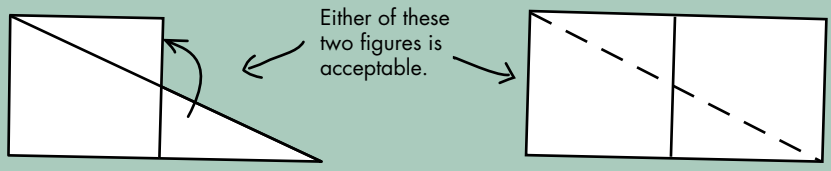
Two P's match two N's therefore they have the same area. (Therefore, one N has the same area as one P.)

OR



Areas are equal because height of P is the same as the height of N, and the base of P is twice the base of N.

OR



Grade 12 Sample 1 (1990)—Basic Performance

Which of the following is true about 87% of 10?

It is greater than 10.

(B) It is less than 10.

(C) It is equal to 10.

(D) Can't tell.

(E) I don't know.

Probability of correct response	
Basic	84%
Proficient	99%
Advanced	100%

Grade 12 Sample 2 (1992)—Basic Performance

$$\frac{6 \times 10^3}{3 \times 10^5} =$$

(A) 0.5×10^2

(B) 2×10^2

(C) $2 \times 10^{0.6}$

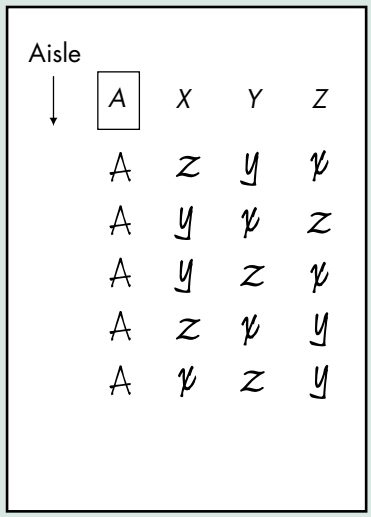
(D) 0.5×10^{-2}

(E) 2×10^{-2}

Probability of correct response	
Basic	56%
Proficient	88%
Advanced	97%

Grade 12 Sample 3 (1996)—Basic Performance

Four people—*A, X, Y,* and *Z*—go to a movie and sit in adjacent seats. If *A* sits in the aisle seat, list all possible arrangements of the other three people. One of the arrangements is shown below.



Probability of correct response	
Basic	70%
Proficient	89%
Advanced	96%

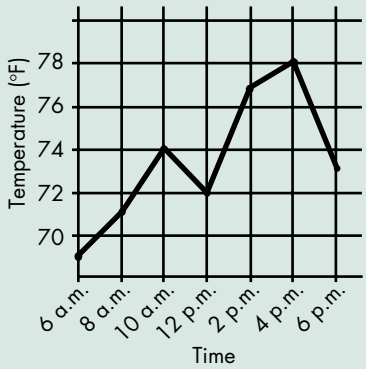
Scoring guide

1 = Correct: Any correct arrangement(s) other than XYZ.

0 = Incorrect/Incomplete: Does not list all 5 correct arrangements other than XYZ, OR lists incorrect arrangements.

Note: The scoring guide for this item originally included separate scores for incorrect, partially correct, and completely correct. After scaling, partially correct and completely correct responses were combined as correct responses. The student response shown was originally scored as completely correct.

Grade 12 Sample 4 (1996)—Basic Performance



According to the graph above, the temperature at 10 a.m. is approximately how many degrees greater than the temperature at 8 a.m.?

(A) 1

(B) 1.5

(C) 2

(D) 2.5

(E) 3

Proficient	93%
Advanced	97%

Grade 12 Sample 5 (1990)—Proficient Performance

The perimeter of a square is 24 centimeters. What is the area of that square?

(A) 36 square cm

(B) 48 square cm

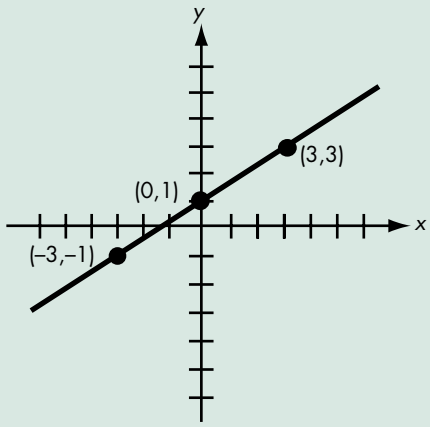
(C) 96 square cm

(D) 576 square cm

(E) I don't know.

Probability of correct response	
Basic	35%
Proficient	89%
Advanced	100%

Grade 12 Sample 6 (1992)—Proficient Performance



Probability of correct response	
Basic	42%
Proficient	84%
Advanced	98%

What is the slope of the line shown in the graph above?

(A) 1/3

(B) 2/3

(C) 1

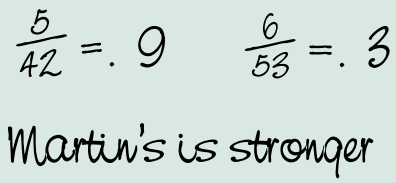
(D) 3/2

(E) 3

Grade 12 Sample 7 (1996)—Proficient Performance

Luis mixed 6 ounces of cherry syrup with 53 ounces of water to make a cherry-flavored drink. Martin mixed 5 ounces of the same cherry syrup with 42 ounces of water. Who made the drink with the stronger cherry flavor?

Give mathematical evidence to justify your answer.



Probability of a score of 2	
Basic	17%
Proficient	50%
Advanced	77%

Scoring guide

2 = Correct: Identifies Martin with correct mathematical justification. See Solution box below.

Note: Correct responses may be based on cherry syrup to water volumes or on cherry syrup to cherry water solution volumes.

1 = Partial: Compares a pair of correct ratios for both Luis and Martin, such as 6/59 to 5/47 or 59/6 to 47/5, OR 6/53 to 5/42 or 53/6 to 42/5, OR 6/5 to 42/53 or 5/6 to 53/42.

0 = Incorrect response.

Students were permitted to use calculators to answer this question.

Solution

Martin's drink has the stronger cherry flavor.

Luis		Martin		Luis		Martin
6/59 = 0.1017	<	5/47 = 0.1064	OR	6/53	<	5/42
0.1017	<	0.1064		0.1132	<	.1190

OR

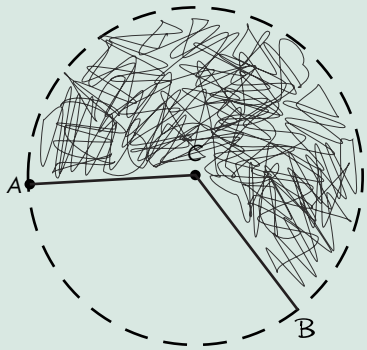
Luis: 1 part CS to 8.8 parts water < Martin: 1 part CS to 8.4 parts water

Note: $\frac{6}{53} = \frac{252}{2226}$ and $\frac{5}{42} = \frac{265}{2226}$

Solution may be shown as converted to a common denominator (2226). (2773)

Grade 12 Sample 8 (1996)—Proficient Performance

On the circle with center *C* shown below, use the protractor to locate and label a point *B* that creates an arc *AB* with measure 235°. Darken this arc.



Probability of correct response	
Basic	24%
Proficient	54%
Advanced	79%

Scoring guide

1 = Correct: See Solution box below.

0 = Incorrect: Any incorrect response.

Note: The scoring guide for this item originally included separate scores for incorrect, partially correct, and completely correct. After scaling, partially correct and completely correct responses were combined as correct responses. The student response shown was originally scored as completely correct.

Solution

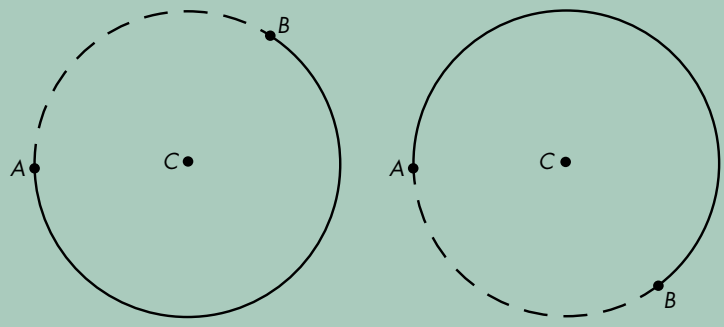
An arc length *AB* that clearly indicates point *B* is placed on the circle such that obtuse angle *ACB* is not 235° but within ± 5° of 235°, OR an arc length *AB* that clearly indicates point *B* is placed so that the obtuse angle *ACB* = 235°. (Note: ± 2° tolerance). Either one of the darkened arcs *AB* illustrated in the circles below is a correct answer.

OR

indicates a sector or an arc of 235° (±5°) that does not have an endpoint at point *A*,

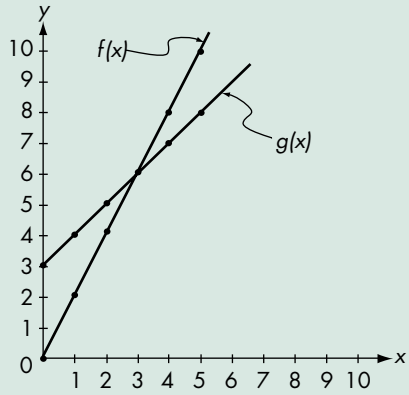
OR

point *B* is placed correctly on the circle (within ±5° of the correct location), but the arc is not clearly indicated.



Grade 12 Sample 9 (1990)—Advanced Performance

The following question refers to the graph shown below.



What is the value of $f[g(1)]$?

(A) 2

(B) 4

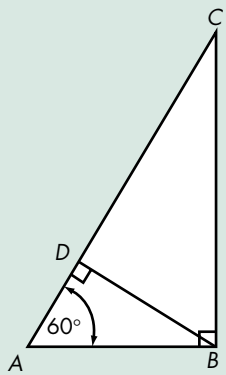
(C) 5

(D) 6

(E) 8

Probability of correct response	
Basic	19%
Proficient	32%
Advanced	68%

Grade 12 Sample 10 (1992)—Advanced Performance



In $\triangle ABC$ shown above, $AC = 12$. What is the length of segment BD?

(A) $3\sqrt{2}$

(B) $3\sqrt{3}$

(C) 6

(D) $6\sqrt{2}$

(E) $6\sqrt{3}$

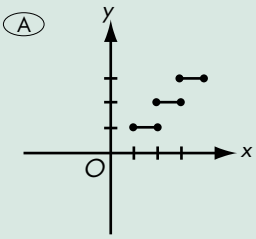
Probability of correct response	
Basic	21%
Proficient	43%
Advanced	87%

Grade 12 Sample 11 (1996)—Advanced Performance

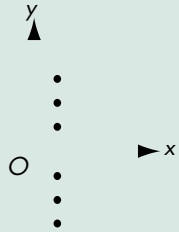
Which of the following could be the graph of a function?

Probability of correct response	
Basic	13%
Proficient	39%
Advanced	84%

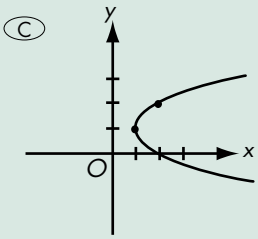
(A)



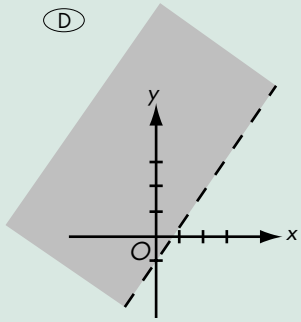
(B)



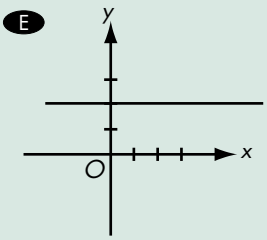
(C)



(D)



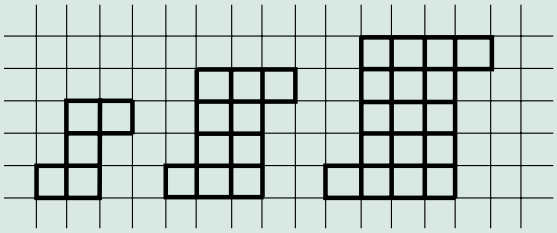
(E)



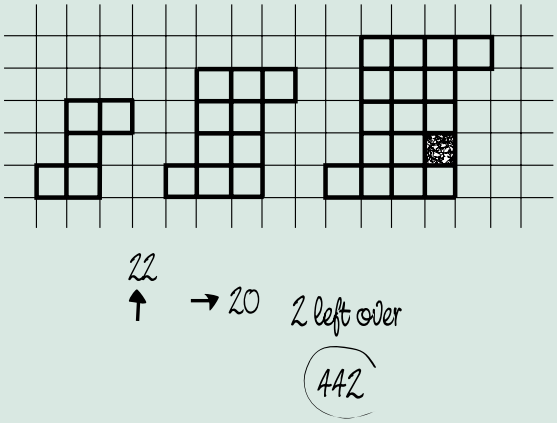
Grade 12 Sample 12 (1996)—Advanced Performance

This question requires you to show your work and explain your reasoning. You may use drawings, words, and numbers in your explanation. Your answer should be clear enough so that another person could read it and understand your thinking. It is important that you show all your work.

The first 3 figures in a pattern of tiles are shown below. The pattern of tiles contains 50 figures.



Describe the 20th figure in this pattern, including the total number of tiles it contains and how they are arranged. Then explain the reasoning that you used to determine this information. Write a description that could be used to define any figure in the pattern.



Probability of a score of 2	
Basic	17%
Proficient	41%
Advanced	67%

Scoring guide

4 = Correct: Describes the 20th figure correctly, including the fact that there are 442 tiles. Provides a clear explanation and evidence of accurate generalization (not necessarily symbolic) based on inductive reasoning. See Solution box below.

3 = Acceptable: Describes the 20th figure and gives the number of tiles. Provides some evidence of sound reasoning, but there may be a computational error. Explanation may lack some clarity.

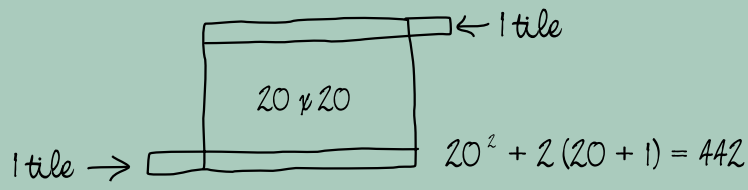
2 = Partial: Illustrates or describes at least one additional figure in the pattern correctly, OR states there are 442 tiles in the 20th figure.

1 = Incomplete: Attempts to draw or describe the given pattern or an additional figure in the pattern. (Goes beyond what is shown.)

0 = Incorrect: Any incorrect response.

Solution

The explanation should indicate there are 442 tiles in the 20th figure. Descriptions will vary—a correct one should suggest a row of 21 tiles across the top, a row of 21 across the bottom, and a 20 x 20 square between these rows. The top row extends one tile to the right of the square and the bottom row one tile to the left. Their counting methods might be illustrated by a diagram such as this:



Counting methods are supported by generalizations (verbal or symbolic) that are based on the students' observations about the pattern.

Performance Data

Exhibit 1. 1990 Mathematics NAEP, Grade 4: Percentage of Students At or Above Each Achievement Level

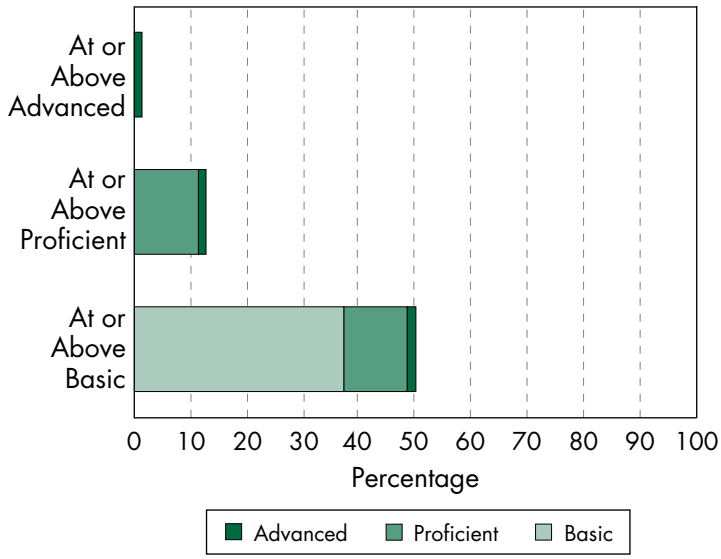


Exhibit 2. 1990 Mathematics NAEP, Grade 4: Percentage of Students Within Each Achievement Level

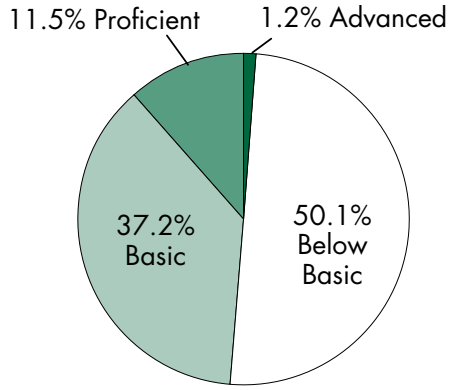


Exhibit 3. 1992 Mathematics NAEP, Grade 4: Percentage of Students At or Above Each Achievement Level

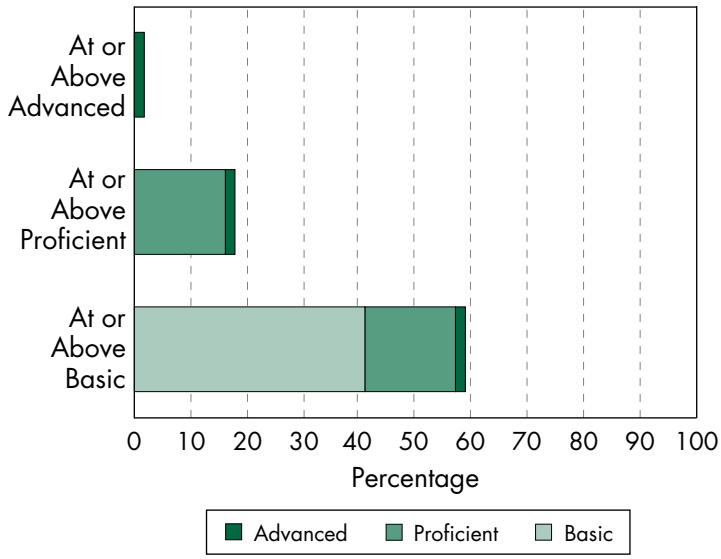


Exhibit 4. 1992 Mathematics NAEP, Grade 4: Percentage of Students Within Each Achievement Level

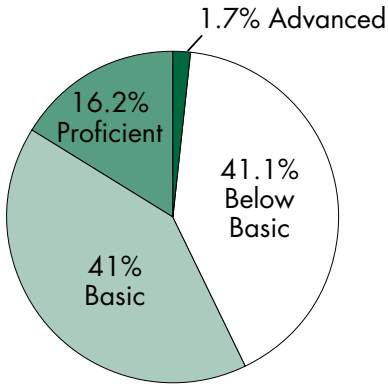


Exhibit 5. 1996 Mathematics NAEP, Grade 4: Percentage of Students At or Above Each Achievement Level

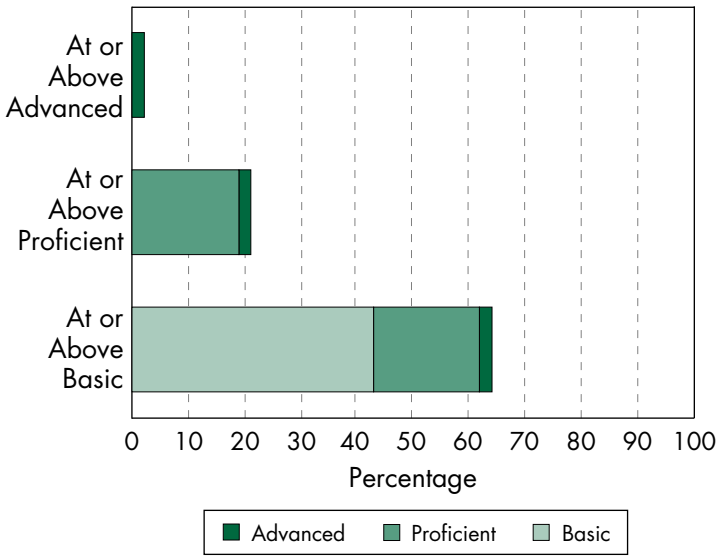


Exhibit 6. 1996 Mathematics NAEP, Grade 4: Percentage of Students Within Each Achievement Level

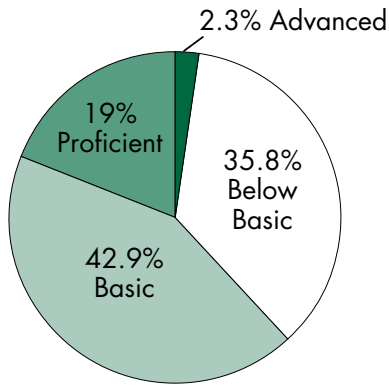


Exhibit 7. 1990 Mathematics NAEP, Grade 8: Percentage of Students At or Above Each Achievement Level

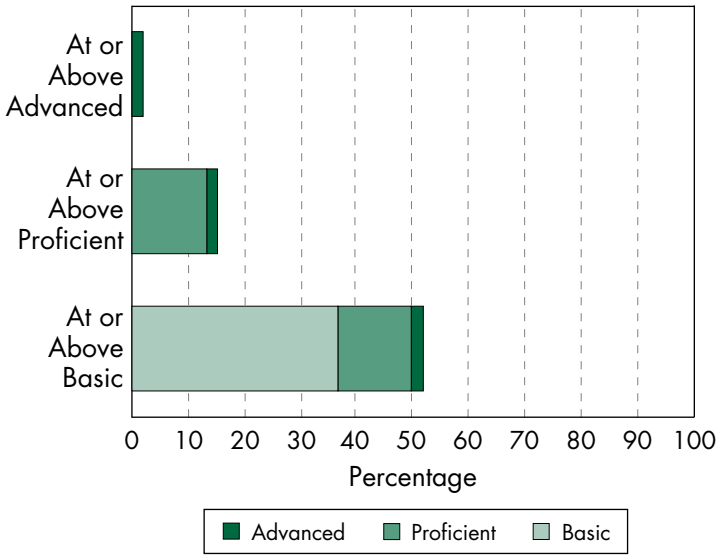


Exhibit 8. 1990 Mathematics NAEP, Grade 8: Percentage of Students Within Each Achievement Level

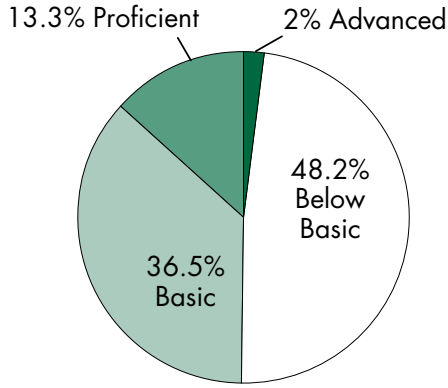


Exhibit 9. 1992 Mathematics NAEP, Grade 8: Percentage of Students At or Above Each Achievement Level

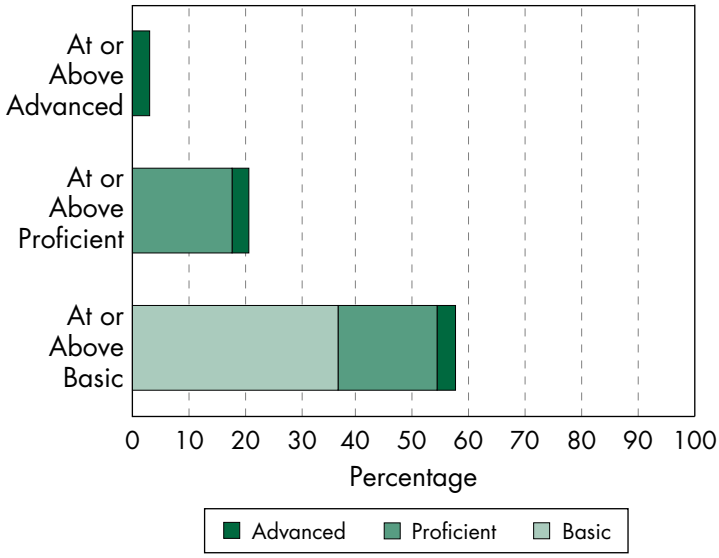


Exhibit 10. 1992 Mathematics NAEP, Grade 8: Percentage of Students Within Each Achievement Level

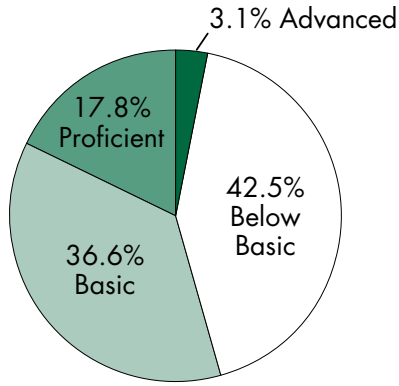


Exhibit 11. 1996 Mathematics NAEP, Grade 8: Percentage of Students At or Above Each Achievement Level

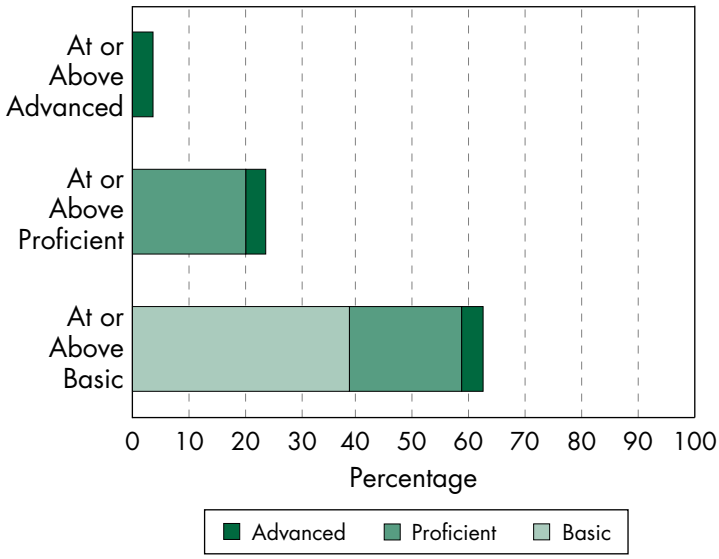


Exhibit 12. 1996 Mathematics NAEP, Grade 8: Percentage of Students Within Each Achievement Level

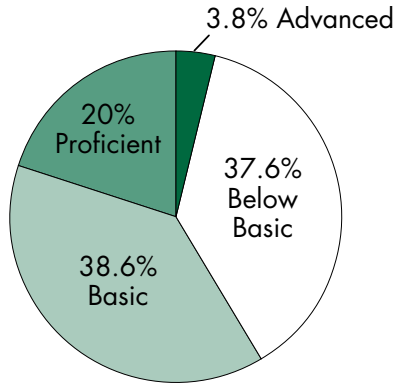


Exhibit 13. 1990 Mathematics NAEP, Grade 12: Percentage of Students At or Above Each Achievement Level

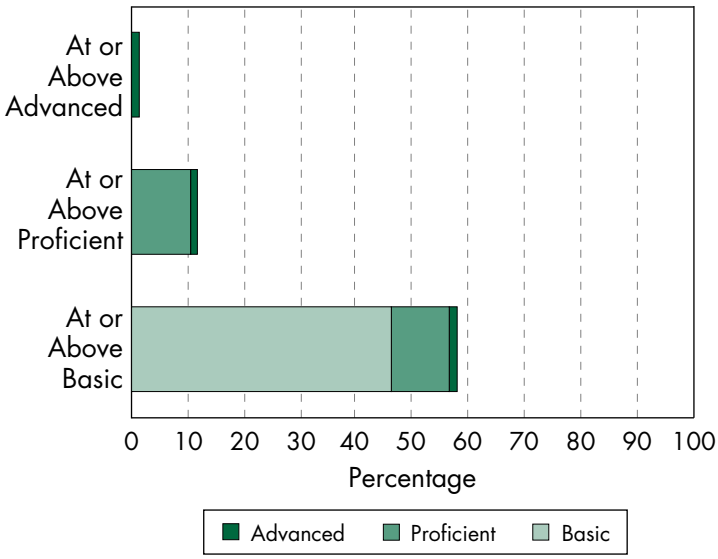


Exhibit 14. 1990 Mathematics NAEP, Grade 12: Percentage of Students Within Each Achievement Level

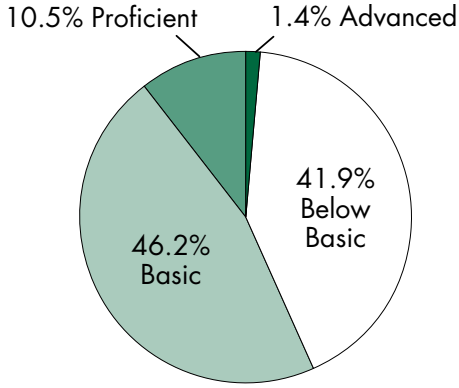


Exhibit 15. 1992 Mathematics NAEP, Grade 12: Percentage of Students At or Above Each Achievement Level

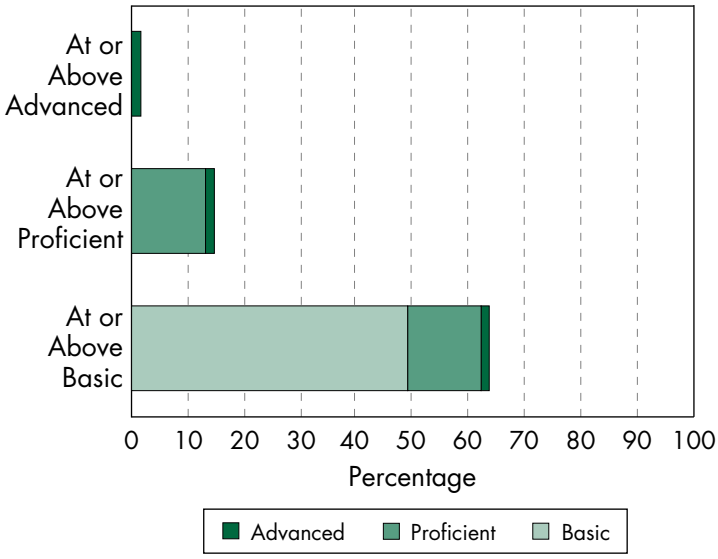


Exhibit 16. 1992 Mathematics NAEP, Grade 12: Percentage of Students Within Each Achievement Level

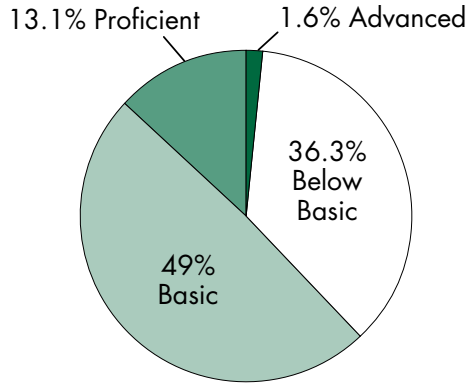


Exhibit 17. 1996 Mathematics NAEP, Grade 12: Percentage of Students At or Above Each Achievement Level

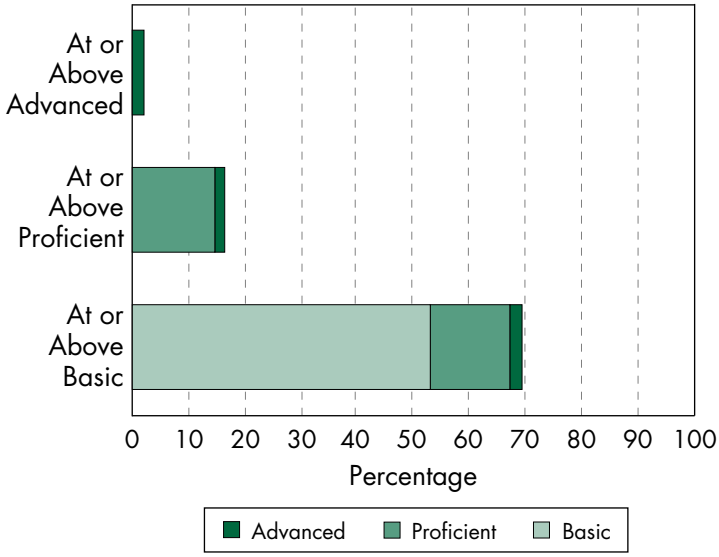


Exhibit 18. 1996 Mathematics NAEP, Grade 12: Percentage of Students Within Each Achievement Level

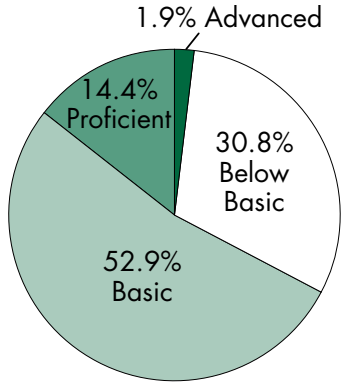
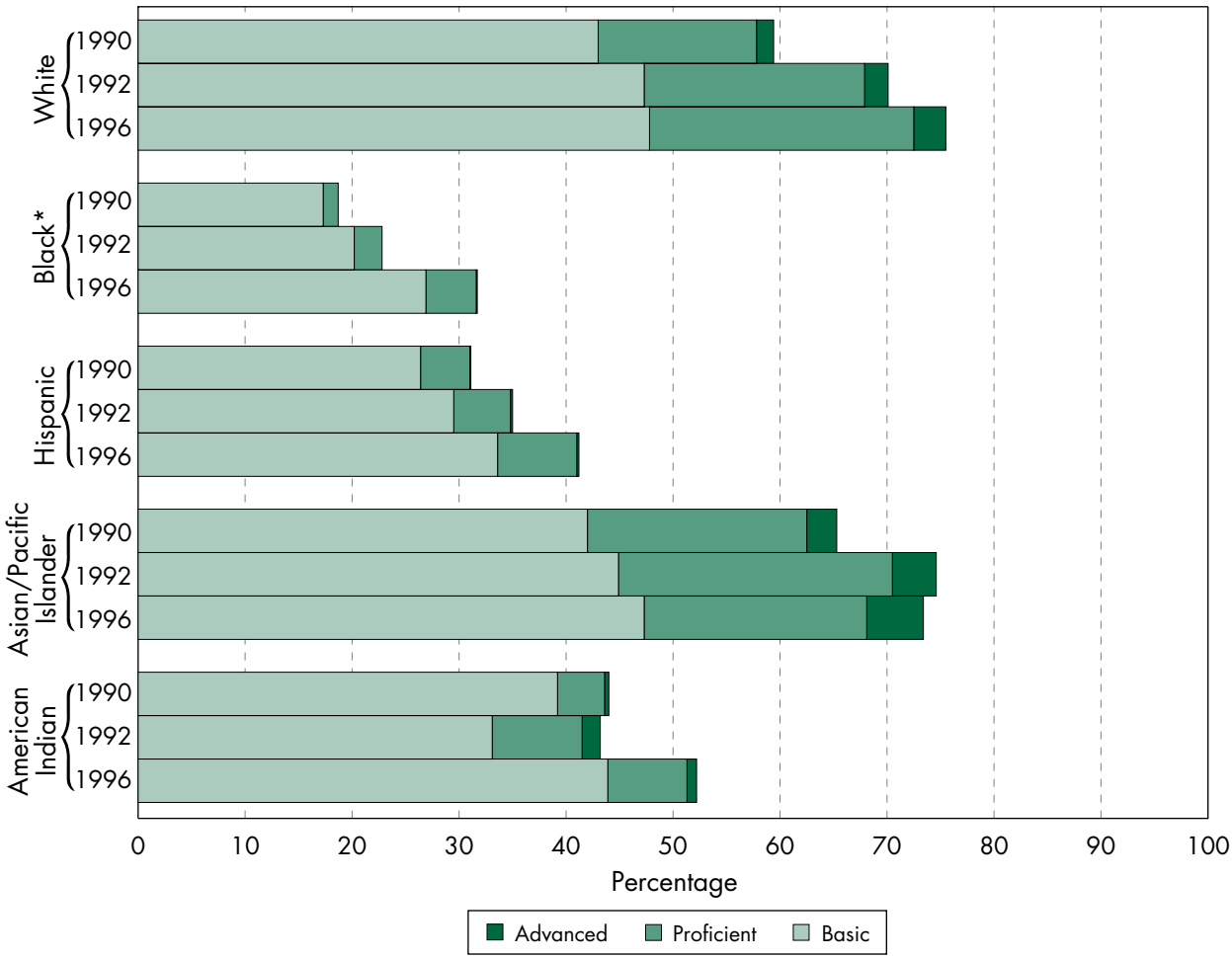
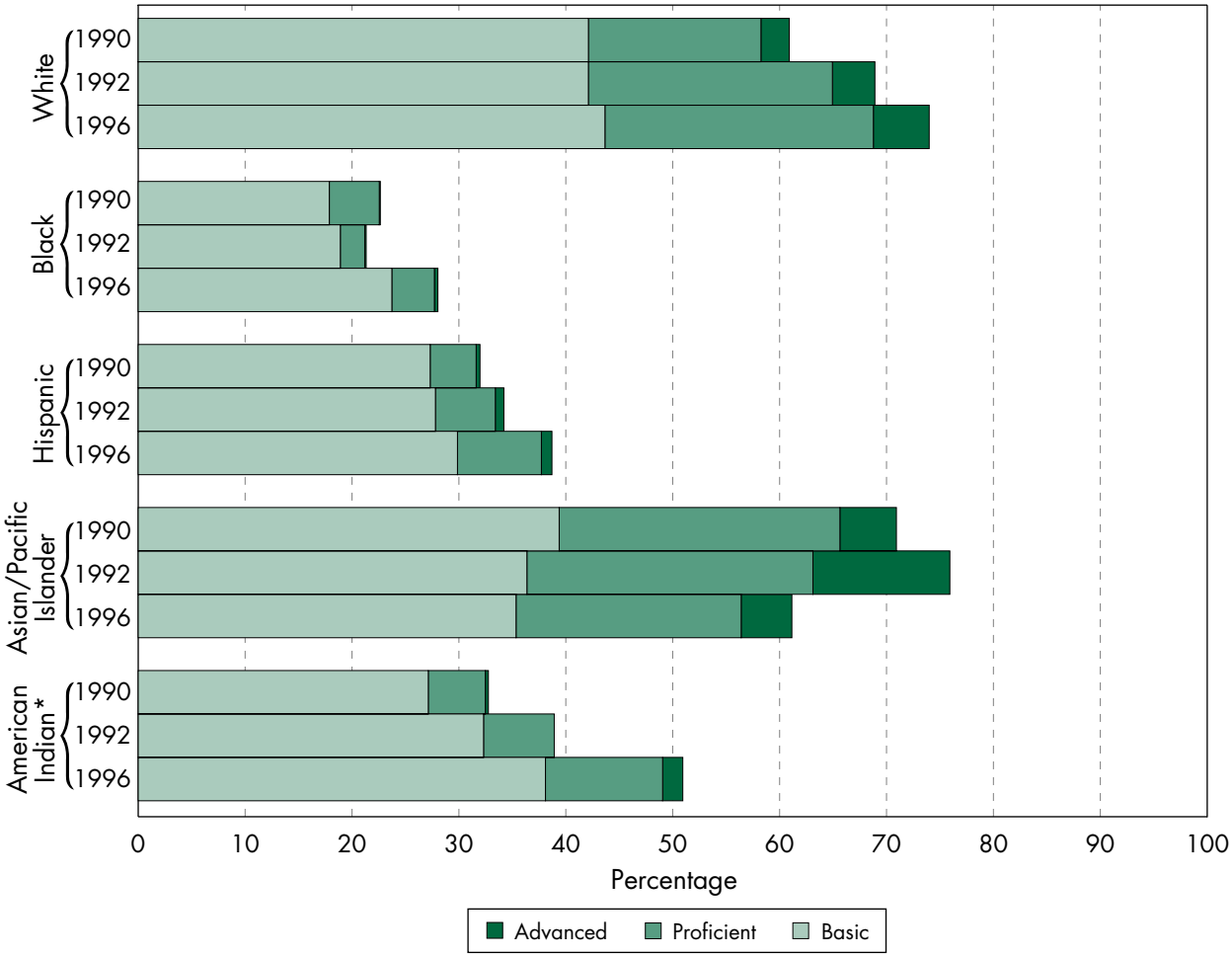


Exhibit 19. 1990, 1992, and 1996 Mathematics NAEP, Grade 4: Percentage of Students At or Above the Basic Achievement Level by Race/Ethnicity



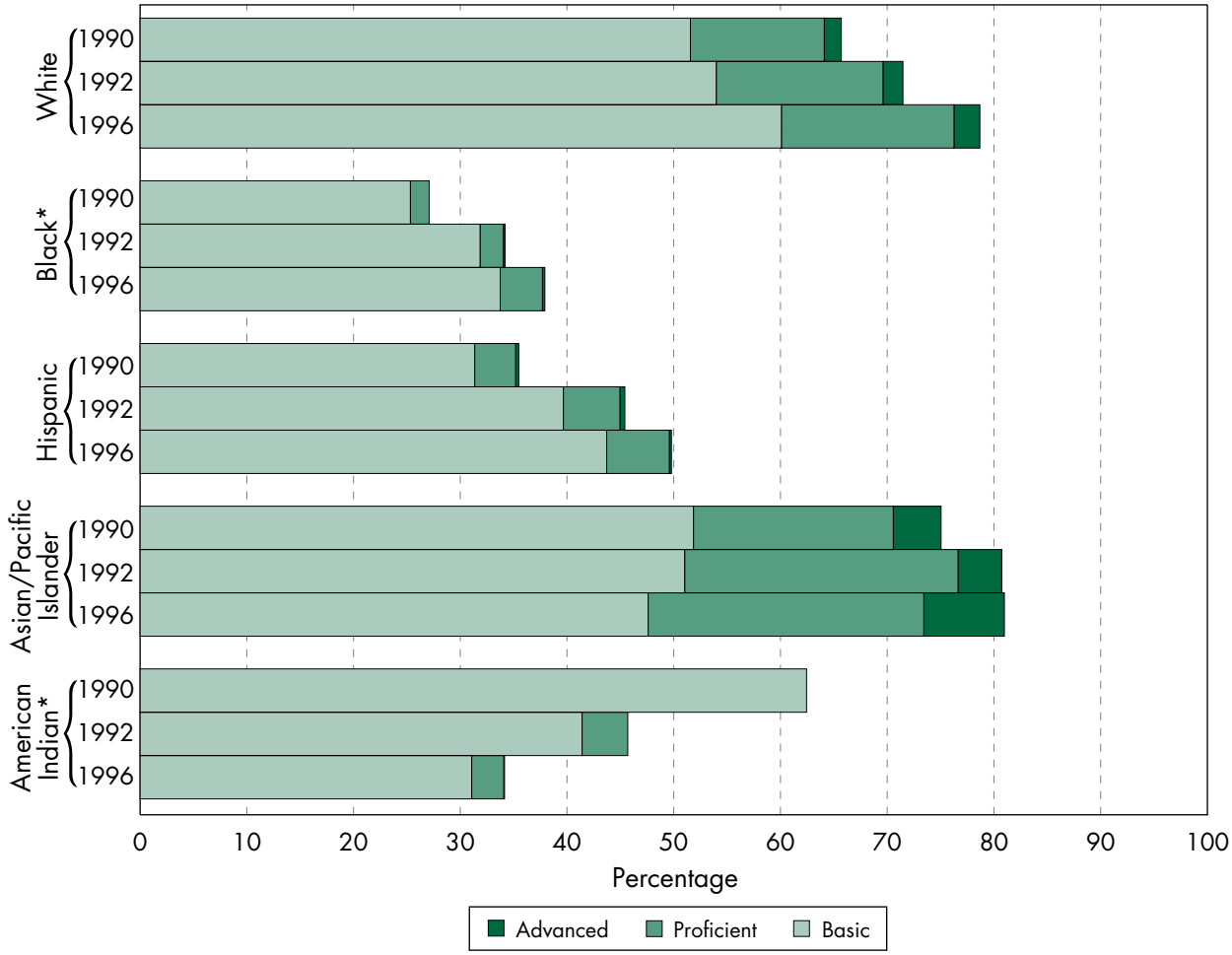
*Zero percent of Black students in 1990 and 1992 scored at or above Advanced.

Exhibit 20. 1990, 1992, and 1996 Mathematics NAEP, Grade 8: Percentage of Students At or Above the Basic Achievement Level by Race/Ethnicity



*Zero percent of American Indian students in 1992 scored at or above Advanced.

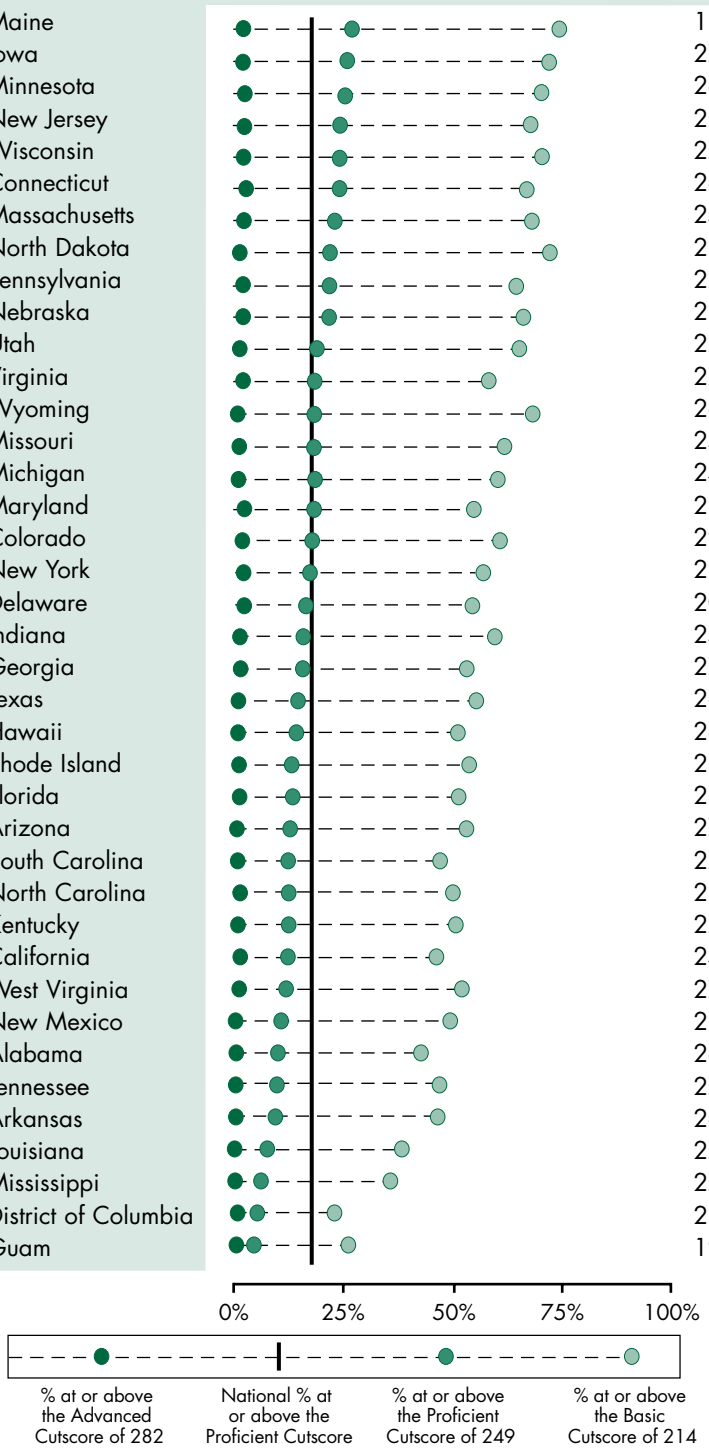
Exhibit 21. 1990, 1992, and 1996 Mathematics NAEP, Grade 12: Percentage of Students At or Above the Basic Achievement Level by Race/Ethnicity



*Zero percent of Black students in 1990 and American Indian students in 1990 and 1992 scored at or above Advanced. Zero percent of American Indian students in 1990 scored at or above Proficient.

Exhibit 22. 1992 Mathematics NAEP, Grade 4: Percentage of Students At or Above Each Achievement Level by Jurisdiction (Standard errors in parentheses)

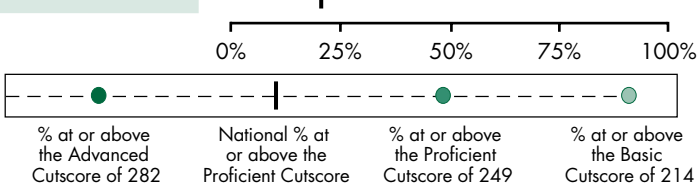
Jurisdiction Ordered by % At or Above Proficient	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Maine	1898	2.4 (0.5)	27.4 (1.5)	74.8 (1.5)
Iowa	2770	2.3 (0.4)	26.0 (1.2)	72.4 (1.5)
Minnesota	2640	2.5 (0.4)	25.9 (1.3)	70.6 (1.6)
New Jersey	2231	2.5 (0.6)	24.6 (1.5)	68.2 (2.1)
Wisconsin	2780	2.2 (0.4)	24.5 (1.4)	70.9 (1.4)
Connecticut	2600	2.9 (0.5)	24.4 (1.4)	67.3 (1.6)
Massachusetts	2549	2.4 (0.5)	23.3 (1.5)	68.5 (1.6)
North Dakota	2193	1.3 (0.3)	22.2 (1.1)	72.5 (1.3)
Pennsylvania	2740	2.0 (0.4)	21.8 (1.5)	64.9 (2.0)
Nebraska	2327	2.0 (0.5)	21.8 (1.6)	66.6 (1.8)
Utah	2799	1.4 (0.3)	19.0 (1.1)	65.6 (1.7)
Virginia	2786	2.3 (0.5)	18.8 (1.5)	58.6 (1.4)
Wyoming	2605	1.0 (0.3)	18.7 (1.1)	68.6 (1.4)
Missouri	2509	1.3 (0.3)	18.6 (1.3)	62.1 (1.7)
Michigan	2412	1.2 (0.4)	18.5 (1.7)	60.5 (2.2)
Maryland	2844	2.2 (0.3)	18.4 (1.2)	55.1 (1.6)
Colorado	2906	1.5 (0.4)	17.5 (1.0)	60.8 (1.4)
New York	2284	1.5 (0.3)	17.0 (1.3)	57.0 (1.8)
Delaware	2040	1.8 (0.3)	16.5 (0.9)	54.6 (1.0)
Indiana	2593	1.0 (0.2)	15.6 (1.1)	59.8 (1.7)
Georgia	2766	1.1 (0.3)	15.3 (1.2)	53.1 (1.7)
Texas	2623	1.2 (0.3)	15.0 (1.2)	55.7 (1.6)
Hawaii	2625	1.1 (0.2)	14.6 (0.9)	51.9 (1.8)
Rhode Island	2390	1.2 (0.4)	13.3 (1.1)	54.2 (2.2)
Florida	2828	1.2 (0.3)	13.3 (1.4)	51.6 (1.7)
Arizona	2741	0.8 (0.2)	13.1 (0.9)	53.5 (1.6)
South Carolina	2771	0.9 (0.3)	12.8 (1.1)	47.6 (1.7)
North Carolina	2884	1.2 (0.3)	12.7 (0.8)	50.3 (1.6)
Kentucky	2703	1.0 (0.3)	12.6 (1.2)	50.9 (1.5)
California	2412	1.3 (0.4)	12.4 (1.2)	46.4 (1.9)
West Virginia	2786	1.0 (0.3)	12.2 (0.9)	52.4 (1.5)
New Mexico	2342	0.6 (0.2)	11.1 (1.3)	49.8 (2.0)
Alabama	2605	0.5 (0.1)	10.1 (1.2)	43.0 (2.1)
Tennessee	2708	0.5 (0.2)	9.9 (1.0)	47.3 (2.0)
Arkansas	2621	0.4 (0.2)	9.7 (0.7)	46.9 (1.5)
Louisiana	2792	0.4 (0.2)	7.6 (0.8)	38.8 (2.0)
Mississippi	2712	0.3 (0.1)	6.3 (0.6)	35.8 (1.3)
District of Columbia	2399	0.9 (0.2)	5.5 (0.3)	23.1 (0.9)
Guam	1933	0.3 (0.2)	4.7 (0.5)	26.3 (1.4)



(*)Standard error estimates cannot be precisely determined.

Exhibit 23. 1996 Mathematics NAEP, Grade 4: Percentage of Students At or Above Each Achievement Level by Jurisdiction (Standard errors in parentheses)

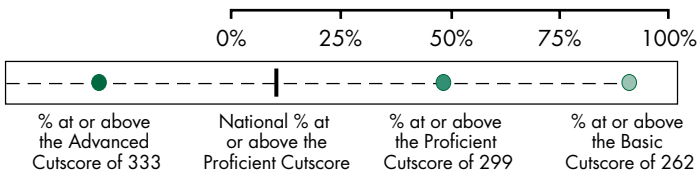
Jurisdiction Ordered by % At or Above Proficient	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Connecticut	2565	2.9 (0.5)	30.6 (1.7)†	74.7 (1.5)†
Minnesota	2425	3.2 (0.5)	29.4 (1.5)	75.5 (1.5)
Maine	2115	2.8 (0.6)	27.5 (1.4)	75.5 (1.4)
Wisconsin	2437	2.7 (0.6)	27.4 (1.3)	74.1 (1.2)
Texas	2413	2.8 (0.5)	25.3 (1.5)†	69.4 (1.9)†
New Jersey	1961	2.5 (0.7)	24.9 (1.7)	67.8 (2.1)
Nebraska	2678	2.3 (0.3)	24.4 (1.4)	70.2 (1.6)
North Dakota	2666	1.9 (0.5)	24.3 (1.3)	75.3 (1.9)
Massachusetts	2497	1.9 (0.5)	24.3 (1.9)	71.4 (1.8)
Indiana	2470	2.1 (0.5)	23.8 (1.6)†	72.2 (1.7)†
Michigan	2382	2.2 (0.5)	23.0 (1.5)	67.9 (1.8)
Utah	2625	1.7 (0.4)	22.7 (1.3)	68.6 (1.6)
Vermont	2136	2.7 (0.5)	22.6 (1.1)	66.8 (2.1)
Montana	2251	1.3 (0.4)	22.4 (1.6)	70.6 (1.9)
Colorado	2609	1.7 (0.3)	22.2 (1.3)†	66.9 (1.6)†
Iowa	2359	1.3 (0.4)	22.1 (1.4)	73.8 (1.4)
Maryland	2465	2.8 (0.7)	21.6 (1.7)	58.6 (1.8)
North Carolina	2658	2.4 (0.4)	21.2 (1.3)†	64.4 (1.6)†
Washington	2640	1.4 (0.2)	20.9 (1.2)	66.7 (1.8)
Oregon	2233	2.1 (0.5)	20.7 (1.3)	64.7 (2.2)
Alaska	2304	2.0 (0.5)	20.6 (1.2)	64.5 (2.0)
Pennsylvania	2347	1.4 (0.3)	20.5 (1.5)	68.4 (1.8)
DoDEA/DDESS[a]	1313	2.2 (0.6)	20.3 (1.5)	63.6 (1.7)
New York	2248	1.7 (0.4)	19.7 (1.2)	64.4 (1.8)†
Missouri	2643	1.2 (0.3)	19.7 (1.3)	65.8 (1.7)
Virginia	2586	1.9 (0.5)	19.3 (1.5)	61.9 (2.2)
DoDEA/DoDDS[b]	2604	1.3 (0.3)	19.0 (1.1)	63.9 (1.2)
West Virginia	2530	1.7 (0.5)	19.0 (1.2)†	63.5 (1.6)†
Wyoming	2758	1.3 (0.3)	18.8 (1.2)	64.0 (1.7)
Rhode Island	2461	1.3 (0.3)	17.4 (1.3)	60.9 (2.0)
Tennessee	2473	1.3 (0.3)	16.5 (1.5)†	58.5 (2.0)†
Hawaii	2578	1.6 (0.4)	16.4 (1.1)	52.9 (1.6)
Delaware	1984	1.4 (0.4)	15.9 (1.2)	53.6 (1.1)
Kentucky	2579	1.2 (0.3)	15.6 (1.1)	60.2 (1.8)†
Arizona	2113	1.4 (0.4)	15.3 (1.6)	56.5 (2.4)
Florida	2549	0.9 (0.2)	14.6 (1.1)	54.6 (1.7)
Nevada	2193	0.8 (0.3)	14.0 (1.2)	56.9 (1.8)
Arkansas	2047	0.7 (0.3)	13.3 (1.4)	54.1 (2.2)
Georgia	2542	1.0 (0.3)	13.0 (1.3)	52.6 (2.1)
New Mexico	2389	0.8 (0.3)	12.8 (1.2)	50.7 (2.4)
South Carolina	2364	1.0 (0.3)	11.8 (1.3)	48.4 (2.0)
Alabama	2541	0.9 (0.2)	10.8 (1.1)	47.8 (2.0)
California	2063	0.9 (0.4)	10.6 (1.5)	45.8 (2.4)
Mississippi	2716	0.4 (0.2)	8.0 (0.9)	42.0 (1.9)
Louisiana	2671	0.4 (0.2)	7.7 (0.9)	44.0 (1.8)
District of Columbia	2574	0.9 (0.4)	5.1 (0.5)	20.1 (0.8)
Guam	1431	0.2 (*)	3.4 (0.5)	23.0 (1.4)



(*)Standard error estimates cannot be precisely determined.
†Significantly different from 1992
[a]DoDEA/DDESS: Department of Defense Educational Activity/Department of Defense Domestic Dependent Elementary and Secondary Schools
[b]DoDEA/DoDDS: Department of Defense Educational Activity/Department of Defense Dependent Schools (Overseas)

Exhibit 24. 1990 Mathematics NAEP, Grade 8: Percentage of Students At or Above Each Achievement Level by Jurisdiction (Standard errors in parentheses)

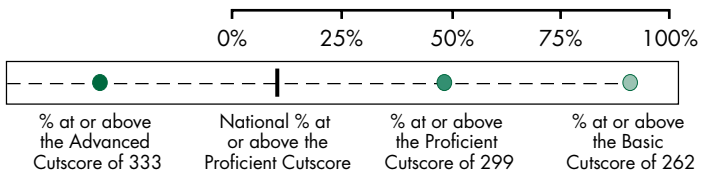
Jurisdiction Ordered by % At or Above Proficient	N	At or Above Advanced	At or Above Proficient	At or Above Basic
North Dakota	2485	3.6 (0.6)	27.3 (1.8)	75.4 (1.6)
Montana	2486	3.6 (0.5)	26.7 (1.4)	74.5 (1.5)
Iowa	2474	3.3 (0.5)	25.1 (1.4)	70.0 (1.2)
Nebraska	2519	3.3 (0.5)	24.4 (1.2)	68.2 (1.3)
Minnesota	2584	3.3 (0.5)	23.3 (1.2)	67.5 (1.1)
Wisconsin	2750	3.1 (0.4)	23.2 (1.4)	65.7 (1.6)
Connecticut	2672	3.4 (0.4)	21.7 (0.9)	59.9 (1.4)
Oregon	2708	3.0 (0.5)	20.7 (1.1)	61.6 (1.4)
Wyoming	2701	1.7 (0.2)	18.5 (0.9)	63.7 (1.3)
Virginia	2661	3.7 (0.8)	17.3 (1.6)	51.6 (1.7)
Colorado	2675	1.9 (0.4)	16.9 (1.0)	57.5 (1.2)
Indiana	2569	2.5 (0.5)	16.6 (1.1)	56.4 (1.5)
Maryland	2794	2.6 (0.5)	16.6 (1.2)	49.7 (1.6)
Michigan	2587	2.1 (0.4)	15.8 (1.2)	53.3 (1.7)
New York	2302	2.7 (0.4)	15.3 (0.9)	49.9 (1.7)
Rhode Island	2675	1.6 (0.3)	14.5 (0.7)	48.8 (1.0)
Delaware	2110	1.9 (0.4)	14.2 (0.8)	47.8 (1.5)
Georgia	2766	2.4 (0.4)	13.8 (1.2)	47.2 (1.5)
Arizona	2558	1.3 (0.4)	12.7 (0.9)	47.5 (1.8)
Texas	2542	1.6 (0.3)	12.7 (1.1)	45.5 (1.6)
California	2424	1.7 (0.3)	12.5 (1.1)	44.6 (1.7)
Florida	2534	1.4 (0.3)	12.0 (0.9)	42.7 (1.4)
Hawaii	2551	1.6 (0.3)	11.7 (0.7)	40.0 (1.0)
Kentucky	2680	1.1 (0.3)	10.5 (0.8)	43.0 (1.7)
New Mexico	2643	1.0 (0.3)	10.2 (0.9)	43.2 (1.2)
Arkansas	2669	0.7 (0.2)	9.3 (0.7)	43.9 (1.2)
West Virginia	2600	0.9 (0.2)	9.3 (0.8)	41.8 (1.1)
Alabama	2531	1.0 (0.2)	9.1 (0.7)	40.3 (1.7)
North Carolina	2843	0.6 (0.3)	8.7 (0.7)	37.9 (1.4)
Louisiana	2572	0.5 (0.2)	5.4 (0.6)	31.7 (1.6)
Guam	1617	0.4 (0.2)	3.8 (0.4)	21.7 (1.0)
District of Columbia	2135	0.8 (0.2)	3.1 (0.6)	16.6 (1.0)



(*)Standard error estimates cannot be precisely determined.

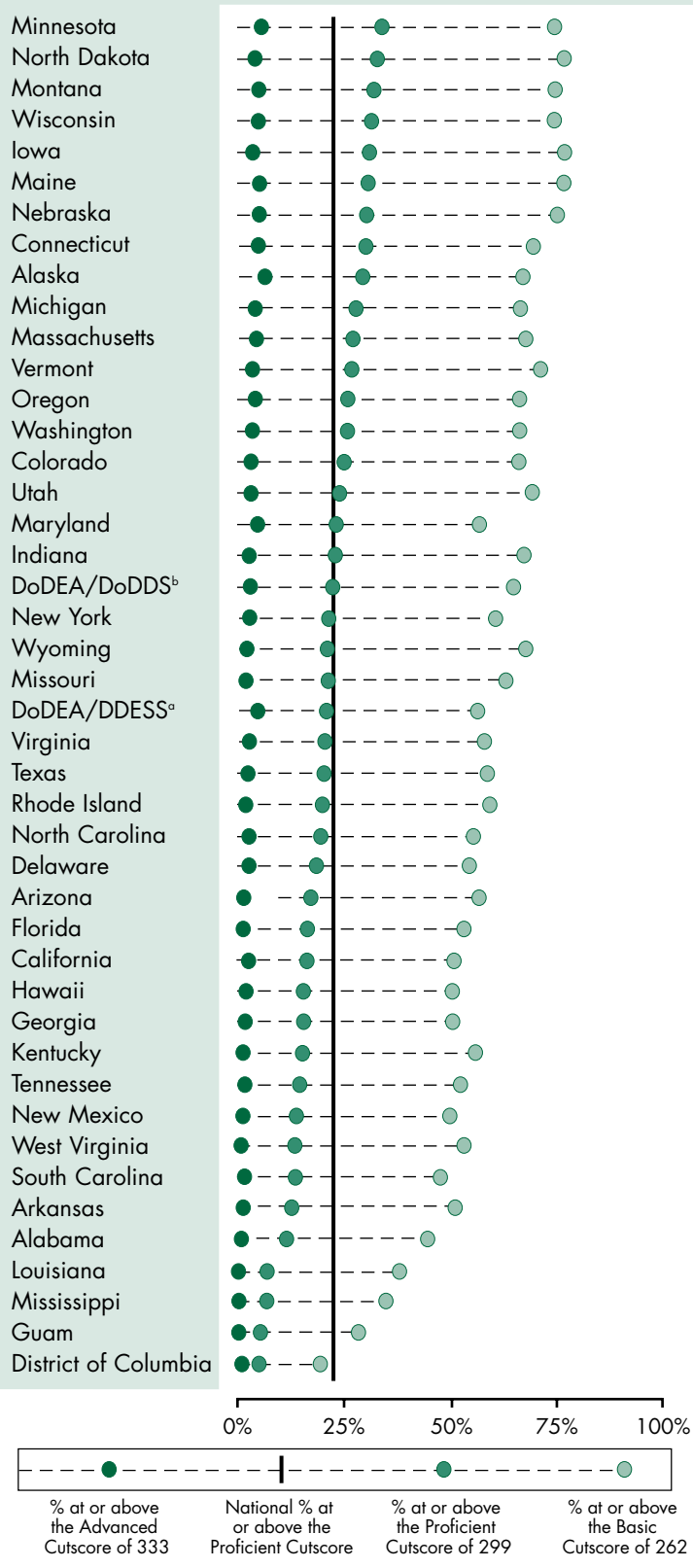
Exhibit 25. 1992 Mathematics NAEP, Grade 8: Percentage of Students At or Above Each Achievement Level by Jurisdiction (Standard errors in parentheses)

Jurisdiction Ordered by % At or Above Proficient	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Iowa	2816	3.9 (0.7)	31.2 (1.3)‡	76.4 (1.3)‡
Minnesota	2471	4.7 (0.6)	31.1 (1.2)‡	74.2 (1.3)‡
North Dakota	2314	3.1 (0.5)	29.5 (1.6)	77.9 (1.4)
Wisconsin	2814	3.2 (0.6)	27.0 (1.4)	70.8 (2.1)
Nebraska	2285	2.9 (0.5)	26.3 (1.6)	70.2 (1.3)
Connecticut	2613	3.2 (0.6)	25.7 (1.1)‡	64.4 (1.4)
Maine	2464	3.1 (0.6)	25.5 (1.5)	71.6 (1.3)
Massachusetts	2456	2.8 (0.5)	23.3 (1.3)	62.8 (1.5)
Utah	2726	2.3 (0.4)	22.3 (1.0)	66.8 (1.2)
Colorado	2799	2.1 (0.4)	21.6 (1.2)‡	63.9 (1.4)‡
Wyoming	2444	1.9 (0.4)	21.0 (1.1)	67.2 (1.3)
New York	2158	3.2 (0.5)	20.0 (1.3)‡	57.5 (2.2)‡
Maryland	2399	3.2 (0.5)	19.9 (1.2)	53.9 (1.4)
Indiana	2659	2.6 (0.4)	19.7 (1.2)	59.9 (1.5)
Missouri	2666	2.3 (0.4)	19.5 (1.2)	62.5 (1.6)
Virginia	2710	2.7 (0.6)	19.2 (1.1)	56.7 (1.7)
Michigan	2616	2.2 (0.4)	18.9 (1.5)	57.9 (1.7)
Texas	2614	3.2 (0.6)	18.1 (1.2)‡	52.7 (1.5)‡
California	2516	2.2 (0.7)	16.2 (1.3)	50.4 (1.9)
Rhode Island	2120	1.4 (0.3)	15.7 (1.1)	56.4 (1.2)‡
Delaware	1934	2.3 (0.4)	15.1 (1.0)	51.6 (1.2)
Arizona	2617	1.4 (0.3)	15.1 (1.3)	54.7 (1.8)‡
South Carolina	2625	1.7 (0.5)	14.9 (1.0)	47.8 (1.3)
Florida	2549	1.5 (0.3)	14.6 (1.2)	48.8 (1.9)
Kentucky	2756	1.6 (0.3)	13.8 (1.1)	51.2 (1.5)‡
Hawaii	2454	1.8 (0.3)	13.5 (0.7)	46.2 (1.1)‡
Georgia	2589	1.1 (0.3)	12.7 (0.9)	47.9 (1.7)
North Carolina	2769	1.2 (0.3)	12.1 (1.0)‡	47.0 (1.4)‡
Tennessee	2485	1.0 (0.4)	11.6 (1.0)	46.8 (1.9)
New Mexico	2561	0.9 (0.3)	10.9 (0.8)	47.6 (1.3)
Alabama	2522	0.9 (0.3)	10.2 (0.9)	38.8 (1.9)
Arkansas	2556	0.7 (0.2)	10.0 (0.8)	44.3 (1.8)
West Virginia	2690	0.6 (0.2)	9.8 (0.8)	46.8 (1.6)
Louisiana	2582	0.5 (0.2)	7.2 (1.0)	36.6 (1.9)
Mississippi	2498	0.3 (0.1)	6.4 (0.7)	33.4 (1.6)
Guam	1496	0.5 (0.1)	5.6 (0.6)	25.3 (1.4)
District of Columbia	1816	0.6 (0.2)	4.4 (0.9)	21.8 (1.1)‡



(*)Standard error estimates cannot be precisely determined.
‡Significantly different from 1990

Exhibit 26. 1996 Mathematics NAEP, Grade 8: Percentage of Students At or Above Each Achievement Level by Jurisdiction (Standard errors in parentheses)



Jurisdiction Ordered by % At or Above Proficient	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Minnesota	2425	6.0 (0.8)‡	34.5 (1.8)‡	75.0 (1.5)‡
North Dakota	2602	4.4 (0.7)	33.3 (1.5)‡	77.4 (1.2)
Montana	1912	5.2 (0.5)‡	32.5 (1.5)‡	75.2 (1.7)
Wisconsin	2165	5.2 (0.8)‡	31.8 (2.0)‡	75.0 (2.0)‡
Iowa	2169	3.9 (0.6)	31.5 (1.8)‡	77.6 (1.4)‡
Maine	2258	5.5 (0.7)	31.2 (1.7)	77.4 (1.5)†
Nebraska	2610	5.2 (0.7)‡	30.8 (1.5)‡	75.9 (1.1)†‡
Connecticut	2485	5.1 (0.6)‡	30.6 (1.5)‡	70.3 (1.4)†‡
Alaska	1462	6.7 (1.1)	29.9 (1.6)	67.7 (2.3)
Michigan	2155	4.4 (0.8)‡	28.3 (1.8)†‡	67.0 (2.1)†‡
Massachusetts	2280	4.7 (0.8)	27.6 (1.8)	68.3 (2.3)
Vermont	2001	3.8 (0.6)	27.4 (1.4)	71.8 (1.7)
Oregon	2323	4.4 (0.7)	26.3 (1.6)‡	66.9 (1.7)‡
Washington	2434	4.0 (0.7)	26.2 (1.2)	66.9 (1.6)
Colorado	2530	3.2 (0.5)	25.4 (1.3)‡	66.6 (1.3)‡
Utah	2697	2.5 (0.4)	24.4 (1.3)	69.7 (1.5)
Maryland	2137	5.4 (1.0)‡	24.4 (2.3)‡	57.4 (2.2)‡
Indiana	2347	3.0 (0.5)	23.6 (1.7)‡	68.0 (2.0)†‡
DoDEA/DoDDS[b]	2160	3.3 (0.6)	22.8 (1.2)	65.4 (1.4)
New York	1962	3.1 (0.5)	22.0 (1.5)‡	61.2 (2.0)‡
Wyoming	2696	2.5 (0.6)	21.6 (1.0)‡	68.3 (1.2)‡
Missouri	2386	2.2 (0.5)	21.6 (1.4)	63.8 (2.0)
DoDEA/DDESS[a]	620	5.0 (1.1)	21.4 (2.4)	57.0 (3.1)
Virginia	2545	3.0 (0.4)	21.1 (1.2)	58.5 (2.0)‡
Texas	2245	2.7 (0.4)	20.9 (1.5)‡	59.4 (1.8)†‡
Rhode Island	2055	2.5 (0.4)	20.4 (1.3)†‡	59.9 (1.6)‡
North Carolina	2638	3.0 (0.6)‡	20.0 (1.3)†‡	56.1 (1.8)†‡
Delaware	1798	3.0 (0.6)	18.9 (1.0)‡	55.1 (1.3)‡
Arizona	2136	1.8 (0.3)	17.7 (1.2)‡	57.4 (1.9)‡
Florida	2401	1.7 (0.4)	16.9 (1.3)‡	53.7 (2.1)‡
California	2290	2.8 (0.5)	16.9 (1.5)‡	51.4 (2.1)‡
Hawaii	2189	2.3 (0.4)	15.9 (0.9)‡	51.0 (1.5)‡
Georgia	2364	2.1 (0.5)	15.9 (1.8)	51.1 (2.0)
Kentucky	2461	1.4 (0.3)	15.7 (1.2)‡	56.5 (1.6)‡
Tennessee	2300	1.8 (0.3)	15.1 (1.3)	53.0 (1.8)
New Mexico	2371	1.6 (0.3)	14.3 (1.1)‡	50.5 (1.6)‡
West Virginia	2578	1.2 (0.4)	13.8 (0.9)†‡	53.8 (1.6)†‡
South Carolina	2143	1.9 (0.4)	13.7 (1.2)	48.2 (1.7)
Arkansas	1845	1.6 (0.4)	13.1 (1.0)‡	51.9 (1.8)†‡
Alabama	2261	1.2 (0.4)	12.0 (1.8)	45.2 (2.6)
Louisiana	2599	0.5 (0.2)	7.4 (1.1)	38.5 (2.0)‡
Mississippi	2487	0.4 (0.2)	7.2 (0.8)	35.6 (1.3)
Guam	928	0.5 (*)	5.8 (0.8)	29.0 (1.6)‡
District of Columbia	1693	1.2 (0.3)	5.4 (0.8)	19.8 (1.2)

(*)Standard error estimates cannot be precisely determined.
†Significantly different from 1992
‡Significantly different from 1990
[a]DoDEA/DDESS: Department of Defense Educational Activity/Department of Defense Domestic Dependent Elementary and Secondary Schools
[b]DoDEA/DoDDS: Department of Defense Educational Activity/Department of Defense Dependent Schools (Overseas)

Exhibit 27. 1992, 1996 Mathematics NAEP, Grade 4: Percentage of Students in Each Participating Jurisdiction At or Above Each Achievement Level, by Race/ Ethnicity (Standard errors in parentheses)

Note: Data were collected in each participating state on the number of White, Black, Hispanic, Asian/Pacific Islander, and American Indian students who took the NAEP. If the sample size of one or more of these populations was too small to produce accurate data, the categories were omitted for the state in the table below.

Population	Year	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Alabama total	1992	2605	0.5 (0.1)	10.1 (1.2)	43.0 (2.1)
	1996	2541	0.9 (0.2)	10.8 (1.1)	47.8 (2.0)
White	1992	1552	0.64 (0.23)	15.13 (1.61)	57.37 (2.31)
	1996	1452	1.34 (0.36)	16.08 (1.55)	63.66 (2.20)
Black	1992	859	0.00 (*)	1.15 (0.45)	16.20 (1.45)
	1996	856	0.02 (*)	1.82 (0.64)	20.82 (1.99)
Hispanic	1992	113	0.00 (*)	2.49 (1.42)	26.01 (5.11)
	1996	161	0.00 (*)	4.52 (1.88)	28.51 (4.24)
Alaska total	1996	2304	2.0 (0.5)	20.6 (1.2)	64.5 (2.0)
White	1996	1398	2.92 (0.66)	28.11 (1.72)	75.53 (2.35)
Black	1996	100	0.21 (*)	4.70 (2.16)	36.34 (7.66)
Hispanic	1996	247	1.02 (*)	10.88 (2.38)	55.90 (3.88)
Asian/Pacific Islander	1996	96	1.66 (*)	16.16 (4.26)	65.77 (6.27)
American Indian	1996	463	0.76 (0.46)	10.34 (1.74)	45.94 (3.95)
Arizona total	1992	2741	0.8 (0.2)	13.1 (0.9)	53.5 (1.6)
	1996	2113	1.4 (0.4)	15.3 (1.6)	56.5 (2.4)
White	1992	1556	1.38 (0.43)	19.65 (1.22)	68.68 (1.67)
	1996	1196	2.18 (0.61)	22.06 (2.12)	71.67 (2.34)
Black	1992	113	0.00 (*)	3.32 (*)	27.90 (6.11)
	1996	87	0.00 (*)	3.76 (*)	27.56 (5.61)
Hispanic	1992	777	0.07 (*)	4.36 (0.80)	35.71 (2.15)
	1996	623	0.18 (*)	6.37 (1.34)	37.33 (3.16)
American Indian	1992	255	0.07 (*)	3.33 (1.76)	25.30 (4.04)
	1996	157	0.09 (*)	4.36 (2.67)	32.23 (4.88)
Arkansas total	1992	2621	0.4 (0.2)	9.7 (0.7)	46.9 (1.5)
	1996	2047	0.7 (0.3)	13.3 (1.4)	54.1 (2.2)
White	1992	1815	0.54 (0.32)	13.17 (1.01)	57.17 (1.60)
	1996	1363	0.94 (0.42)	18.00 (1.82)	65.66 (2.26)
Black	1992	552	0.00 (*)	1.09 (0.65)	18.36 (2.80)
	1996	470	0.03 (*)	1.75 (0.90)	21.30 (2.97)
Hispanic	1992	169	0.00 (*)	1.17 (*)	28.83 (3.79)
	1996	118	0.00 (*)	3.18 (1.60)	35.93 (5.65)
American Indian	1992	65	0.33 (*)	9.47 (4.03)	51.84 (6.96)
	1996	73	0.63 (*)	6.05 (2.54)	45.18 (7.37)
California total	1992	2412	1.3 (0.4)	12.4 (1.2)	46.4 (1.9)
	1996	2063	0.9 (0.4)	10.6 (1.5)	45.8 (2.4)
White	1992	1036	1.99 (0.63)	18.84 (1.82)	60.81 (2.55)
	1996	896	1.48 (0.65)	16.89 (2.45)	63.42 (2.38)
Black	1992	158	0.00 (*)	1.65 (1.07)	21.16 (2.60)
	1996	194	0.00 (*)	1.56 (*)	17.92 (4.00)
Hispanic	1992	865	0.08 (*)	3.67 (0.76)	27.02 (2.12)
	1996	709	0.26 (*)	3.96 (1.31)	28.99 (2.88)
Asian/Pacific Islander	1992	284	2.88 (1.69)	20.73 (3.73)	63.51 (3.22)
	1996	213	2.01 (1.15)	17.26 (2.98)	57.66 (6.76)
American Indian	1992	63	1.21 (*)	10.59 (6.86)	49.82 (9.31)

Exhibit 27. 1992, 1996 Mathematics NAEP, Grade 4 (continued)

Population	Year	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Colorado total	1992	2906	1.5 (0.4)	17.5 (1.0)	60.8 (1.4)
	1996	2609	1.7 (0.3)	22.2 (1.3)†	66.9 (1.6)†
White	1992	1960	2.13 (0.59)	22.40 (1.32)	69.60 (1.49)
	1996	1816	2.35 (0.46)	28.10 (1.50)	75.73 (1.38)
Black	1992	159	0.00 (*)	2.51 (1.44)	32.11 (4.58)
	1996	88	0.00 (*)	4.13 (2.63)	26.24 (6.93)
Hispanic	1992	634	0.40 (*)	6.17 (1.50)	41.59 (2.42)
	1996	529	0.09 (*)	7.62 (1.26)	45.85 (2.68)
Asian/Pacific Islander	1992	74	0.24 (*)	23.41 (5.92)	63.01 (6.85)
	1996	87	3.05 (2.04)	20.10 (5.28)	68.11 (5.49)
American Indian	1992	75	0.66 (*)	10.33 (4.66)	50.10 (7.26)
	1996	87	0.00 (*)	11.89 (4.04)	57.64 (6.97)
Connecticut total	1992	2600	2.9 (0.5)	24.4 (1.4)	67.3 (1.6)
	1996	2565	2.9 (0.5)	30.6 (1.7)†	74.7 (1.5)†
White	1992	1864	3.57 (0.56)	30.54 (1.72)	79.01 (1.24)
	1996	1817	3.69 (0.56)	38.30 (1.84)	86.04 (1.51)
Black	1992	286	0.20 (*)	2.12 (1.27)	24.28 (3.23)
	1996	314	0.32 (*)	5.41 (1.73)	40.44 (4.97)
Hispanic	1992	361	0.76 (*)	7.77 (1.94)	36.80 (4.26)
	1996	333	0.57 (*)	7.67 (2.04)	42.03 (4.48)
Delaware total	1992	2040	1.8 (0.3)	16.5 (0.9)	54.6 (1.0)
	1996	1984	1.4 (0.4)	15.9 (1.2)	53.6 (1.1)
White	1992	1360	2.54 (0.43)	22.51 (1.42)	67.43 (1.34)
	1996	1247	2.01 (0.52)	21.92 (1.84)	67.78 (1.22)
Black	1992	442	0.20 (*)	2.81 (1.03)	26.22 (2.77)
	1996	483	0.21 (*)	3.96 (0.96)	27.50 (2.64)
Hispanic	1992	169	0.14 (*)	3.87 (*)	29.57 (3.63)
	1996	168	0.45 (*)	6.23 (1.86)	28.26 (4.44)
District of Columbia total	1992	2399	0.9 (0.2)	5.5 (0.3)	23.1 (0.9)
	1996	2574	0.9 (0.4)	5.1 (0.5)	20.1 (0.8)
White	1992	130	12.59 (3.12)	51.71 (6.46)	79.22 (4.60)
	1996	150	12.29 (6.78)	48.74 (3.17)	77.43 (2.99)
Black	1992	1967	0.12 (*)	2.57 (0.37)	19.95 (0.98)
	1996	2101	0.07 (*)	1.78 (0.40)	15.67 (0.84)
Hispanic	1992	229	0.08 (*)	1.90 (1.26)	14.20 (2.24)
	1996	260	0.22 (*)	4.26 (2.20)	17.83 (3.67)
DoDEA/DDESS[a] total	1996	1313	2.2 (0.6)	20.3 (1.5)	63.6 (1.7)
White	1996	636	3.27 (1.17)	29.15 (2.42)	76.97 (1.86)
Black	1996	335	0.32 (*)	7.51 (2.18)	46.03 (4.81)
Hispanic	1996	238	1.33 (*)	12.60 (2.89)	52.11 (4.51)
DoDEA/DoDDS[b] total	1996	2604	1.3 (0.3)	19.0 (1.1)	63.9 (1.2)
White	1996	1241	1.78 (0.43)	25.58 (1.76)	74.27 (1.63)
Black	1996	495	0.44 (*)	5.93 (1.34)	44.60 (2.74)
Hispanic	1996	417	0.47 (*)	10.94 (2.19)	51.25 (3.27)
Asian/Pacific Islander	1996	297	1.88 (0.81)	24.13 (3.20)	69.40 (4.16)
American Indian	1996	78	0.00 (*)	12.77 (4.25)	58.07 (9.22)
Florida total	1992	2828	1.2 (0.3)	13.3 (1.4)	51.6 (1.7)
	1996	2549	0.9 (0.2)	14.6 (1.1)	54.6 (1.7)
White	1992	1645	1.67 (0.52)	18.91 (1.93)	65.95 (1.71)
	1996	1401	1.47 (0.35)	21.44 (1.41)	70.37 (1.86)
Black	1992	605	0.23 (*)	2.32 (0.67)	22.09 (2.42)
	1996	538	0.04 (*)	3.39 (1.03)	26.02 (1.90)
Hispanic	1992	478	0.53 (*)	7.26 (1.51)	40.75 (3.18)
	1996	516	0.26 (*)	7.89 (1.44)	42.56 (3.72)

Exhibit 27. 1992, 1996 Mathematics NAEP, Grade 4 (continued)

Population	Year	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Georgia total	1992	2766	1.1 (0.3)	15.3 (1.2)	53.1 (1.7)
	1996	2542	1.0 (0.3)	13.0 (1.3)	52.6 (2.1)
White	1992	1583	1.74 (0.53)	24.09 (1.61)	71.86 (1.79)
	1996	1428	1.57 (0.51)	19.52 (1.90)	66.62 (2.03)
Black	1992	940	0.20 (*)	2.69 (0.84)	26.54 (2.30)
	1996	818	0.00 (*)	2.48 (0.64)	31.07 (2.73)
Hispanic	1992	169	0.11 (*)	4.18 (1.57)	29.90 (4.31)
	1996	192	0.60 (*)	4.97 (1.89)	36.17 (4.80)
Guam total	1992	1933	0.3 (0.2)	4.7 (0.5)	26.3 (1.4)
	1996	1431	0.2 (*)	3.4 (0.5)	23.0 (1.4)
White	1992	238	0.80 (*)	10.92 (1.94)	42.94 (3.76)
	1996	108	1.39 (*)	10.62 (4.35)	35.47 (6.16)
Black	1992	76	0.50 (*)	2.27 (*)	22.54 (5.77)
Hispanic	1992	388	0.20 (*)	2.28 (0.86)	15.95 (2.25)
	1996	294	0.00 (*)	1.35 (0.81)	13.22 (4.31)
Asian/Pacific Islander	1992	1181	0.21 (*)	4.27 (0.76)	26.67 (1.66)
	1996	942	0.10 (*)	3.43 (0.67)	25.50 (1.53)
Hawaii total	1992	2625	1.1 (0.2)	14.6 (0.9)	51.9 (1.8)
	1996	2578	1.6 (0.4)	16.4 (1.1)	52.9 (1.6)
White	1992	541	1.31 (0.58)	19.64 (2.23)	59.84 (2.38)
	1996	475	2.50 (0.83)	21.90 (2.27)	66.07 (2.84)
Black	1992	114	0.00 (*)	4.57 (2.30)	33.04 (5.89)
	1996	106	0.18 (*)	7.01 (2.49)	37.71 (5.50)
Hispanic	1992	288	0.00 (*)	6.11 (1.27)	33.46 (3.49)
	1996	531	0.19 (*)	6.88 (1.17)	36.57 (2.46)
Asian/Pacific Islander	1992	1582	1.29 (0.33)	15.04 (1.29)	53.81 (2.13)
	1996	1359	2.12 (0.68)	19.27 (1.84)	56.33 (2.43)
American Indian	1996	63	0.31 (*)	12.90 (4.97)	50.05 (8.42)
Idaho					
White	1992	2343	0.82 (0.34)	17.66 (1.08)	66.69 (1.67)
Hispanic	1992	313	0.06 (*)	4.72 (1.37)	36.15 (4.34)
American Indian	1992	74	0.00 (*)	4.60 (2.99)	52.86 (6.05)
Indiana total	1992	2593	1.0 (0.2)	15.6 (1.1)	59.8 (1.7)
	1996	2470	2.1 (0.5)	23.8 (1.6)†	72.2 (1.7)†
White	1992	2120	1.19 (0.30)	18.05 (1.27)	65.57 (1.55)
	1996	2000	2.42 (0.62)	27.21 (1.71)	77.66 (1.46)
Black	1992	264	0.20 (*)	1.58 (0.71)	21.98 (3.68)
	1996	251	0.00 (*)	3.68 (1.36)	36.36 (5.56)
Hispanic	1992	141	0.00 (*)	3.31 (1.63)	42.41 (3.49)
	1996	158	0.71 (*)	9.49 (2.71)	52.26 (5.13)
Iowa total	1992	2770	2.3 (0.4)	26.0 (1.2)	72.4 (1.5)
	1996	2359	1.3 (0.4)	22.1 (1.4)	73.8 (1.4)
White	1992	2472	2.49 (0.44)	27.56 (1.27)	74.47 (1.40)
	1996	2077	1.48 (0.44)	23.63 (1.54)	76.85 (1.41)
Black	1992	64	0.00 (*)	2.34 (*)	28.57 (6.18)
	1996	65	0.00 (*)	4.12 (2.49)	34.17 (5.56)
Hispanic	1992	149	0.12 (*)	13.87 (3.29)	60.74 (5.73)
	1996	143	0.55 (*)	9.44 (2.51)	47.96 (5.69)
Kentucky total	1992	2703	1.0 (0.3)	12.6 (1.2)	50.9 (1.5)
	1996	2579	1.2 (0.3)	15.6 (1.1)	60.2 (1.8)†
White	1992	2293	1.15 (0.30)	13.83 (1.26)	54.04 (1.46)
	1996	2191	1.40 (0.32)	17.42 (1.33)	63.88 (1.89)
Black	1992	232	0.00 (*)	4.05 (1.98)	31.50 (3.89)
	1996	249	0.32 (0.20)	3.66 (1.45)	38.83 (4.08)
Hispanic	1992	114	0.4 (*)	3.90 (2.63)	30.91 (5.08)
	1996	91	0.00 (*)	6.68 (2.44)	33.39 (7.16)

Exhibit 27. 1992, 1996 Mathematics NAEP, Grade 4 (continued)

Population	Year	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Louisiana total	1992	2792	0.4 (0.2)	7.6 (0.8)	38.8 (2.0)
	1996	2671	0.4 (0.2)	7.7 (0.9)	44.0 (1.8)
White	1992	1352	0.79 (0.28)	12.87 (1.37)	57.13 (2.63)
	1996	1310	0.75 (0.37)	13.49 (1.64)	63.00 (2.29)
Black	1992	1214	0.03 (*)	1.72 (0.49)	17.60 (1.70)
	1996	1063	0.00 (*)	1.51 (0.77)	23.55 (2.15)
Hispanic	1992	141	0.08 (*)	4.85 (1.86)	33.10 (6.55)
	1996	183	0.07 (*)	3.27 (1.86)	25.89 (3.80)
American Indian	1996	80	0.17 (*)	2.90 (*)	34.63 (6.44)
Maine total	1992	1898	2.4 (0.5)	27.4 (1.5)	74.8 (1.5)
	1996	2115	2.8 (0.6)	27.5 (1.4)	75.5 (1.4)
White	1992	1727	2.51 (0.54)	28.45 (1.71)	75.80 (1.45)
	1996	1967	2.99 (0.59)	28.67 (1.54)	76.63 (1.60)
Hispanic	1992	98	0.59 (*)	13.66 (5.00)	62.68 (6.34)
	1996	77	0.46 (*)	8.51 (4.47)	57.06 (5.62)
Maryland total	1992	2844	2.2 (0.3)	18.4 (1.2)	55.1 (1.6)
	1996	2465	2.8 (0.7)	21.6 (1.7)	58.6 (1.8)
White	1992	1710	3.38 (0.51)	26.43 (1.60)	69.73 (1.73)
	1996	1295	3.98 (0.87)	32.45 (2.50)	77.13 (1.79)
Black	1992	810	0.00 (*)	3.19 (0.74)	26.19 (1.88)
	1996	854	0.21 (0.14)	3.82 (0.89)	29.80 (1.88)
Hispanic	1992	169	0.11 (*)	9.52 (3.17)	45.23 (4.57)
	1996	182	1.59 (1.06)	11.94 (3.14)	43.29 (5.53)
Asian/Pacific Islander	1992	103	5.08 (2.25)	32.37 (5.51)	77.83 (4.24)
	1996	82	15.23 (5.77)	49.49 (6.20)	84.06 (5.70)
Massachusetts total	1992	2549	2.4 (0.5)	23.3 (1.5)	68.5 (1.6)
	1996	2497	1.9 (0.5)	24.3 (1.9)	71.4 (1.8)
White	1992	1974	2.63 (0.51)	26.80 (1.64)	75.79 (1.40)
	1996	1902	2.10 (0.54)	27.53 (2.08)	77.61 (1.59)
Black	1992	211	0.00 (*)	1.76 (*)	24.47 (5.35)
	1996	192	0.45 (*)	6.26 (2.73)	39.18 (6.48)
Hispanic	1992	230	0.52 (*)	8.92 (2.52)	40.63 (4.54)
	1996	282	0.06 (*)	9.51 (2.82)	46.24 (4.52)
Asian/Pacific Islander	1992	94	6.35 (4.35)	29.36 (8.09)	64.98 (8.78)
	1996	76	7.15 (*)	34.62 (8.18)	76.87 (7.89)
Michigan total	1992	2412	1.2 (0.4)	18.5 (1.7)	60.5 (2.2)
	1996	2382	2.2 (0.5)	23.0 (1.5)	67.9 (1.8)
White	1992	1750	1.50 (0.43)	22.63 (1.94)	70.10 (2.05)
	1996	1775	2.68 (0.59)	28.32 (1.61)	77.79 (1.73)
Black	1992	348	0.22 (*)	2.11 (1.33)	18.73 (3.49)
	1996	313	0.05 (*)	3.48 (1.13)	30.12 (4.47)
Hispanic	1992	208	0.85 (*)	8.25 (2.35)	42.89 (3.61)
	1996	180	0.64 (*)	6.81 (1.90)	42.06 (5.42)
American Indian	1992	65	0.00 (*)	9.05 (3.66)	50.88 (6.97)
	1996	69	0.00 (*)	10.85 (4.49)	53.78 (6.97)
Minnesota total	1992	2640	2.5 (0.4)	25.9 (1.3)	70.6 (1.6)
	1996	2425	3.2 (0.5)	29.4 (1.5)	75.5 (1.5)
White	1992	2274	2.78 (0.48)	28.23 (1.36)	74.93 (1.59)
	1996	2028	3.74 (0.58)	32.51 (1.73)	80.74 (1.46)
Black	1992	63	1.03 (0.63)	4.23 (1.88)	27.76 (7.00)
	1996	103	0.00 (*)	2.69 (*)	28.25 (6.17)
Hispanic	1992	185	0.10 (*)	11.19 (2.52)	44.19 (4.95)
	1996	147	0.09 (*)	17.00 (3.67)	54.88 (5.55)
Asian/Pacific Islander	1996	81	2.64 (*)	18.99 (4.72)	60.83 (5.15)
American Indian	1996	62	0.29 (*)	16.21 (5.41)	54.12 (7.59)

Exhibit 27. 1992, 1996 Mathematics NAEP, Grade 4 (continued)

Population	Year	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Mississippi total	1992	2712	0.3 (0.1)	6.3 (0.6)	35.8 (1.3)
	1996	2716	0.3 (0.1)	6.3 (0.6)	35.8 (1.3)
White	1992	1128	0.70 (0.25)	13.03 (1.31)	57.84 (1.77)
	1996	1178	0.70 (0.34)	14.43 (1.42)	62.79 (2.43)
Black	1992	1379	0.01 (*)	1.26 (0.41)	20.02 (1.47)
	1996	1340	0.04 (*)	2.17 (0.57)	24.14 (1.99)
Hispanic	1992	158	0.00 (*)	2.00 (1.35)	19.40 (3.46)
	1996	141	0.00 (*)	2.78 (1.74)	24.48 (4.53)
Missouri total	1992	2509	1.3 (0.3)	18.6 (1.3)	62.1 (1.7)
	1996	2643	1.2 (0.3)	19.7 (1.3)	65.8 (1.7)
White	1992	1922	1.57 (0.33)	22.35 (1.47)	70.12 (1.56)
	1996	1984	1.47 (0.33)	23.76 (1.43)	73.60 (1.53)
Black	1992	351	0.00 (*)	1.22 (0.79)	26.23 (3.68)
	1996	399	0.00 (*)	2.29 (0.82)	31.17 (3.02)
Hispanic	1992	151	0.71 (*)	10.26 (3.16)	43.75 (4.84)
	1996	166	0.77 (*)	10.19 (3.05)	50.35 (5.29)
Montana total	1996	2251	1.3 (0.4)	22.4 (1.6)	70.6 (1.9)
White	1996	1791	1.56 (0.46)	25.44 (1.93)	76.29 (1.71)
Hispanic	1996	162	0.09 (*)	12.89 (3.41)	57.92 (5.35)
American Indian	1996	249	0.58 (0.39)	9.52 (2.17)	42.54 (4.05)
Nebraska total	1992	2327	2.0 (0.5)	21.8 (1.6)	66.6 (1.8)
	1996	2678	2.3 (0.3)	24.4 (1.4)	70.2 (1.6)
White	1992	1925	2.12 (0.55)	24.41 (1.75)	72.20 (1.70)
	1996	2199	2.74 (0.37)	27.41 (1.50)	76.50 (1.59)
Black	1992	166	0.00 (*)	3.61 (2.30)	18.00 (3.84)
	1996	164	0.31 (*)	4.71 (1.90)	31.57 (3.43)
Hispanic	1992	168	1.16 (0.78)	8.49 (3.41)	46.80 (6.02)
	1996	213	0.35 (*)	12.51 (2.58)	43.16 (4.47)
American Indian	1996	71	0.00 (*)	13.97 (5.96)	54.48 (8.48)
Nevada total	1996	2193	0.8 (0.3)	14.0 (1.2)	56.9 (1.8)
White	1996	1339	1.04 (0.39)	18.30 (1.46)	66.97 (2.11)
Black	1996	184	0.00 (*)	2.29 (1.35)	29.63 (4.15)
Hispanic	1996	467	0.31 (*)	6.84 (1.25)	39.71 (3.16)
Asian/Pacific Islander	1996	93	1.04 (*)	21.24 (5.74)	64.09 (7.48)
American Indian	1996	99	0.37 (*)	7.74 (2.89)	51.52 (5.30)
New Hampshire					
White	1992	2008	2.24 (0.46)	26.51 (1.63)	74.15 (1.54)
Hispanic	1992	117	0.99 (*)	10.55 (3.12)	54.33 (5.76)
New Jersey total	1992	2231	2.5 (0.6)	24.6 (1.5)	68.2 (2.1)
	1996	1961	2.5 (0.7)	24.9 (1.7)	67.8 (2.1)
White	1992	1407	3.25 (0.86)	32.18 (2.00)	81.14 (1.76)
	1996	1133	3.54 (1.01)	35.88 (2.07)	84.22 (1.81)
Black	1992	348	0.22 (0.14)	2.63 (1.08)	28.67 (3.57)
	1996	403	0.00 (*)	3.07 (1.80)	35.39 (3.69)
Hispanic	1992	345	0.24 (*)	6.33 (2.03)	41.99 (4.36)
	1996	290	0.22 (*)	5.43 (1.96)	39.70 (4.58)
Asian/Pacific Islander	1992	96	5.86 (2.93)	40.05 (4.55)	83.25 (5.49)
	1996	92	8.25 (3.31)	47.78 (5.04)	92.33 (2.44)

Exhibit 27. 1992, 1996 Mathematics NAEP, Grade 4 (continued)

Population	Year	*N*	At or Above Advanced	At or Above Proficient	At or Above Basic
New Mexico total	1992	2342	0.6 (0.2)	11.1 (1.3)	49.8 (2.0)
	1996	2389	0.8 (0.3)	12.8 (1.2)	50.7 (2.4)
White	1992	1015	1.08 (0.37)	18.72 (2.00)	66.46 (2.31)
	1996	1038	1.77 (0.56)	22.71 (1.83)	69.33 (2.03)
Black	1992	87	0.00 (*)	3.49 (*)	33.97 (8.39)
	1996	68	0.00 (*)	3.18 (1.94)	39.70 (10.03)
Hispanic	1992	1109	0.17 (*)	4.76 (1.15)	35.92 (2.57)
	1996	1051	0.04 (*)	5.65 (1.05)	38.20 (2.15)
American Indian	1992	91	0.00 (*)	3.86 (2.55)	41.86 (9.56)
	1996	193	0.00 (*)	2.30 (*)	27.04 (4.67)
New York total	1992	2284	1.5 (0.3)	17.0 (1.3)	57.0 (1.8)
	1996	2248	1.7 (0.4)	19.7 (1.2)	64.4 (1.8)†
White	1992	1387	1.87 (0.41)	23.20 (1.85)	70.99 (2.01)
	1996	1261	2.62 (0.62)	26.88 (1.65)	79.65 (1.65)
Black	1992	290	0.04 (*)	3.68 (1.40)	30.51 (3.95)
	1996	398	0.00 (*)	4.89 (1.57)	36.91 (4.30)
Hispanic	1992	472	0.04 (*)	5.08 (1.16)	33.05 (2.55)
	1996	440	0.67 (*)	7.61 (1.67)	40.05 (3.25)
Asian/Pacific Islander	1992	81	9.17 (3.32)	36.83 (6.32)	72.09 (6.43)
	1996	106	1.48 (*)	32.17 (4.15)	78.39 (4.97)
North Carolina total	1992	2884	1.2 (0.3)	12.7 (0.8)	50.3 (1.6)
	1996	2658	2.4 (0.4)	21.2 (1.3)†	64.4 (1.6)†
White	1992	1782	1.93 (0.47)	18.40 (1.19)	64.60 (1.58)
	1996	1729	3.38 (0.56)	28.94 (1.67)	77.35 (1.44)
Black	1992	835	0.07 (*)	1.91 (0.61)	23.59 (2.26)
	1996	735	0.02 (*)	3.62 (0.67)	36.50 (2.44)
Hispanic	1992	156	0.12 (*)	6.74 (2.81)	34.91 (5.83)
	1996	107	0.49 (*)	10.19 (3.60)	42.66 (5.60)
American Indian	1992	81	0.00 (*)	7.73 (4.17)	39.67 (9.77)
North Dakota total	1992	2193	1.3 (0.3)	22.2 (1.1)	72.5 (1.3)
	1996	2666	1.9 (0.5)	24.3 (1.3)	75.3 (1.9)
White	1992	1987	1.42 (0.33)	23.39 (1.17)	74.65 (1.21)
	1996	2379	2.11 (0.54)	25.61 (1.41)	77.19 (1.47)
Hispanic	1992	83	0.00 (*)	6.59 (2.98)	49.08 (7.40)
	1996	116	0.27 (*)	14.61 (6.23)	66.47 (8.88)
American Indian	1992	93	0.00 (*)	7.91 (3.56)	47.32 (6.88)
	1996	123	0.00 (*)	7.27 (3.09)	48.08 (8.93)
Ohio					
White	1992	2056	1.59 (0.31)	18.42 (1.37)	62.43 (1.65)
Black	1992	312	0.13 (*)	2.68 (1.05)	23.30 (3.61)
Hispanic	1992	163	0.15 (*)	7.43 (1.87)	45.48 (5.08)
American Indian	1992	63	2.05 (*)	11.23 (5.19)	58.14 (8.09)
Oklahoma					
White	1992	1643	1.11 (0.41)	16.91 (1.42)	66.28 (1.88)
Black	1992	206	0.00 (*)	2.57 (1.29)	29.16 (3.87)
Hispanic	1992	158	0.00 (*)	6.19 (2.78)	45.00 (4.15)
American Indian	1992	223	0.00 (*)	7.21 (2.06)	47.62 (4.47)
Oregon total	1996	2233	2.1 (0.5)	20.7 (1.3)	64.7 (2.2)
White	1996	1754	2.29 (0.55)	23.49 (1.52)	69.83 (2.21)
Hispanic	1996	240	0.30 (*)	6.38 (1.58)	34.36 (4.28)
Asian/Pacific Islander	1996	94	4.14 (2.34)	23.50 (5.23)	73.20 (6.38)
American Indian	1996	90	0.25 (*)	8.83 (3.92)	49.69 (6.48)

Exhibit 27. 1992, 1996 Mathematics NAEP, Grade 4 (continued)

Population	Year	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Pennsylvania total	1992	2740	2.0 (0.4)	21.8 (1.5)	64.9 (2.0)
	1996	2347	1.4 (0.3)	20.5 (1.5)	68.4 (1.8)
White	1992	2039	2.46 (0.50)	26.49 (1.56)	74.31 (1.77)
	1996	1795	1.69 (0.38)	24.31 (1.76)	77.08 (1.97)
Black	1992	389	0.00 (*)	2.33 (0.91)	22.85 (2.63)
	1996	268	0.00 (*)	2.44 (1.21)	26.62 (3.34)
Hispanic	1992	218	0.68 (*)	7.25 (2.37)	37.50 (4.01)
	1996	207	0.07 (*)	7.45 (2.15)	39.35 (4.18)
Rhode Island total	1992	2390	1.2 (0.4)	13.3 (1.1)	54.2 (2.2)
	1996	2461	1.3 (0.3)	17.4 (1.3)	60.9 (2.0)
White	1992	1842	1.51 (0.51)	16.62 (1.31)	63.07 (2.00)
	1996	1890	1.39 (0.33)	20.35 (1.45)	68.24 (2.09)
Black	1992	161	0.00 (*)	1.85 (*)	19.93 (4.06)
	1996	140	0.00 (*)	3.07 (1.69)	25.41 (4.58)
Hispanic	1992	264	0.00 (*)	1.53 (0.80)	23.01 (3.29)
	1996	306	0.49 (*)	6.89 (2.04)	35.31 (4.59)
Asian/Pacific Islander	1992	71	0.00 (*)	1.36 (*)	24.02 (5.36)
	1996	72	4.82 (2.77)	16.31 (4.64)	47.77 (8.79)
South Carolina total	1992	2771	0.9 (0.3)	12.8 (1.1)	47.6 (1.7)
	1996	2364	1.0 (0.3)	11.8 (1.3)	48.4 (2.0)
White	1992	1500	1.43 (0.50)	20.84 (1.72)	66.15 (1.85)
	1996	1232	1.88 (0.55)	19.14 (2.13)	65.54 (2.20)
Black	1992	1062	0.10 (*)	1.88 (0.53)	22.92 (1.89)
	1996	933	0.00 (*)	2.14 (0.69)	26.97 (2.48)
Hispanic	1992	151	0.37 (*)	6.45 (1.97)	32.93 (4.19)
	1996	134	0.10 (*)	4.66 (1.66)	27.15 (5.45)
Tennessee total	1992	2708	0.5 (0.2)	9.9 (1.0)	47.3 (2.0)
	1996	2473	1.3 (0.3)	16.5 (1.5)†	58.5 (2.0)†
White	1992	1850	0.61 (0.29)	12.98 (1.17)	57.80 (2.09)
	1996	1758	1.66 (0.39)	20.67 (1.85)	68.05 (1.87)
Black	1992	645	0.00 (*)	1.25 (0.59)	21.01 (2.63)
	1996	563	0.16 (*)	2.75 (0.99)	28.10 (3.22)
Hispanic	1992	144	0.00 (*)	2.66 (*)	21.97 (5.11)
	1996	99	1.20 (*)	12.18 (4.15)	45.40 (6.01)
Texas total	1992	2623	1.2 (0.3)	15.0 (1.2)	55.7 (1.6)
	1996	2413	2.8 (0.5)	25.3 (1.5)†	69.4 (1.9)†
White	1992	1225	1.99 (0.72)	22.86 (1.96)	71.57 (2.11)
	1996	1213	5.02 (0.74)	40.25 (2.15)	85.41 (1.80)
Black	1992	389	0.00 (*)	3.23 (1.05)	29.09 (4.01)
	1996	353	0.35 (*)	6.64 (1.96)	46.68 (3.02)
Hispanic	1992	913	0.27 (*)	7.36 (1.28)	42.54 (2.70)
	1996	751	0.57 (*)	10.71 (1.36)	54.53 (3.09)
Asian/Pacific Islander	1992	67	4.49 (2.14)	34.39 (9.45)	78.72 (4.54)
Utah total	1992	2799	1.4 (0.3)	19.0 (1.1)	65.6 (1.7)
	1996	2625	1.7 (0.4)	22.7 (1.3)	68.6 (1.6)
White	1992	2397	1.59 (0.35)	20.83 (1.13)	68.57 (1.69)
	1996	2184	1.98 (0.51)	25.65 (1.40)	73.35 (1.62)
Hispanic	1992	274	0.00 (*)	7.14 (2.20)	46.56 (3.31)
	1996	291	0.14 (*)	7.19 (2.37)	45.58 (4.32)
American Indian	1996	65	0.97 (*)	9.96 (4.88)	46.14 (8.56)
Vermont total	1996	2136	2.7 (0.5)	22.6 (1.1)	66.8 (2.1)
White	1996	1883	2.78 (0.51)	23.52 (1.15)	68.57 (2.24)
Hispanic	1996	136	1.71 (*)	14.31 (4.10)	53.48 (6.38)

Exhibit 27. 1992, 1996 Mathematics NAEP, Grade 4 (continued)

Population	Year	*N*	At or Above Advanced	At or Above Proficient	At or Above Basic
Virginia total	1992	2786	2.3 (0.5)	18.8 (1.5)	58.6 (1.4)
	1996	2586	1.9 (0.5)	19.3 (1.5)	61.9 (2.2)
White	1992	1876	3.13 (0.69)	24.73 (1.95)	69.95 (1.87)
	1996	1668	2.39 (0.61)	24.89 (1.93)	72.77 (2.06)
Black	1992	640	0.08 (*)	3.20 (0.90)	25.22 (2.06)
	1996	636	0.09 (*)	4.18 (0.81)	33.59 (2.70)
Hispanic	1992	134	0.00 (*)	9.23 (3.33)	47.62 (5.65)
	1996	150	0.41 (*)	9.27 (3.12)	51.65 (6.42)
Asian/Pacific Islander	1992	89	5.56 (*)	25.92 (6.84)	81.96 (4.79)
	1996	82	7.91 (3.99)	39.05 (6.08)	80.00 (4.93)
Washington total	1996	2640	1.4 (0.2)	20.9 (1.2)	66.7 (1.8)
White	1996	1918	1.85 (0.34)	24.14 (1.29)	71.93 (1.94)
Black	1996	134	0.00 (*)	5.87 (2.83)	35.08 (5.00)
Hispanic	1996	268	0.18 (*)	9.09 (2.19)	44.35 (3.63)
Asian/Pacific Islander	1996	179	0.12 (*)	21.44 (3.55)	72.03 (4.51)
American Indian	1996	137	0.13 (*)	14.12 (3.00)	62.48 (5.21)
West Virginia total	1992	2786	1.0 (0.3)	12.2 (0.9)	52.4 (1.5)
	1996	2530	1.7 (0.5)	19.0 (1.2)†	63.5 (1.6)†
White	1992	2516	1.13 (0.30)	12.96 (0.97)	53.70 (1.51)
	1996	2191	1.71 (0.46)	20.16 (1.28)	65.99 (1.74)
Black	1992	71	0.00 (*)	2.03 (*)	40.38 (5.62)
	1996	104	0.00 (*)	6.56 (3.44)	36.45 (7.64)
Hispanic	1992	130	0.00 (*)	5.40 (2.79)	37.40 (4.41)
	1996	156	0.67 (*)	8.68 (2.86)	47.31 (4.77)
Wisconsin total	1992	2780	2.2 (0.4)	24.5 (1.4)	70.9 (1.4)
	1996	2437	2.7 (0.6)	27.4 (1.3)	74.1 (1.2)
White	1992	2236	2.62 (0.41)	28.53 (1.55)	77.93 (1.25)
	1996	1911	3.19 (0.66)	31.85 (1.46)	81.29 (0.96)
Black	1992	186	0.00 (*)	2.10 (1.02)	25.57 (4.15)
	1996	255	0.00 (*)	4.74 (1.40)	31.27 (2.80)
Hispanic	1992	210	0.60 (*)	9.99 (2.74)	50.20 (4.24)
	1996	166	0.77 (*)	10.10 (3.55)	49.51 (5.55)
American Indian	1992	86	0.00 (*)	5.83 (2.48)	40.16 (9.03)
Wyoming total	1992	2605	1.0 (0.3)	18.7 (1.1)	68.6 (1.4)
	1996	2758	1.3 (0.3)	18.8 (1.2)	64.0 (1.7)
White	1992	2146	1.13 (0.37)	20.63 (1.28)	72.01 (1.48)
	1996	2251	1.53 (0.39)	21.33 (1.26)	68.03 (1.57)
Hispanic	1992	293	0.15 (*)	8.18 (1.70)	54.25 (3.90)
	1996	353	0.55 (*)	7.18 (2.05)	44.33 (3.90)
American Indian	1992	124	0.00 (*)	9.19 (3.30)	49.34 (7.02)
	1996	98	0.00 (*)	6.52 (3.18)	47.28 (7.51)

(*)Standard error estimates cannot be precisely determined.
†Significantly different from 1992
[a]DoDEA/DDESS: Department of Defense Educational Activity/Department of Defense Domestic Dependent Elementary and Secondary Schools
[b]DoDEA/DoDDS: Department of Defense Educational Activity/Department of Defense Dependent Schools (Overseas)

Exhibit 28. 1990, 1992, 1996 Mathematics NAEP, Grade 8: Percentage of Students in Each Participating Jurisdiction At or Above Each Achievement Level, by Race/Ethnicity (Standard errors in parentheses)

Note: Data were collected in each participating state on the number of White, Black, Hispanic, Asian/Pacific Islander, and American Indian students who took the NAEP. If the sample size of one or more of these populations was too small to produce accurate data, the categories were omitted for the state in the table below.

Population	Year	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Alabama total	1990	2531	1.0 (0.2)	9.1 (0.7)	40.3 (1.7)
	1992	2522	0.9 (0.3)	10.2 (0.9)	38.8 (1.9)
	1996	2261	1.2 (0.4)	12.0 (1.8)	45.2 (2.6)
White	1990	1638	1.29 (0.28)	12.33 (0.95)	51.77 (1.81)
	1992	1568	1.35 (0.41)	15.35 (1.32)	52.73 (2.01)
	1996	1313	1.89 (0.57)	18.13 (2.74)	62.76 (3.16)
Black	1990	727	0.11 (*)	2.18 (0.61)	17.71 (2.05)
	1992	785	0.00 (*)	1.11 (0.45)	14.77 (1.74)
	1996	797	0.02 (*)	1.44 (0.47)	16.74 (2.03)
Hispanic	1990	110	0.97 (*)	3.88 (1.69)	15.14 (4.66)
	1992	106	0.00 (*)	0.89 (*)	11.60 (3.77)
	1996	91	0.00 (*)	5.86 (2.58)	22.95 (5.00)
Alaska total	1996	1462	6.7 (1.1)	29.9 (1.6)	67.7 (2.3)
White	1996	1031	8.58 (1.45)	36.92 (1.91)	77.18 (2.17)
Hispanic	1996	84	0.00 (*)	13.33 (4.85)	44.20 (8.11)
Asian/Pacific Islander	1996	63	10.08 (6.80)	30.24 (9.08)	65.00 (6.86)
American Indian	1996	224	1.33 (*)	11.79 (2.60)	46.29 (4.52)
Arizona total	1990	2558	1.3 (0.4)	12.7 (0.9)	47.5 (1.8)
	1992	2617	1.4 (0.3)	15.1 (1.3)	54.7 (1.8)‡
	1996	2136	1.8 (0.3)	17.7 (1.2)‡	57.4 (1.9)‡
White	1990	1488	1.85 (0.53)	18.30 (1.24)	61.28 (1.72)
	1992	1569	2.14 (0.55)	21.59 (1.71)	67.90 (1.92)
	1996	1248	2.60 (0.51)	24.55 (1.69)	71.68 (1.78)
Black	1990	86	0.00 (*)	3.76 (2.06)	29.86 (5.64)
	1992	105	0.26 (*)	4.50 (2.54)	31.14 (6.47)
	1996	72	0.00 (*)	4.81 (2.71)	34.41 (6.17)
Hispanic	1990	761	0.13 (*)	3.73 (0.94)	27.15 (2.16)
	1992	720	0.40 (0.24)	4.79 (1.26)	32.37 (3.65)
	1996	645	0.57 (*)	6.36 (1.06)	34.62 (2.60)
American Indian	1990	173	0.00 (*)	0.27 (*)	17.68 (2.79)
	1992	172	0.00 (*)	5.64 (2.85)	38.74 (5.15)
	1996	119	0.14 (*)	8.67 (5.26)	39.96 (9.92)
Arkansas total	1990	2669	0.7 (0.2)	9.3 (0.7)	43.9 (1.2)
	1992	2556	0.7 (0.2)	10 (0.8)	44.3 (1.8)
	1996	1845	1.6 (0.4)	13.1 (1.0)‡	51.9 (1.8)†‡
White	1990	1924	0.99 (0.30)	12.23 (0.87)	54.92 (1.40)
	1992	1860	0.96 (0.30)	12.95 (0.97)	54.73 (1.97)
	1996	1338	2.16 (0.49)	16.52 (1.26)	61.93 (1.75)
Black	1990	580	0.00 (*)	0.80 (0.38)	13.12 (1.30)
	1992	538	0.06 (*)	1.65 (0.85)	14.14 (1.89)
	1996	406	0.05 (*)	2.19 (0.90)	17.39 (2.92)
Hispanic	1990	96	0.00 (*)	(2.47) (*)	16.29 (5.03)
	1992	109	0.61 (*)	3.01 (1.77)	17.93 (4.45)

Exhibit 28. 1990, 1992, 1996 Mathematics NAEP, Grade 8 (continued)

Population	Year	N	At or Above Advanced	At or Above Proficient	At or Above Basic
California total	1990	2424	1.7 (0.3)	12.5 (1.1)	44.6 (1.7)
	1992	2516	2.2 (0.7)	16.2 (1.3)	50.4 (1.9)
	1996	2290	2.8 (0.5)	16.9 (1.5)‡	51.4 (2.1)‡
White	1990	1091	2.63 (0.56)	19.44 (1.92)	61.33 (2.19)
	1992	1125	3.45 (1.40)	24.65 (2.23)	69.03 (2.06)
	1996	940	3.87 (0.91)	28.10 (2.31)	71.20 (1.99)
Black	1990	167	0.00 (*)	2.62 (1.26)	19.44 (2.91)
	1992	176	0.00 (*)	2.40 (1.24)	21.30 (4.39)
	1996	171	0.00 (*)	1.51 (*)	25.29 (4.39)
Hispanic	1990	818	0.14 (*)	2.96 (0.73)	23.43 (2.23)
	1992	900	0.18 (*)	4.36 (1.01)	28.35 (2.11)
	1996	857	0.41 (*)	4.77 (0.83)	32.02 (2.35)
Asian/Pacific Islander	1990	302	3.54 (1.25)	20.49 (3.09)	59.01 (4.54)
	1992	281	5.29 (1.70)	28.95 (3.25)	64.68 (3.75)
	1996	277	8.65 (1.46)	29.31 (4.08)	66.65 (4.50)
Colorado total	1990	2675	1.9 (0.4)	16.9 (1.0)	57.5 (1.2)
	1992	2799	2.1 (0.4)	21.6 (1.2)‡	63.9 (1.4)‡
	1996	2530	3.2 (0.5)	25.4 (1.3)‡	66.6 (1.3)‡
White	1990	1952	2.31 (0.43)	21.00 (1.21)	66.11 (1.35)
	1992	2048	2.58 (0.57)	26.11 (1.41)	71.75 (1.36)
	1996	1767	3.95 (0.57)	31.24 (1.40)	75.70 (1.18)
Black	1990	118	0.00 (*)	1.40 (*)	20.12 (5.46)
	1992	123	0.00 (*)	5.12 (2.85)	26.19 (6.21)
	1996	139	0.27 (*)	7.69 (3.62)	39.52 (4.81)
Hispanic	1990	498	0.20 (*)	4.31 (0.98)	32.36 (2.55)
	1992	510	0.31 (*)	7.39 (1.11)	40.96 (2.51)
	1996	511	0.88 (0.52)	9.67 (1.52)	43.34 (3.10)
Asian/Pacific Islander	1996	71	6.78 (3.97)	36.79 (8.56)	76.27 (9.90)
Connecticut total	1990	2672	3.4 (0.4)	21.7 (0.9)	59.9 (1.4)
	1992	2613	3.2 (0.6)	25.7 (1.1)‡	64.4 (1.4)
	1996	2485	5.1 (0.6)‡	30.6 (1.5)‡	70.3 (1.4)†‡
White	1990	2110	4.00 (0.49)	25.91 (1.09)	68.68 (1.49)
	1992	1958	3.97 (0.75)	32.41 (1.24)	76.75 (1.22)
	1996	1911	6.16 (0.72)	37.02 (1.60)	79.97 (1.36)
Black	1990	259	0.10 (*)	3.76 (1.44)	27.98 (3.64)
	1992	284	0.07 (*)	3.33 (1.21)	26.60 (3.88)
	1996	235	0.00 (*)	3.93 (1.52)	28.54 (3.76)
Hispanic	1990	230	0.52 (*)	3.73 (1.52)	23.06 (3.31)
	1992	286	0.17 (*)	4.16 (1.26)	26.92 (3.20)
	1996	253	0.79 (*)	7.85 (1.91)	37.24 (2.54)
Asian/Pacific Islander	1992	66	11.14 (5.07)	45.35 (8.77)	74.80 (7.15)
	1996	65	8.69 (3.96)	34.60 (7.90)	70.33 (7.77)
Delaware total	1990	2110	1.9 (0.4)	14.2 (0.8)	47.8 (1.5)
	1992	1934	2.3 (0.4)	15.1 (1.0)	51.6 (1.2)
	1996	1798	3.0 (0.6)	18.9 (1.0)‡	55.1 (1.3)‡
White	1990	1422	2.33 (0.64)	17.96 (1.02)	56.39 (2.06)
	1992	1275	3.11 (0.65)	20.65 (1.25)	63.69 (1.70)
	1996	1207	3.74 (0.79)	23.96 (1.38)	65.66 (1.82)
Black	1990	515	0.06 (*)	3.96 (0.93)	27.03 (2.89)
	1992	483	0.15 (0.09)	2.71 (1.12)	25.03 (2.33)
	1996	417	0.33 (*)	3.60 (1.25)	26.56 (4.16)
Hispanic	1990	110	0.30 (*)	5.83 (3.26)	28.13 (5.96)
	1992	115	0.00 (*)	3.43 (*)	28.65 (4.04)
	1996	91	0.85 (*)	7.89 (3.18)	35.87 (5.48)

Exhibit 28. 1990, 1992, 1996 Mathematics NAEP, Grade 8 (continued)

Population	Year	N	At or Above Advanced	At or Above Proficient	At or Above Basic
District of Columbia total	1990	2135	0.8 (0.2)	3.1 (0.6)	16.6 (1.0)
	1992	1816	0.6 (0.2)	4.4 (0.9)	21.8 (1.1)‡
	1996	1693	1.2 (0.3)	5.4 (0.8)	19.8 (1.2)
White	1996	62	22.19 (6.99)	60.83 (9.17)	78.88 (6.26)
Black	1990	1840	0.06 (*)	1.38 (0.38)	14.82 (0.76)
	1992	1576	0.00 (*)	2.42 (0.62)	19.88 (1.28)
	1996	1416	0.23 (*)	2.46 (0.63)	16.73 (1.45)
Hispanic	1990	192	0.28 (*)	1.88 (1.13)	9.57 (2.33)
	1992	157	0.12 (*)	5.84 (3.15)	18.99 (3.24)
	1996	171	0.31 (*)	3.55 (1.54)	16.05 (4.06)
DoDEA/DDESS[a] total	1996	620	5.0 (1.1)	21.4 (2.4)	57.0 (3.1)
White	1996	250	9.33 (2.26)	34.20 (4.70)	74.18 (5.47)
Black	1996	185	0.97 (*)	7.50 (3.07)	39.16 (5.95)
Hispanic	1996	140	3.14 (*)	17.72 (5.16)	51.85 (7.67)
DoDEA/DoDDS[b] total	1996	2160	3.3 (0.6)	22.8 (1.2)	65.4 (1.4)
White	1996	994	4.74 (1.04)	31.65 (1.84)	76.65 (2.23)
Black	1996	437	0.56 (*)	6.07 (1.20)	39.14 (3.80)
Hispanic	1996	341	1.07 (0.71)	14.52 (2.98)	59.48 (4.16)
Asian/Pacific Islander	1996	271	4.94 (2.56)	24.14 (4.16)	72.26 (3.80)
Florida total	1990	2534	1.4 (0.3)	12 (0.9)	42.7 (1.4)
	1992	2549	1.5 (0.3)	14.6 (1.2)	48.8 (1.9)
	1996	2401	1.7 (0.4)	16.9 (1.3)‡	53.7 (2.1)‡
White	1990	1548	2.01 (0.50)	15.83 (1.36)	53.52 (1.94)
	1992	1444	2.30 (0.44)	22.38 (1.69)	64.45 (1.95)
	1996	1341	2.60 (0.75)	25.98 (1.89)	71.90 (2.25)
Black	1990	495	0.04 (*)	2.44 (0.79)	16.78 (1.76)
	1992	571	0.24 (*)	3.00 (0.94)	21.67 (2.76)
	1996	504	0.06 (*)	2.60 (1.13)	20.79 (2.25)
Hispanic	1990	398	0.98 (0.46)	7.82 (1.40)	31.41 (2.77)
	1992	452	0.13 (*)	5.14 (1.49)	33.38 (3.87)
	1996	481	0.55 (0.35)	7.83 (1.63)	39.34 (2.58)
Asian/Pacific Islander	1990	65	2.19 (*)	28.42 (6.83)	63.35 (6.76)
Georgia total	1990	2766	2.4 (0.4)	13.8 (1.2)	47.2 (1.5)
	1992	2589	1.1 (0.3)	12.7 (0.9)	47.9 (1.7)
	1996	2364	2.1 (0.5)	15.9 (1.8)	51.1 (2.0)
White	1990	1678	3.65 (0.63)	19.81 (1.70)	61.71 (1.81)
	1992	1506	1.84 (0.42)	18.72 (1.36)	63.08 (2.14)
	1996	1361	3.29 (0.74)	24.09 (2.56)	68.18 (2.15)
Black	1990	886	0.15 (*)	3.67 (0.77)	24.75 (1.73)
	1992	925	0.08 (*)	3.05 (0.59)	24.07 (1.94)
	1996	836	0.02 (*)	2.65 (0.80)	24.16 (1.68)
Hispanic	1990	153	0.46 (*)	3.45 (1.58)	20.18 (3.70)
	1992	100	0.00 (*)	3.90 (*)	23.75 (8.70)
	1996	103	1.08 (*)	9.64 (4.22)	35.51 (6.57)
Guam total	1990	1617	0.4 (0.2)	3.8 (0.4)	21.7 (1.0)
	1992	1496	0.5 (0.1)	5.6 (0.6)	25.3 (1.4)
	1996	928	0.5 (*)	5.8 (0.8)	29.0 (1.6)‡
White	1990	109	1.11 (*)	10.09 (2.52)	47.68 (5.32)
	1992	68	2.28 (*)	19.07 (7.06)	59.58 (7.69)
Hispanic	1990	308	0.00 (*)	0.58 (*)	6.17 (1.46)
	1992	226	0.00 (*)	2.54 (1.26)	14.65 (2.70)
	1996	157	0.00 (*)	2.44 (1.36)	15.58 (2.99)
Asian/Pacific Islander	1990	1163	0.51 (0.23)	4.04 (0.57)	23.28 (1.19)
	1992	1141	0.52 (0.21)	5.53 (0.59)	25.48 (1.50)
	1996	707	0.39 (*)	6.06 (1.12)	30.87 (2.15)

Exhibit 28. 1990, 1992, 1996 Mathematics NAEP, Grade 8 (continued)

Population	Year	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Hawaii total	1990	2551	1.6 (0.3)	11.7 (0.7)	40.0 (1.0)
	1992	2454	1.8 (0.3)	13.5 (0.7)	46.2 (1.1)‡
	1996	2189	2.3 (0.4)	15.9 (0.9)‡	51.0 (1.5)‡
White	1990	445	1.72 (0.79)	16.74 (2.76)	53.45 (2.49)
	1992	436	1.79 (1.06)	17.93 (2.31)	56.61 (2.54)
	1996	344	2.96 (1.07)	22.22 (3.49)	62.36 (3.30)
Hispanic	1990	264	0.36 (*)	3.63 (1.42)	18.05 (3.17)
	1992	260	0.40 (*)	3.94 (0.97)	29.26 (2.81)
	1996	362	0.54 (*)	6.98 (1.65)	33.1 (3.11)
Asian/Pacific Islander	1990	1738	1.84 (0.42)	12.27 (0.76)	40.42 (1.22)
	1992	1634	2.15 (0.47)	14.73 (0.83)	47.72 (1.52)
	1996	1344	2.74 (0.64)	17.80 (1.26)	54.63 (1.75)
Idaho					
White	1990	2419	1.26 (0.38)	19.46 (1.29)	66.42 (1.31)
	1992	2297	2.35 (0.38)	23.43 (1.25)	70.99 (1.05)
Hispanic	1990	180	0.22 (*)	4.84 (1.79)	34.26 (4.72)
	1992	193	0.00 (*)	6.56 (2.02)	40.14 (4.33)
American Indian	1990	78	0.25 (*)	5.16 (*)	36.47 (7.26)
	1992	72	0.32 (*)	9.37 (4.64)	46.26 (6.48)
Illinois					
White	1990	1767	2.38 (0.54)	18.85 (1.63)	62.46 (1.81)
Black	1990	474	0.22 (*)	3.36 (1.18)	19.72 (4.63)
Hispanic	1990	339	0.00 (*)	2.87 (1.24)	23.50 (3.83)
Asian/Pacific Islander	1990	77	3.83 (2.25)	32.14 (5.39)	70.32 (5.99)
Indiana total	1990	2569	2.5 (0.5)	16.6 (1.1)	56.4 (1.5)
	1992	2659	2.6 (0.4)	19.7 (1.2)	59.9 (1.5)
	1996	2347	3.0 (0.5)	23.6 (1.7)‡	68.0 (2.0)†‡
White	1990	2191	2.74 (0.53)	18.45 (1.13)	61.55 (1.42)
	1992	2237	2.88 (0.47)	22.18 (1.33)	64.56 (1.61)
	1996	1890	3.49 (0.66)	27.25 (1.84)	74.42 (1.89)
Black	1990	205	0.57 (*)	1.95 (1.02)	22.86 (3.90)
	1992	242	0.10 (*)	3.50 (1.35)	27.12 (4.06)
	1996	291	0.10 (*)	2.48 (1.00)	30.77 (4.41)
Hispanic	1990	114	0.96 (*)	7.63 (3.24)	28.38 (4.05)
	1992	114	1.78 (*)	7.88 (2.94)	40.63 (7.39)
	1996	123	0.67 (*)	9.55 (3.15)	44.29 (7.59)
Iowa total	1990	2474	3.3 (0.5)	25.1 (1.4)	70.0 (1.2)
	1992	2816	3.9 (0.7)	31.2 (1.3)‡	76.4 (1.3)‡
	1996	2169	3.9 (0.6)	31.5 (1.8)‡	77.6 (1.4)‡
White	1990	2277	3.42 (0.54)	26.46 (1.50)	72.16 (1.34)
	1992	2594	4.07 (0.70)	32.49 (1.38)	78.38 (1.41)
	1996	1977	4.09 (0.58)	32.95 (1.83)	79.31 (1.41)
Black	1996	66	0.35 (*)	10.72 (4.14)	38.43 (6.91)
Hispanic	1990	105	0.46 (*)	8.88 (2.95)	39.27 (4.87)
	1992	106	0.36 (*)	12.18 (4.67)	45.86 (5.19)
	1996	67	0.57 (*)	11.54 (5.05)	56.92 (6.31)
Kentucky total	1990	2680	1.1 (0.3)	10.5 (0.8)	43.0 (1.7)
	1992	2756	1.6 (0.3)	13.8 (1.1)	51.2 (1.5)‡
	1996	2461	1.4 (0.3)	15.7 (1.2)‡	56.5 (1.6)‡
White	1990	2275	1.15 (0.28)	11.78 (0.91)	46.61 (1.80)
	1992	2381	1.58 (0.32)	14.91 (1.19)	54.70 (1.51)
	1996	2148	1.60 (0.41)	17.34 (1.32)	59.64 (1.61)
Black	1990	243	0.10 (*)	2.45 (0.93)	23.29 (3.42)
	1992	245	0.16 (*)	4.43 (1.79)	24.78 (3.62)
	1996	221	0.08 (*)	2.19 (*)	30.72 (4.00)
Hispanic	1990	108	0.00 (*)	0.82 (*)	13.91 (3.79)
	1992	81	0.00 (*)	4.06 (2.53)	22.52 (5.74)

Exhibit 28. 1990, 1992, 1996 Mathematics NAEP, Grade 8 (continued)

Population	Year	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Louisiana total	1990	2572	0.5 (0.2)	5.4 (0.6)	31.7 (1.6)
	1992	2582	0.5 (0.2)	7.2 (1.0)	36.6 (1.9)
	1996	2599	0.5 (0.2)	7.4 (1.1)	38.5 (2.0)‡
White	1990	1390	0.84 (0.34)	8.48 (1.12)	45.22 (2.00)
	1992	1393	0.81 (0.32)	11.89 (1.56)	52.08 (2.38)
	1996	1367	0.89 (0.37)	12.06 (1.58)	56.01 (1.79)
Black	1990	990	0.08 (*)	1.17 (0.36)	13.39 (1.46)
	1992	1019	0.03 (*)	1.23 (0.45)	16.96 (1.89)
	1996	1071	0.01 (*)	1.51 (0.53)	16.79 (1.98)
Hispanic	1990	138	0.00 (*)	1.68 (*)	14.27 (3.72)
	1992	111	0.00 (*)	0.73 (*)	18.63 (3.70)
	1996	103	0.00 (*)	1.89 (*)	23.94 (4.58)
Maine total	1992	2464	3.1 (0.6)	25.5 (1.5)	71.6 (1.3)
	1996	2258	5.5 (0.7)	31.2 (1.7)	77.40 (1.5)†
White	1992	2317	3.16 (0.54)	26.38 (1.54)	73.02 (1.23)
	1996	2138	5.79 (0.77)	32.09 (1.72)	78.36 (1.61)
American Indian	1992	62	1.33 (*)	8.61 (4.59)	49.14 (7.43)
Maryland total	1990	2794	2.6 (0.5)	16.6 (1.2)	49.7 (1.6)
	1992	2399	3.2 (0.5)	19.9 (1.2)	53.9 (1.4)
	1996	2137	5.4 (1.0)‡	24.4 (2.3)‡	57.4 (2.2)
White	1990	1707	3.75 (0.75)	22.38 (1.39)	63.94 (1.76)
	1992	1440	4.83 (0.89)	29.05 (1.76)	69.61 (1.69)
	1996	1167	7.10 (1.20)	34.47 (2.81)	75.47 (1.92)
Black	1990	742	0.16 (*)	3.49 (0.83)	22.90 (2.51)
	1992	699	0.03 (*)	2.86 (0.93)	24.92 (2.14)
	1996	728	0.26 (*)	3.86 (0.99)	26.43 (2.20)
Hispanic	1990	197	0.61 (*)	6.61 (1.71)	25.57 (3.20)
	1992	153	0.61 (*)	4.45 (1.90)	28.62 (3.79)
	1996	113	2.34 (*)	13.95 (3.69)	35.85 (5.20)
Asian/Pacific Islander	1990	106	7.35 (2.81)	46.90 (6.51)	80.40 (4.25)
	1992	80	7.38 (2.88)	40.89 (6.29)	77.27 (4.98)
	1996	101	25.15 (6.48)	62.17 (5.87)	86.34 (5.18)
Massachusetts total	1992	2456	2.8 (0.5)	23.3 (1.3)	62.8 (1.5)
	1996	2280	4.7 (0.8)	27.6 (1.8)	68.3 (2.3)
White	1992	2085	2.97 (0.58)	26.15 (1.37)	68.92 (1.75)
	1996	1833	5.53 (0.94)	31.54 (2.06)	75.16 (1.97)
Black	1992	120	0.33 (*)	6.18 (2.20)	28.75 (4.53)
	1996	150	0.65 (*)	8.35 (3.27)	35.10 (5.43)
Hispanic	1992	179	0.00 (*)	4.12 (1.64)	24.57 (4.49)
	1996	175	0.43 (*)	4.54 (2.22)	25.91 (5.47)
Asian/Pacific Islander	1996	102	3.84 (*)	29.17 (6.49)	67.14 (7.08)
Michigan total	1990	2587	2.1 (0.4)	15.8 (1.2)	53.3 (1.7)
	1992	2616	2.2 (0.4)	18.9 (1.5)	57.9 (1.7)
	1996	2155	4.4 (0.8)‡	28.3 (1.8)†‡	67.0 (2.1)†‡
White	1990	2029	2.45 (0.46)	19.06 (1.25)	61.82 (1.63)
	1992	1901	2.64 (0.49)	23.99 (1.79)	69.44 (1.77)
	1996	1649	5.41 (0.91)	34.31 (1.85)	76.86 (1.65)
Black	1990	318	0.00 (*)	0.97 (0.65)	12.80 (1.53)
	1992	497	0.19 (*)	1.76 (0.68)	17.69 (2.68)
	1996	308	0.15 (*)	4.60 (2.04)	29.36 (4.56)
Hispanic	1990	125	0.72 (*)	4.11 (1.87)	29.21 (4.05)
	1992	126	0.61 (*)	7.69 (3.04)	37.79 (6.48)
	1996	109	1.33 (*)	11.56 (4.57)	37.49 (5.22)

Exhibit 28. 1990, 1992, 1996 Mathematics NAEP, Grade 8 (continued)

Population	Year	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Minnesota total	1990	2584	3.3 (0.5)	23.3 (1.2)	67.5 (1.1)
	1992	2471	4.7 (0.6)	31.1 (1.2)‡	74.2 (1.3)‡
	1996	2425	6.0 (0.8)‡	34.5 (1.8)‡	75.0 (1.5)
White	1990	2305	3.40 (0.50)	24.60 (1.27)	70.54 (1.12)
	1992	2258	5.06 (0.68)	32.95 (1.22)	76.56 (1.28)
	1996	2122	6.42 (0.86)	37.27 (1.88)	79.46 (1.35)
Black	1990	67	0.64 (*)	7.64 (2.77)	21.68 (5.62)
	1996	83	0.00 (*)	5.81 (3.47)	33.17 (7.08)
Hispanic	1990	84	0.00 (*)	5.68 (2.32)	25.62 (5.65)
	1992	86	0.00 (*)	5.93 (2.45)	40.04 (7.02)
	1996	73	4.44 (3.06)	18.77 (6.36)	49.50 (7.74)
Asian/Pacific Islander	1990	77	7.54 (4.19)	19.54 (5.58)	60.85 (5.92)
	1996	100	6.35 (2.52)	27.24 (5.46)	60.13 (6.98)
Mississippi total	1992	2498	0.3 (0.1)	6.4 (0.7)	33.40 (1.6)
	1996	2487	0.4 (0.2)	7.2 (0.8)	35.60 (1.3)
White	1992	1204	0.65 (0.26)	11.95 (1.27)	52.86 (1.99)
	1996	1183	0.69 (0.34)	12.93 (1.60)	56.10 (1.91)
Black	1992	1111	0.00 (*)	0.75 (0.45)	14.43 (1.55)
	1996	1135	0.08 (*)	1.11 (0.31)	16.07 (1.25)
Hispanic	1992	150	0.00 (*)	0.74 (*)	9.63 (3.52)
	1996	127	0.04 (*)	3.00 (1.74)	11.09 (2.93)
Missouri total	1992	2666	2.3 (0.4)	19.5 (1.2)	62.5 (1.6)
	1996	2386	2.2 (0.5)	21.6 (1.4)	63.8 (2.0)
White	1992	2183	2.45 (0.42)	22.25 (1.30)	69.11 (1.49)
	1996	1968	2.60 (0.61)	24.71 (1.59)	70.14 (2.08)
Black	1992	328	0.41 (*)	2.55 (0.98)	25.18 (3.43)
	1996	283	0.00 (*)	3.54 (1.73)	25.50 (4.73)
Hispanic	1992	81	1.41 (*)	9.48 (4.72)	33.66 (6.75)
	1996	76	1.22 (*)	10.01 (4.27)	47.60 (8.22)
Montana total	1990	2486	3.6 (0.5)	26.7 (1.4)	74.5 (1.5)
	1996	1912	5.2 (0.5)‡	32.5 (1.5)‡	75.2 (1.7)
White	1990	2138	4.00 (0.52)	29.28 (1.47)	78.51 (1.60)
	1996	1611	5.88 (0.69)	35.84 (1.50)	79.14 (1.53)
Hispanic	1990	81	0.50 (*)	9.83 (5.20)	52.58 (6.21)
	1996	88	1.03 (*)	11.61 (4.06)	51.73 (6.52)
American Indian	1990	230	0.40 (*)	6.99 (2.48)	42.11 (6.01)
	1996	182	0.97 (*)	14.22 (2.56)	55.18 (5.35)
Nebraska total	1990	2519	3.3 (0.5)	24.4 (1.2)	68.2 (1.3)
	1992	2285	2.9 (0.5)	26.3 (1.6)	70.2 (1.3)
	1996	2610	5.2 (0.7)‡	30.8 (1.50)‡	75.9 (1.1)†‡
White	1990	2251	3.57 (0.61)	26.99 (1.35)	72.60 (1.48)
	1992	1966	3.33 (0.57)	29.18 (1.71)	75.77 (1.24)
	1996	2267	5.84 (0.79)	33.80 (1.55)	80.35 (1.05)
Black	1990	86	0.00 (*)	2.19 (*)	19.25 (4.14)
	1992	127	0.16 (*)	1.92 (1.29)	18.64 (5.98)
	1996	131	0.48 (*)	7.48 (3.27)	40.28 (4.53)
Hispanic	1990	120	0.00 (*)	3.86 (2.69)	41.32 (6.64)
	1992	126	0.40 (*)	9.72 (2.79)	40.54 (5.20)
	1996	139	0.25 (*)	7.50 (2.77)	43.73 (5.60)
New Hampshire					
White	1990	2405	2.85 (0.50)	20.74 (1.19)	65.65 (1.55)
	1992	2314	2.83 (0.49)	25.39 (1.41)	72.56 (1.25)
Hispanic	1990	69	0.00 (*)	8.79 (4.38)	35.95 (7.85)
	1992	73	0.52 (*)	11.06 (4.97)	48.67 (7.18)

Exhibit 28. 1990, 1992, 1996 Mathematics NAEP, Grade 8 (continued)

Population	Year	*N*	At or Above Advanced	At or Above Proficient	At or Above Basic
New Jersey					
White	1990	1789	4.14 (0.62)	26.34 (1.54)	70.37 (1.57)
	1992	1302	3.83 (0.60)	30.90 (1.84)	77.09 (1.63)
Black	1990	398	0.25 (*)	4.26 (1.48)	24.00 (3.61)
	1992	385	0.15 (*)	3.72 (1.12)	26.13 (3.60)
Hispanic	1990	363	1.05 (*)	5.48 (1.43)	27.72 (2.75)
	1992	332	0.67 (*)	5.75 (1.33)	34.89 (4.58)
Asian/Pacific Islander	1990	131	11.16 (3.65)	51.85 (6.30)	83.59 (4.36)
	1992	134	11.25 (2.68)	51.38 (5.64)	86.12 (2.96)
New Mexico total	1990	2643	1.0 (0.3)	10.2 (0.9)	43.2 (1.2)
	1992	2561	0.9 (0.3)	10.9 (0.8)	47.6 (1.3)
	1996	2371	1.6 (0.3)	14.3 (1.1)‡	50.5 (1.6)‡
White	1990	989	1.99 (0.67)	19.50 (2.05)	63.65 (2.13)
	1992	1095	1.83 (0.59)	19.06 (1.52)	65.74 (1.88)
	1996	851	3.90 (0.68)	27.95 (1.76)	72.01 (2.02)
Hispanic	1990	1177	0.28 (0.18)	3.78 (0.79)	30.58 (1.66)
	1992	1267	0.19 (0.12)	4.77 (0.65)	33.34 (1.83)
	1996	1195	0.35 (0.19)	6.41 (1.19)	37.88 (1.92)
American Indian	1990	386	0.11 (*)	2.23 (1.00)	21.83 (2.38)
	1992	104	0.00 (*)	0.98 (*)	32.67 (5.37)
	1996	232	0.32 (*)	6.00 (1.62)	36.56 (3.84)
New York total	1990	2302	2.7 (0.4)	15.3 (0.9)	49.9 (1.7)
	1992	2158	3.2 (0.5)	20.0 (1.3)‡	57.5 (2.2)‡
	1996	1962	3.1 (0.5)	22.0 (1.5)‡	61.2 (2.0)‡
White	1990	1518	3.61 (0.55)	20.80 (1.34)	64.98 (1.58)
	1992	1464	4.13 (0.51)	26.90 (1.66)	72.56 (1.22)
	1996	1118	4.26 (0.67)	30.73 (1.81)	77.27 (1.78)
Black	1990	337	0.19 (*)	3.66 (1.07)	20.41 (3.88)
	1992	300	0.38 (*)	3.59 (1.45)	20.43 (4.42)
	1996	353	0.36 (*)	4.32 (1.75)	32.00 (3.97)
Hispanic	1990	316	0.56 (0.33)	4.76 (1.45)	24.47 (3.46)
	1992	258	0.60 (*)	6.57 (1.73)	32.40 (4.36)
	1996	336	0.41 (*)	5.53 (1.36)	29.68 (3.65)
Asian/Pacific Islander	1990	88	9.63 (3.38)	31.95 (6.18)	68.45 (6.98)
	1992	83	10.73 (4.41)	33.28 (7.79)	68.65 (8.77)
	1996	109	8.38 (2.87)	34.89 (6.28)	75.26 (5.20)
North Carolina total	1990	2843	0.6 (0.3)	8.7 (0.7)	37.9 (1.4)
	1992	2769	1.2 (0.3)	12.1 (1.0)‡	47.0 (1.4)‡
	1996	2638	3.0 (0.6)‡	20.0 (1.3)†‡	56.1 (1.8)†‡
White	1990	1772	0.93 (0.47)	12.56 (0.99)	50.14 (1.97)
	1992	1889	1.59 (0.38)	15.98 (1.20)	57.22 (1.52)
	1996	1713	4.25 (0.86)	27.50 (1.61)	68.63 (1.82)
Black	1990	838	0.14 (*)	2.03 (0.74)	17.88 (1.50)
	1992	737	0.18 (*)	3.07 (0.78)	23.51 (2.02)
	1996	730	0.08 (*)	4.60 (0.97)	30.77 (2.49)
Hispanic	1990	130	0.15 (*)	1.45 (1.00)	10.30 (3.30)
	1992	76	0.25 (*)	5.09 (*)	23.25 (6.23)
	1996	94	1.49 (*)	7.15 (2.84)	41.03 (5.57)
American Indian	1990	79	0.22 (*)	2.09 (*)	17.66 (4.94)

Exhibit 28. 1990, 1992, 1996 Mathematics NAEP, Grade 8 (continued)

Population	Year	*N*	At or Above Advanced	At or Above Proficient	At or Above Basic
North Dakota total	1990	2485	3.6 (0.6)	27.3 (1.8)	75.4 (1.6)
	1992	2314	3.1 (0.5)	29.5 (1.6)	77.9 (1.4)
	1996	2602	4.4 (0.7)	33.3 (1.5)‡	77.4 (1.2)
White	1990	2234	3.84 (0.66)	29.20 (1.75)	79.30 (1.43)
	1992	2154	3.09 (0.55)	30.67 (1.68)	79.67 (1.36)
	1996	2401	4.75 (0.80)	35.03 (1.54)	79.73 (1.06)
Hispanic	1990	70	1.60 (*)	7.17 (4.48)	36.91 (8.05)
	1996	69	0.64 (*)	13.27 (4.88)	55.36 (8.54)
American Indian	1990	146	0.00 (*)	2.37 (*)	25.86 (4.73)
	1992	65	0.00 (*)	4.82 (2.96)	47.56 (11.58)
	1996	91	0.23 (*)	6.59 (3.61)	36.46 (7.03)
Ohio					
White	1990	2234	1.88 (0.36)	16.61 (1.17)	58.59 (1.56)
	1992	2010	2.29 (0.48)	21.46 (1.49)	66.54 (2.05)
Black	1990	281	0.16 (*)	1.57 (1.05)	16.64 (2.63)
	1992	360	0.00 (*)	2.66 (0.76)	20.42 (2.67)
Hispanic	1990	84	0.00 (*)	2.93 (*)	20.60 (6.59)
	1992	96	0.00 (*)	5.17 (2.80)	32.59 (4.60)
Oklahoma					
White	1990	1657	1.63 (0.45)	16.13 (1.40)	58.12 (1.99)
	1992	1587	1.26 (0.41)	19.06 (1.21)	65.51 (1.49)
Black	1990	213	0.00 (*)	0.49 (*)	19.94 (2.84)
	1992	169	0.00 (*)	1.65 (0.93)	22.14 (4.31)
Hispanic	1990	111	0.15 (*)	4.47 (2.22)	33.88 (5.57)
	1992	132	0.13 (*)	9.36 (2.92)	40.96 (5.09)
American Indian	1990	204	0.33 (*)	5.77 (2.07)	43.83 (3.68)
	1992	216	1.23 (*)	12.44 (3.25)	50.32 (5.06)
Oregon total	1990	2708	3.0 (0.5)	20.7 (1.1)	61.6 (1.4)
	1996	2323	4.4 (0.7)	26.3 (1.6)‡	66.9 (1.7)‡
White	1990	2295	3.19 (0.53)	22.25 (1.25)	64.69 (1.41)
	1996	1926	4.70 (0.91)	28.59 (1.70)	70.31 (1.59)
Hispanic	1990	187	2.83 (1.32)	10.49 (3.02)	37.64 (4.23)
	1996	170	3.21 (1.54)	13.05 (3.66)	45.97 (5.27)
Asian/Pacific Islander	1990	80	3.94 (2.68)	28.20 (6.16)	69.08 (5.43)
	1996	82	7.00 (3.26)	33.71 (5.47)	77.67 (7.08)
American Indian	1990	101	0.21 (*)	6.25 (2.56)	41.91 (5.18)
	1996	83	0.63 (*)	10.16 (3.72)	46.00 (6.68)
Pennsylvania					
White	1990	2112	2.19 (0.41)	19.61 (1.34)	63.10 (1.55)
	1992	2152	3.16 (0.62)	24.20 (1.52)	68.17 (1.39)
Black	1990	250	0.00 (*)	2.83 (1.30)	21.81 (4.35)
	1992	293	0.11 (*)	4.52 (2.53)	23.63 (3.86)
Hispanic	1990	106	0.00 (*)	3.07 (1.96)	13.58 (3.50)
	1992	89	0.00 (*)	5.56 (3.37)	32.71 (5.45)
Rhode Island total	1990	2675	1.6 (0.3)	14.5 (0.7)	48.8 (1.0)
	1992	2120	1.4 (0.3)	15.7 (1.1)	56.4 (1.2)‡
	1996	2055	2.5 (0.4)	20.4 (1.3)†‡	59.9 (1.6)‡
White	1990	2241	1.93 (0.39)	16.88 (0.85)	54.96 (1.20)
	1992	1706	1.76 (0.38)	18.36 (1.30)	62.66 (1.38)
	1996	1662	3.06 (0.55)	24.11 (1.53)	67.28 (1.64)
Black	1990	114	0.00 (*)	1.72 (1.05)	14.37 (3.49)
	1992	129	0.00 (*)	2.35 (*)	28.23 (4.33)
	1996	100	0.18 (*)	6.79 (3.57)	30.70 (5.03)
Hispanic	1990	207	0.00 (*)	1.57 (0.70)	15.05 (3.24)
	1992	183	0.06 (*)	2.06 (0.94)	17.90 (4.15)
	1996	191	0.53 (*)	3.81 (1.41)	27.25 (5.77)
Asian/Pacific Islander	1992	64	0.65 (*)	13.90 (3.30)	59.27 (5.38)
	1996	67	1.42 (*)	17.59 (5.53)	56.19 (7.31)

Exhibit 28. 1990, 1992, 1996 Mathematics NAEP, Grade 8 (continued)

Population	Year	N	At or Above Advanced	At or Above Proficient	At or Above Basic
South Carolina total	1992	2625	1.7 (0.5)	14.9 (1.0)	47.8 (1.3)
	1996	2143	1.9 (0.4)	13.7 (1.2)	48.2 (1.7)
White	1992	1505	2.80 (0.75)	23.10 (1.60)	64.24 (1.47)
	1996	1142	3.12 (0.59)	21.97 (2.06)	64.85 (2.31)
Black	1992	921	0.00 (*)	2.60 (0.59)	24.54 (1.38)
	1996	853	0.21 (*)	3.45 (0.62)	28.44 (1.88)
Hispanic	1992	146	0.00 (*)	1.73 (*)	15.21 (2.92)
	1996	87	0.18 (*)	4.17 (2.91)	25.79 (5.57)
Tennessee total	1992	2485	1.0 (0.4)	11.6 (1.0)	46.8 (1.9)
	1996	2300	1.8 (0.3)	15.1 (1.3)	53.0 (1.8)
White	1992	1869	1.33 (0.51)	14.57 (1.22)	55.95 (1.70)
	1996	1784	2.18 (0.39)	18.15 (1.51)	61.65 (2.15)
Black	1992	513	0.00 (*)	2.05 (0.77)	16.72 (2.70)
	1996	419	0.04 (*)	3.32 (1.22)	19.16 (2.91)
Hispanic	1992	66	0.00 (*)	1.65 (*)	18.18 (5.39)
	1996	63	0.27 (*)	5.83 (2.68)	31.72 (8.03)
Texas total	1990	2542	1.6 (0.3)	12.7 (1.1)	45.5 (1.6)
	1992	2614	3.2 (0.6)	18.1 (1.2)‡	52.7 (1.5)‡
	1996	2245	2.7 (0.4)	20.9 (1.5)‡	59.4 (1.8)†‡
White	1990	1175	2.88 (0.56)	20.91 (1.81)	63.68 (1.98)
	1992	1262	4.63 (0.90)	27.50 (1.83)	71.40 (1.99)
	1996	1078	4.10 (0.73)	33.03 (1.76)	78.34 (1.70)
Black	1990	358	0.17 (*)	1.85 (1.10)	17.82 (2.26)
	1992	299	0.05 (*)	4.81 (1.36)	28.15 (2.97)
	1996	275	0.53 (0.23)	4.71 (1.73)	31.39 (4.27)
Hispanic	1990	926	0.24 (*)	4.38 (0.99)	29.48 (1.92)
	1992	947	0.45 (*)	6.79 (1.03)	33.43 (1.65)
	1996	808	0.72 (0.37)	7.69 (1.39)	41.61 (2.61)
Asian/Pacific Islander	1992	80	22.22 (7.25)	57.33 (6.95)	84.89 (4.56)
	1996	64	14.29 (5.66)	56.77 (9.97)	85.99 (5.52)
Utah total	1992	2726	2.3 (0.4)	22.3 (1.0)	66.8 (1.2)
	1996	2697	2.5 (0.4)	24.4 (1.3)	69.7 (1.5)
White	1992	2431	2.39 (0.43)	23.84 (1.19)	69.51 (1.24)
	1996	2363	2.80 (0.42)	26.62 (1.27)	72.88 (1.28)
Hispanic	1992	186	0.73 (*)	6.14 (2.57)	40.40 (4.60)
	1996	205	0.33 (*)	5.91 (1.80)	44.83 (4.44)
Asian/Pacific Islander	1996	66	2.43 (*)	23.91 (7.49)	62.17 (7.12)
Vermont total	1996	2001	3.8 (0.6)	27.4 (1.4)	71.8 (1.7)
White	1996	1875	4.04 (0.64)	28.76 (1.38)	73.93 (1.60)
Virgin Islands					
Black	1990	1026	0.11 (*)	0.82 (0.40)	8.35 (1.14)
	1992	1139	0.02 (*)	0.71 (0.37)	10.96 (1.20)
Hispanic	1990	265	0.00 (*)	0.15 (*)	3.97 (1.03)
	1992	310	0.00 (*)	0.00 (*)	3.58 (1.54)
Virginia total	1990	2661	3.7 (0.8)	17.3 (1.6)	51.6 (1.7)
	1992	2710	2.7 (0.6)	19.2 (1.1)	56.7 (1.7)
	1996	2545	3.0 (0.4)	21.1 (1.2)	58.5 (2.0)‡
White	1990	1819	4.28 (0.87)	21.23 (1.94)	60.32 (1.90)
	1992	1877	3.49 (0.79)	23.70 (1.25)	65.69 (1.60)
	1996	1698	3.95 (0.56)	27.65 (1.40)	70.72 (1.81)
Black	1990	596	0.50 (0.32)	3.94 (0.99)	26.29 (2.41)
	1992	586	0.39 (*)	4.39 (1.12)	28.69 (3.02)
	1996	604	0.07 (*)	3.57 (0.80)	25.84 (3.27)
Hispanic	1990	125	0.53 (*)	9.20 (3.52)	31.30 (4.54)
	1992	125	0.45 (*)	11.24 (3.99)	44.33 (4.40)
	1996	118	1.59 (*)	8.72 (3.40)	43.75 (7.30)
Asian/Pacific Islander	1990	94	16.12 (4.26)	41.01 (5.45)	83.05 (4.52)
	1992	106	4.07 (2.21)	32.14 (5.43)	70.59 (5.27)
	1996	99	7.03 (2.59)	37.65 (6.79)	74.19 (5.48)

Exhibit 28. 1990, 1992, 1996 Mathematics NAEP, Grade 8 (continued)

Population	Year	N	At or Above Advanced	At or Above Proficient	At or Above Basic
Washington total	1996	2434	4.0 (0.7)	26.2 (1.2)	66.9 (1.6)
White	1996	1866	4.74 (0.84)	30.15 (1.44)	74.10 (1.50)
Black	1996	102	0.16 (*)	4.78 (2.69)	27.37 (5.41)
Hispanic	1996	214	0.41 (0.29)	10.32 (2.85)	36.03 (4.50)
Asian/Pacific Islander	1996	145	4.96 (2.44)	28.77 (4.81)	66.45 (6.03)
American Indian	1996	98	0.20 (*)	6.81 (2.60)	44.65 (6.46)
West Virginia total	1990	2600	0.9 (0.2)	9.3 (0.8)	41.8 (1.1)
	1992	2690	0.6 (0.2)	9.8 (0.8)	46.8 (1.6)
	1996	2578	1.2 (0.4)	13.8 (0.9)†‡	53.8 (1.6)†‡
White	1990	2333	0.98 (0.25)	9.68 (0.82)	43.68 (1.08)
	1992	2443	0.64 (0.23)	10.24 (0.83)	48.67 (1.58)
	1996	2371	1.30 (0.42)	14.56 (0.92)	55.57 (1.65)
Black	1990	85	0.00 (*)	2.50 (*)	17.50 (6.05)
	1992	117	0.00 (*)	3.48 (1.79)	25.95 (5.88)
	1996	84	0.00 (*)	1.83 (*)	29.25 (6.29)
Hispanic	1990	107	0.00 (*)	3.31 (*)	18.72 (4.29)
	1992	69	0.00 (*)	1.53 (*)	15.11 (5.43)
	1996	65	0.00 (*)	7.22 (4.20)	29.92 (6.62)
Wisconsin total	1990	2750	3.1 (0.4)	23.2 (1.4)	65.7 (1.6)
	1992	2814	3.2 (0.6)	27.0 (1.4)	70.8 (2.1)
	1996	2165	5.2 (0.8)‡	31.8 (2.0)‡	75.0 (2.0)‡
White	1990	2358	3.50 (0.45)	25.92 (1.53)	72.01 (1.62)
	1992	2422	3.67 (0.71)	29.97 (1.43)	76.00 (1.62)
	1996	1793	6.07 (0.86)	36.25 (1.97)	81.61 (1.66)
Black	1990	197	0.00 (*)	3.25 (1.76)	19.82 (5.10)
	1992	179	0.30 (0.18)	8.05 (5.55)	31.75 (9.37)
	1996	173	0.00 (*)	1.61 (*)	19.15 (4.56)
Hispanic	1990	117	0.34 (*)	6.06 (2.64)	33.75 (5.64)
	1992	117	0.00 (*)	5.56 (2.09)	37.36 (7.66)
	1996	110	0.00 (*)	9.77 (2.94)	44.53 (6.10)
American Indian	1992	72	0.00 (*)	8.69 (3.42)	53.10 (12.80)
Wyoming total	1990	2701	1.7 (0.2)	18.5 (0.9)	63.7 (1.3)
	1992	2444	1.9 (0.4)	21.0 (1.1)	67.2 (1.3)
	1996	2696	2.5 (0.6)	21.6 (1.0)‡	68.3 (1.2)‡
White	1990	2313	1.88 (0.30)	20.40 (1.05)	67.25 (1.42)
	1992	2117	2.14 (0.44)	23.11 (1.12)	71.32 (1.23)
	1996	2335	2.74 (0.64)	23.78 (0.99)	72.10 (1.21)
Hispanic	1990	235	0.16 (*)	7.29 (2.84)	39.42 (3.94)
	1992	207	0.34 (*)	8.99 (2.49)	45.01 (4.48)
	1996	233	0.21 (*)	7.52 (1.62)	45.16 (4.96)
American Indian	1990	106	0.00 (*)	5.10 (2.37)	44.54 (6.69)
	1992	89	0.00 (*)	0.95 (*)	31.97 (4.39)
	1996	93	0.00 (*)	3.97 (2.54)	35.06 (7.32)

(*)Standard error estimates cannot be precisely determined.
†Significantly different from 1992
‡Significantly different from 1990
[d]DoDEA/DDESS: Department of Defense Educational Activity/Department of Defense Domestic Dependent Elementary and Secondary Schools
[b]DoDEA/DoDDS: Department of Defense Educational Activity/Department of Defense Dependent Schools (Overseas)


NATIONAL ASSESSMENT
THE NATION'S
REPORT
CARD
GOVERNING BOARD