



# Sample Questions



General Information about the Nation's Report Card<sup>™</sup> (good) ever or study (an educated guess). experience or study (an educated guess). education /éjəkáyshən/ n. 1 a the act or pre educating or being educated; systematic ins educating or being educated; systematic ins educating or being educated from this. 2 a partib the knowledge gained from this. 2 a partib the knowledge gained from this. 2 a partib the knowledge gained from this (a classical educatof or stage in education (a classical educateducation). 3 a development of character education). 3 a development of this (tro powers. b a stage in or aspect of this (tro powers. b a stage in or aspect of this (tro education for you). □□ ed-u-ca-tion-al adj. education for you). □□ ed-u-ca-tion-al adj.

> 2007 Mathematics Reading

## Grade 4



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### **National Assessment of Educational Progress**

#### 2007 Sample Questions Booklet

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### About This Sample Questions Booklet

On behalf of the National Assessment of Educational Progress (NAEP), I want to thank you for your participation in this essential measure of student achievement in America. NAEP tells us what students in our country know and can do. In the coming year, fourth-, eighth- and twelfth-graders will participate in NAEP. Fourth-graders will participate in tests for reading and mathematics.

Assessments require about 90 minutes of a student's time, and each student answers questions in only one subject. The test booklet contains 50 minutes of test questions and a brief section of background questions.

NAEP is voluntary and confidential. Answers to all student questions are confidential, and before the materials leave the school, student names are removed from all assessment materials. Individual student scores are not reported.

Results of the mathematics and reading assessments will be released in *The Nation's Report Card*<sup>™</sup> in the fall of 2007. Assessment results are widely discussed in the press and are used by policymakers, educators, and researchers to make decisions about education policy and funding.

The usefulness of the national assessment results increases when parents, educators, and policymakers are able to study the proficiencies (or scores) along with information about student experience, the school environment, and opportunities for students to learn. Included in this booklet are all of the general student background questions for reading and mathematics. The student background questions provide educators and policymakers with valuable insight into the conditions and factors that influence student learning so that decision can be made that may maximize achievement for all students. Also included in this booklet are sample questions and selected responses to help give you a better understanding of what the assessment is like.

If you have any questions or comments regarding NAEP or would like to view previous Nation's Report Cards, please visit the NAEP web site at <u>http://nces.ed.gov/nationsreportcard</u>. Also available through the website is a Questions Tool (<u>http://nces.ed.gov/nationsreportcard/itmrls</u>) which will allow you to review additional sample questions with sample answers.

> Peggy G. Carr, Associate Commissioner Education Assessment National Center for Education Statistics

NAEP is administered by NCES, a principal component of the U.S. Department of Education's Institute of Education Sciences. Policy for the assessment, including its content and standards, is set by the independent, bipartisan National Assessment Governing Board (www.nagb.org).

#### **The Mathematics Assessment**

The NAEP mathematics assessment measures students' ability to solve problems in five mathematics content strands: Number Properties and Operations; Measurement; Geometry; Data Analysis and Probability; and Algebra. Within each of these five content strands, students are asked questions that involve low, moderate, and high mathematical complexity.

The NAEP mathematics assessment includes multiple-choice questions, shortanswer constructed-response questions, and extended constructed-response questions. The extended exercises allow students to communicate their ideas and demonstrate the reasoning they used to solve problems. The short-answer and extended-response questions make up approximately 50 percent of student assessment time. The assessment also incorporates the use of calculators, rulers, and ancillary materials such as spinners and geometric shapes in some parts of the assessment, but not all.

Calculator use is permitted on approximately one-third of the test questions (four-function calculators at Grade 4). NAEP provides calculators for all students. For more information regarding the mathematics assessment framework please visit <u>http://nagb.org</u>.

Number Properties and Operations	40%
Measurement	20%
Geometry	15%
Data Analysis and Probability	10%
Algebra	15%

#### NAEP Mathematics Framework Distribution of Questions Across Content Strands

#### **Mathematics Booklet Directions**

This assessment uses many different booklets. Each booklet has different questions. Do not worry if the person next to you is working on questions that do not look like those you are working on.

Read each question carefully and answer it as well as you can. Do not spend too much time on any one question.

For some of the questions you may need to write or draw the answer. You can see how this is done in the example below.



You may be given a calculator to use for at least one part of your booklet. If you are given a calculator, you will have to decide when to use it in each section where its use is permitted. For some questions using the calculator is helpful, but for other questions the calculator may not be helpful. After each question you will be asked to indicate whether you used the calculator.

When you receive the calculator, make sure you know how to use it. There are instructions on the back cover of this booklet to help you. If the calculator does not work or if you do not know how to use it, raise your hand and ask for help.

#### **REMEMBER:**

Read each question CAREFULLY.

Fill in only ONE OVAL for each question or write your answer in the space provided.

If you change your answer, ERASE your first answer COMPLETELY.

CHECK OVER your work if you finish a section early.

Do not go past the **STOP** sign at the end of each section until you are told to do so.



#### Sample Mathematics Questions Grade 4

**1.** Each boy and girl in the class voted for his or her favorite kind of music. Here are the results.



Which kind of music did most students in the class prefer?

- Classical
- Rock
- © Country
- Other

**2.** 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?



- **3.** If both the square and the triangle above have the same perimeter, what is the length of each side of the square?

  - 5
  - © 6
  - © 7

