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To **Create** a *World* in which
Children *Love to* Learn!

Practicing for Today's Tests

Level **5** Mathematics

Table of Contents

Introduction

Today's Next Generation Tests *(cont.)*

What's Different about Today's Standards? *(cont.)*

This overview illustrates key mathematics concepts and thinking skills associated with each of the content strands. It deconstructs the critical understandings of the strands to identify the important "what" (concepts) and "how" (thinking skills) for teachers and students. Notice the repeated use of several higher-level thinking skills in many different content strands.

| Strand	Key Concepts		Key Thinking Skills	
Operations and Algebraic Thinking	• addition • subtraction • multiplication • division • relationship between multiplication and division • multiplication and division facts within 100	• factors • multiples • numerical expressions • patterns • problems with the four operations	• analyze • explain • generate • identify • interpret • relate	• represent • solve • understand • use • write
Number and Operations in Base Ten	• place value system • multi-digit arithmetic	• properties of operations • decimals to hundredths	• generalize • perform	• understand • use
Number and Operations—Fractions	• unit fractions • fraction equivalence • fraction ordering • fraction comparison	• decimal notation for fractions • addition, subtraction, multiplication, and division of fractions	• apply • build • compare	• extend • understand • use
Measurement and Data	• time • liquid measures • volume • relationship of volume to multiplication and addition • masses of objects • conversion of measurements • data	• area • relationship of area to multiplication and addition • perimeter • linear vs. area measures • angle measures	• convert • distinguish • estimate • interpret • recognize	• relate • represent • solve • understand
Geometry	• shapes • attributes/properties • lines • angles • coordinate plane		• analyze • classify • compare • describe • draw	• graph • identify • reason • solve

(National Governors Association 2010; Van de Walle, Karp, Lovin, and Bay-Williams 2014)

Making It Meaningful

This section has been included to make this book's test practice more meaningful. The purpose of this section is to provide sample guiding questions framed around a specific practice exercise. This will serve as a meaningful and real-life application of test practice. Each guiding question focuses on strands of mathematics as well as test-taking strategies. The making-it-meaningful questions may be used with students as a teacher-led think aloud or to individually assess how students are approaching and understanding complex mathematical ideas and concepts. The framework used in this model serves as a template for how to approach all the practice exercises in this product. This template supports educators in preparing students for today's tests and helps make meaning of mathematical standards used in classrooms today.

When multiple-choice questions have only one correct response, guide the students in the following way:

"After reading the problem, can you use logical reasoning to eliminate any responses that do not make sense? How do you know they cannot be correct? Cross them out. Then, reread/solve the problem and select the best solution choice."
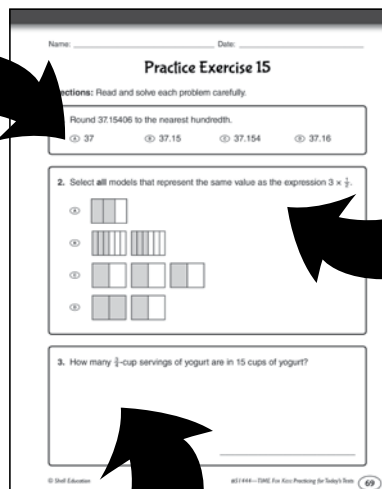
When students encounter multiple-choice questions with more than one correct solution, coach them to practice the following approach:

"Examine all your options. Make a convincing argument as to why **each one** is true or untrue."

For all problems, students should ask themselves the following questions:

"Could I explain this problem to someone else? Do I have to ask any questions in order to understand the problem better? What is my plan to solve this problem? How can I model my thinking? Is my plan working, or do I need to make adjustments? Does my solution make sense?"

Practice Exercise 2

Directions: Read and solve each problem carefully.

1. Which number makes this inequality true?

253.659 < ☐

Ⓐ 253.649

Ⓑ 253.655

Ⓒ 253.638

Ⓓ 253.664

2. Which decimal shows the quotient of 348.23 ÷ 10?

Ⓐ 3.4823

Ⓑ 34.823

Ⓒ 348.230

Ⓓ 3,482.3

3. What is the volume of the following figure?

8 inches
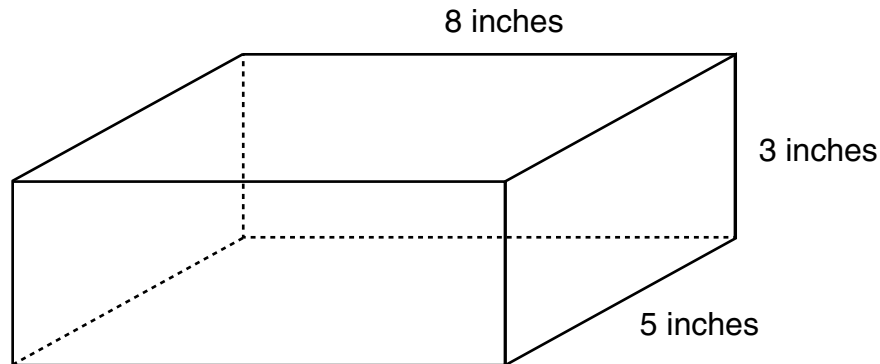
3 inches

5 inches

Ⓐ 16 cubic inches

Ⓑ 24 cubic inches

Ⓒ 40 cubic inches

Ⓓ 120 cubic inches

Practice Exercise 2 *(cont.)*

Directions: Read and solve each problem carefully.

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4. Select **all** fractions that show the difference of $9\frac{1}{3} - 2\frac{3}{4}$.

    Ⓐ $\frac{42}{12}$ Ⓓ $6\frac{5}{6}$

    Ⓑ $\frac{79}{12}$ Ⓔ $7\frac{7}{12}$

    Ⓒ $6\frac{7}{12}$ Ⓕ $7\frac{5}{6}$

---

5. Which expression shows 526.09 in expanded form?

    Ⓐ $5 \times 2 \times 6 + \frac{9}{100}$

    Ⓑ $5 \times 100 + 2 \times 10 + 6 \times 1.9$

    Ⓒ $5 \times 100 + 2 \times 10 + 6 \times 1 + \frac{9}{10}$

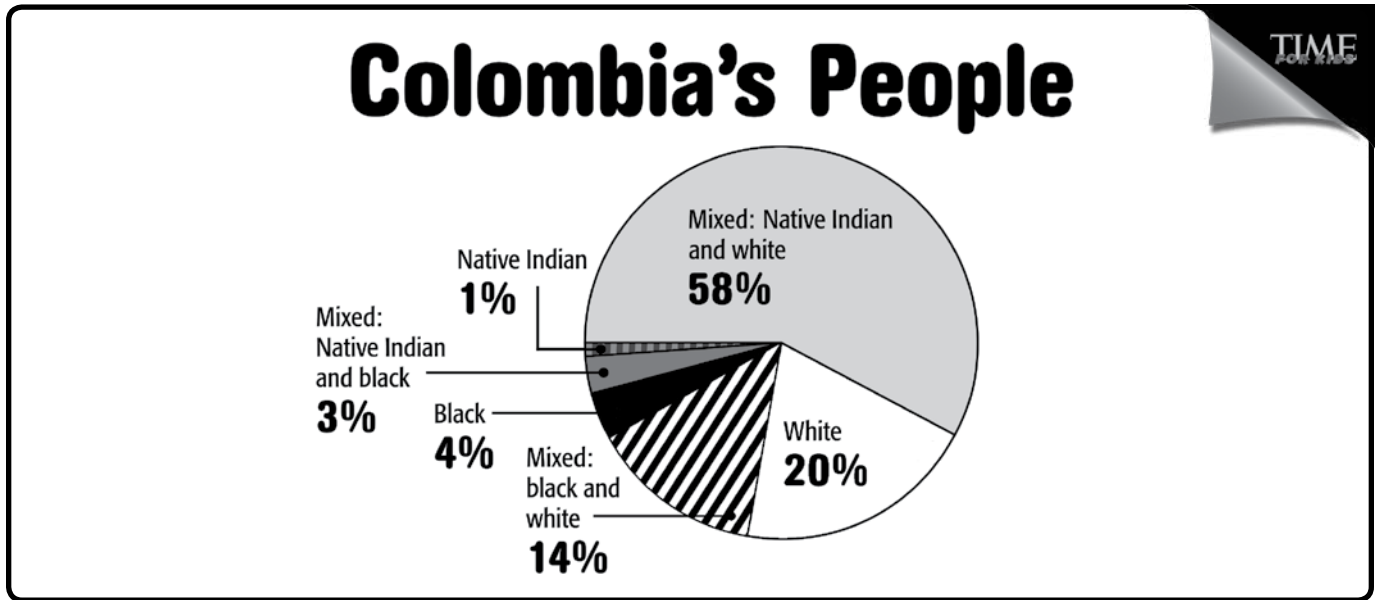   Ⓓ $5 \times 100 + 2 \times 10 + 6 \times 1 + 9 \times \left(\frac{1}{100}\right)$

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6. Jackie's science teacher is projecting an image of a worm onto a wall. The image is 12 times the size of the actual worm. The students have measured the length of the image of the worm to be 54 inches. How long is the actual worm?

_____

Name: _____ Date: _____

Practice Exercise 2 *(cont.)*

Directions: Read and solve each problem carefully.

Colombia's People

7. Use the graph to help you answer the question. Which fractions are equivalent to the percents shown in the graph? Select **all** that apply.

  Ⓐ Native Indian = $\frac{1}{10}$

  Ⓑ Native Indian = $\frac{1}{100}$

  Ⓒ Mixed: black and white = $\frac{7}{50}$

  Ⓓ Mixed: black and white = $\frac{14}{10}$

  Ⓔ Mixed: Native Indian and white = $\frac{14}{25}$

  Ⓕ Mixed: Native Indian and white = $\frac{29}{50}$

8. What fraction of Colombians are only white? Write your answer in simplest form.

_____

Name: _____ Date: _____

Practice Exercise 2 *(cont.)*

Directions: Read and solve each problem carefully.

9. Round each year's population to the nearest million. Complete the table.

The United States Population		
Year	Population	Rounded Population
2011	311,602,811	
2012	313,984,601	
2013	316,148,990	
2014	318,881,992	
2015	321,216,397	

10. Estimate the rounded population for the year 2016. Explain how you determined that estimate.

_____

_____

_____

_____

_____

11. Estimate the rounded population for the year 2020. Explain how you determined that estimate.

_____

_____

_____

_____

_____