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Practicing for Today's Tests

Level **3** Mathematics

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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.

For piggy-back problems that build on one another, direct students to:

"Look at both problems. Underline all of the information from the first problem that can help you solve the second problem. Solve the problem. Did you check your calculations?"

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 to understand the problem better? What is my plan to solve this problem? Is my plan working, or do I need to make adjustments? Does my solution make sense?"

Having the end solution for a problem can be a teaching opportunity for using reasoning. Coach students to try the following approaches:

"Plug the answer into each option. Which solution works? Which solutions do not work? Did you double check your calculations?"

Practice Exercise 2

Directions: Read and solve each problem carefully.

1. Tana has 48 books. She wants to put an equal number of books on each of the 6 shelves. The equation $48 \div ? = 6$ shows one way to find the number of books she can put on each shelf. Which equation also can be used to find how many books Tana can put on each shelf?

   Ⓐ $6 \times 48 = ?$ Ⓒ $? \times 48 = 6$

   Ⓑ $48 \times 6 = ?$ Ⓓ $6 \times ? = 48$

2. How many books should Tana put on each shelf?

   Ⓔ 6   Ⓕ 8   Ⓖ 9   Ⓗ 12

3. Does replacing the question mark with the number 3 make each equation true? Write *true* or *false* next to each equation.

Equation	True or False?
$3 \times (? + 5) = 24$	
$27 \div ? = 3$	
$36 \div (6 + ?) = 4$	
$12 \times ? = 36$	
$(9 + 4) - (6 + 1) = ?$	

Name: _____ Date: _____

Practice Exercise 2 *(cont.)*

Directions: Read and solve each problem carefully.

4. A sponge weighs 30 grams. A fork weighs 57 **more** grams. How many grams does the fork weigh?
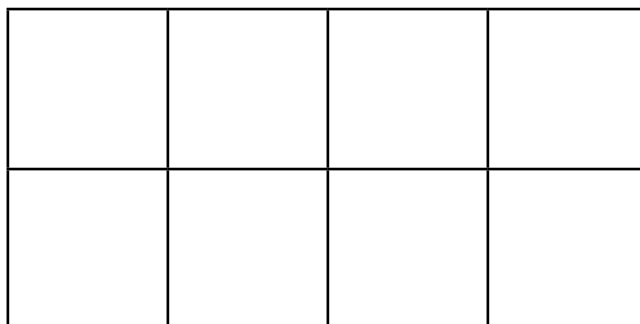
Ⓐ 27

Ⓑ 57

Ⓒ 87

Ⓓ 107

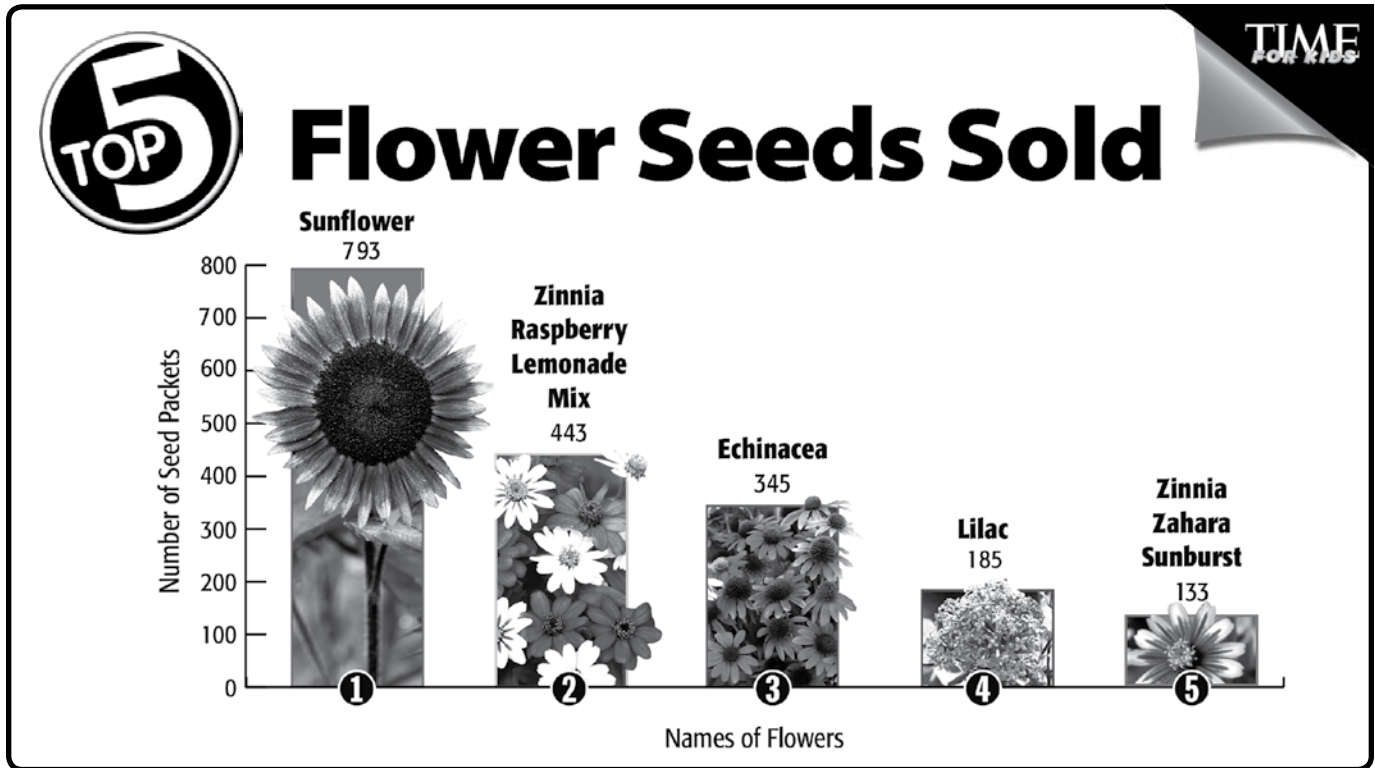**5.** Which numbers complete the pattern?

5, 12, 19, ____, 33, ____, 47

Ⓐ 25, 39

Ⓑ 25, 40

Ⓒ 26, 39

Ⓓ 26, 40

6. Shade $\frac{3}{4}$ of this figure.

Name: _____ Date: _____

Practice Exercise 2 *(cont.)*

Directions: Read and solve each problem carefully.

7. How many more echinacea seed packets need to be sold to equal the number of sunflower seed packets sold?

- (A) 345
- (B) 448
- (C) 452
- (D) 1,138

8. Including both varieties, how many zinnia seed packets have sold?

- (E) 133
- (F) 310
- (G) 443
- (H) 576

Name: _____ Date: _____

Practice Exercise 2 *(cont.)*

Directions: Read and solve each problem carefully.

9. Use the graph, *Top 5 Flower Seeds Sold,* to answer the question. About how many packets of seeds have been sold in all?

Ⓐ 1,700

Ⓑ 1,800

Ⓒ 1,900

Ⓓ 2,200

10. Lindsay is planning a garden for her community. The garden is 9 feet long and 5 feet wide. Each flower needs 1 square foot of space to grow. What is the maximum number of seeds she can plant in the garden?

_____

11. Lindsay wants to plant 5 flowers. She wants to plant the same number of seeds for each flower. Sketch and label how many seeds of each flower she should plant in the grid.

numbers of each flower _____