

A Quick-Study® Program

Book
8

TEST... READY®

– PLUS –
MATHEMATICS

- **REVIEWS**
Key Math Concepts
- **PROVIDES**
Problem-Solving Practice
- **STRENGTHENS**
Math-Reasoning Skills
- **DEVELOPS**
Test-Taking Skills
- **IMPROVES**
Math Assessment Scores

Name: _____

 CURRICULUM ASSOCIATES®, Inc.

For the Student

TEST READY® PLUS Mathematics is a problem-solving math review program that provides practice in test-taking skills. The program can be completed in fourteen days. Your teacher will provide you with directions for doing the lessons and recording the answers. Your teacher will also tell you when to begin work on each lesson part and when to stop.

It is important that you read and follow all directions. When the directions tell you to STOP, go no further. Wait for your teacher to tell you what to do. While you work on the **TEST READY PLUS Mathematics** lessons, use the **Testing Tips** below. Read these helpful tips carefully. They can make you a better test taker. After the optional Pretest, each lesson, and the Practice Test, record your results on the **Student Performance Chart** below. Your teacher will show you how to determine percentages if you need help.

Testing Tips

- Read each problem carefully.
- Note all the facts in a problem before you try to solve it.
- Determine the number of steps needed to solve the problem before you begin.
- Estimate the answer to see if you can cross out any of the multiple choices.

This **TEST READY PLUS Mathematics** book was prepared for students by Brian E. Enright and Lisa Carnell.

Student Performance Chart		
	Number Correct	Percent Correct
Lesson 1	<input type="text" value="10"/>	<input style="width: 50px;" type="text" value="%"/>
Lesson 2	<input type="text" value="10"/>	<input style="width: 50px;" type="text" value="%"/>
Lesson 3	<input type="text" value="10"/>	<input style="width: 50px;" type="text" value="%"/>
Lesson 4	<input type="text" value="10"/>	<input style="width: 50px;" type="text" value="%"/>
Lesson 5	<input type="text" value="10"/>	<input style="width: 50px;" type="text" value="%"/>
Lesson 6	<input type="text" value="10"/>	<input style="width: 50px;" type="text" value="%"/>
Lesson 7	<input type="text" value="10"/>	<input style="width: 50px;" type="text" value="%"/>
Lesson 8	<input type="text" value="10"/>	<input style="width: 50px;" type="text" value="%"/>
Lesson 9	<input type="text" value="10"/>	<input style="width: 50px;" type="text" value="%"/>
Lesson 10	<input type="text" value="10"/>	<input style="width: 50px;" type="text" value="%"/>
Average (Lessons 1–10)	<input type="text" value=""/>	<input style="width: 50px;" type="text" value="%"/>
Practice Test	<input type="text" value="50"/>	<input style="width: 50px;" type="text" value="%"/>
Pretest	<input type="text" value="50"/>	<input style="width: 50px;" type="text" value="%"/>

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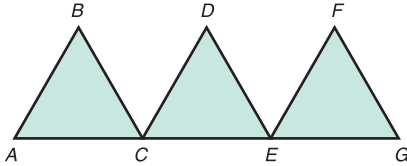
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Lesson 10



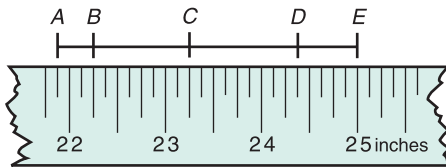
Part 1 Measurement

1. The line segments in this path are all the same length. The shortest path from A to G is A, C, E, G , a length of 36 miles. What is the distance from A to G if the path followed is A, B, C, D, E, F, G ?



- (A) 36 miles
- (B) 60 miles
- (C) 72 miles
- (D) 84 miles

2. What is the combined length of \overline{BC} and \overline{DE} ?



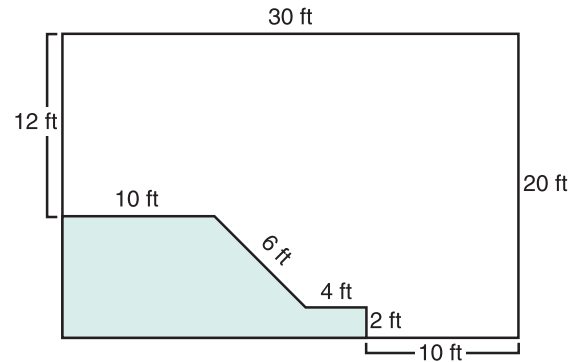
- (A) 2 inches
- (B) $1\frac{5}{8}$ inches
- (C) $3\frac{1}{4}$ inches
- (D) $1\frac{1}{2}$ inches

3. The two rectangles below have the same length, but rectangle A is twice as wide as rectangle B . Which of these is true about the area of both rectangles?



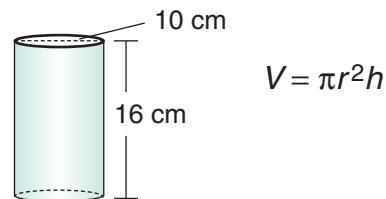
- (A) The area of A is 4 times greater than the area of B .
- (B) The area of B is $\frac{1}{4}$ the area of A .
- (C) The area of A is double the area of B .
- (D) The area of B equals the area of A .

4. Find the perimeter of the shaded part of the figure.



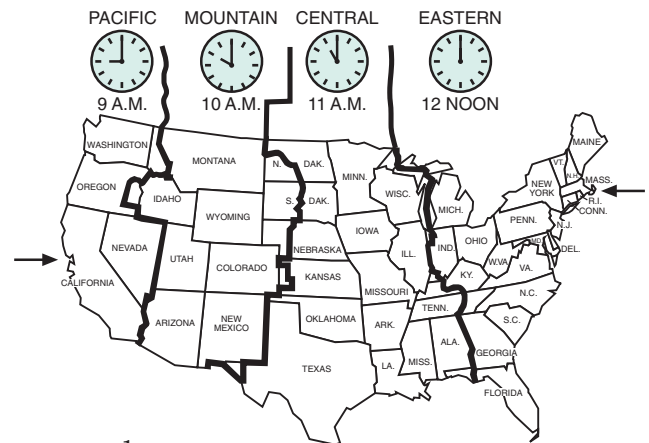
- (A) 20 ft
- (B) 42 ft
- (C) 50 ft
- (D) 60 ft

5. What is the volume of the cylinder?



- (A) 251.2 cm^3
- (B) 502.4 cm^3
- (C) $5,024 \text{ cm}^3$
- (D) $1,256 \text{ cm}^3$

6. Manuel left New York by plane at 2:00 P.M. He flew nonstop to California and arrived at 4:30 P.M. How long was his flight?



- (A) $5\frac{1}{2}$ hours
- (B) 6 hours
- (C) $2\frac{1}{2}$ hours
- (D) 4 hours

Go on to next page

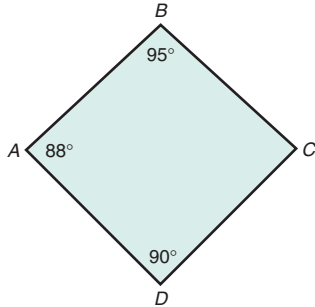


Part 2 Mixed Practice

7. If 600 blue widgets weigh 3 kilograms, how many blue widgets weigh 6,000 grams?

- (A) 1,200 blue widgets
- (B) 900 blue widgets
- (C) 600 blue widgets
- (D) 300 blue widgets

8. What is the measure of $\angle BCD$?



- (A) 80°
- (B) 87°
- (C) 90°
- (D) 95°

9. Tanya and Aaron want to find both the shortest path and the longest path around the lake. What paths should they choose?

Lake Paths

Indian Crossing	$1\frac{5}{8}$ miles
Twisted Fork	$1\frac{2}{3}$ miles
Lake's Edge	$1\frac{4}{5}$ miles
Esther's Choice	$1\frac{3}{4}$ miles

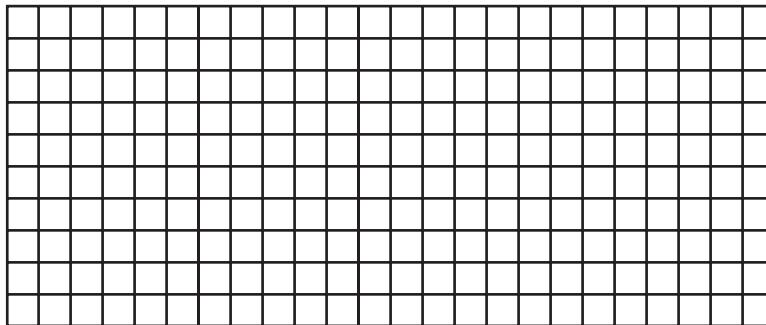
- (A) Indian Crossing and Lake's Edge
- (B) Esther's Choice and Lake's Edge
- (C) Indian Crossing and Twisted Fork
- (D) Esther's Choice and Twisted Fork

10. Ken can rent 2 videos for two nights for \$3.78, or 3 videos for two nights for \$5.07. What question can be answered using only the information given?

- (A) How much did the videos cost Ken?
- (B) How much money is saved per video by renting 3 videos rather than 2 videos?
- (C) Did Ken rent 2 or 3 videos?
- (D) How many videos did Ken watch each night?

Part 3 Math Reasoning

11. Draw a triangle and a rectangle that have the same area in square units. Explain the method you used to determine the areas.



Explanation: _____

TEACHER GUIDE

Book

8

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For the Teacher

What is **TEST READY® PLUS Mathematics**?

TEST READY PLUS Mathematics is a review program that provides practice in math test-taking skills and problem-solving strategies. This ten-level program is designed for students in grades K, 1 through 8, and Advanced. Each **TEST READY PLUS Mathematics** level is a 32-page book of ten lessons, a Practice Test, an Answer Form, and a Student Performance Chart (in Books 3 through Advanced). The optional Pretest appears in the teacher guide. Books 1 and 2 require direct teacher instruction. The scripted text for administering the lessons, the Practice Test, and the optional Pretest is included in the teacher guide.

- Lessons 1 through 10 are two-page lessons. Each lesson provides practice with eleven problems related to basic math understanding and the higher-order math thinking skills. **TEST READY PLUS Mathematics, Book 8**, presents a total of 218 math problems (including the optional Pretest).

The first page of each lesson contains six problems that focus on the concepts and application of one of six major strands of mathematics: data and probability, number sense, measurement, geometry, operations, and patterns and algebra.

The second page mixes four problems from the five other strands. The page concludes with a math-reasoning problem that represents the strand featured on the first page. Math-reasoning problems can be solved using two or more strategies and often have more than one answer.

Each math-reasoning item is presented in a problem-solving setting, is relevant to daily living, and is designed to challenge students to think and write critically.

- The reproducible optional Pretest appears in the teacher guide. It provides information about each student's math ability before beginning the program.

- The Practice Test provides practice with the concepts and strategies reviewed in each lesson. The Practice Test allows students the opportunity to simulate the test-taking experience.
- The Answer Form, on page 30 of the student book, provides students with the opportunity to record answers on a form similar to the ones used with most standardized assessments.
- The Student Performance Chart, on the inside front cover of the student book, provides students with a chart for recording their progress after they complete each of the ten lessons, the optional Pretest, and the Practice Test. The scores for the math-reasoning problems are not recorded on the chart.
- **TEST READY PLUS Mathematics, Book 8**, reviews math strategies introduced and developed in grade 8.

How does **TEST READY® PLUS Mathematics, Book 8**, correlate to major standardized and proficiency assessments?

Major standardized assessments vary in content, format, and level of difficulty. **TEST READY PLUS Mathematics** provides practice with a variety of widely used assessment formats and a broad range of grade-appropriate mathematics strategies that major standardized and proficiency assessments evaluate.

How does **TEST READY® PLUS Mathematics, Book 8**, correlate to the standard mathematics curriculum?

Problems included in each lesson of **TEST READY PLUS Mathematics** reflect the major content and skill areas that appear in the grade 8 mathematics curriculum. Mathematics items included in each lesson are based on information gathered from a review of current math programs, standardized tests, state assessments, and standards promoted by the National Council of Teachers of Mathematics.

LESSON 7

Problem 11

The digit is 5. When 2 is divided by 7, the quotient is a pattern of decimals that repeats after every sixth decimal (.285714 . . .). The fifteenth place represents 2 groups of 6 repeating digits, plus 3 additional digits. Therefore, the digit is 5, the third digit in the pattern.

LESSON 8

Problem 11

Answers will vary. The bag could contain any number of peaches and oranges as long as $\frac{5}{8}$ are peaches and $\frac{3}{8}$ are oranges. The odds are 3 out of 5 that you will pick an orange. This means that for every 8 picks, 3 picks could be oranges and 5 picks could be peaches.

LESSON 9

Problem 11

The missing number is 65. The rule used to identify the sixth number in the series is $(33 \times 2) - 1 = 65$.

LESSON 10

Problem 11

Dimensions and explanations will vary. A possible explanation is: The base of the triangle measures 6 units, and the height is 8 units; $\frac{1}{2}bh = 24$ square units. The sides of the rectangle measure 6 units by 4 units; $lw = 24$ square units.

Scope and Sequence for Book 8

Question Types	Lessons and Questions
Number Sense	1 (1–6, 8, 11); 3 (8); 4 (10); 6 (8); 7 (1–6, 11); 9 (7); PT and OP (3, 12, 17, 18, 19, 22, 23, 31, 39, 43, 51)
Operations	1 (7); 2 (1–6, 8, 11); 3 (7); 4 (7, 9); 5 (9); 6 (7); 8 (7, 8); 10 (10); PT and OP (5, 9, 10, 24, 35, 38, 50)
Patterns and Algebra	2 (7); 3 (1–6, 11); 7 (7); 9 (1–6, 11); PT and OP (8, 11, 29, 32, 34, 40, 42, 46, 48, 53, 54)
Data and Probability	
<ul style="list-style-type: none"> • Graphs, Charts, and Tables 	2 (9, 10); 3 (9, 10); 4 (1–6, 11); 6 (9, 10); 7 (9); 8 (1–6, 11); 9 (10); 10 (9); PT and OP (1, 2, 14–16, 20, 21, 26, 47)
<ul style="list-style-type: none"> • Means 	1 (10); PT and OP (7, 45)
<ul style="list-style-type: none"> • Probability 	5 (10); PT and OP (41)
Geometry	1 (9); 4 (8); 5 (1–6, 11); 7 (8); 8 (9, 10); 9 (8); 10 (8); PT and OP (6, 13, 25, 37, 52)
Measurement	
<ul style="list-style-type: none"> • Standard and Metric 	5 (8); 6 (1–3, 5, 6, 11); 7 (10); 9 (9); 10 (1–5, 7, 11); PT and OP (4, 27, 28, 33, 36, 44, 49)
<ul style="list-style-type: none"> • Time and Money 	6 (4); 10 (6); PT and OP (30)

NOTE: The boldface number in a set indicates the lesson. The numbers in parentheses indicate the questions. **PT** = Practice Test **OP** = Optional Pretest