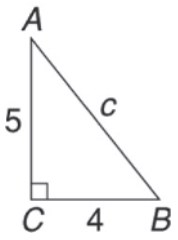
Name _____ Date _____ Class _____

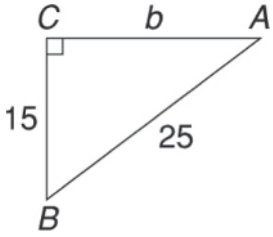
LESSON 12-1

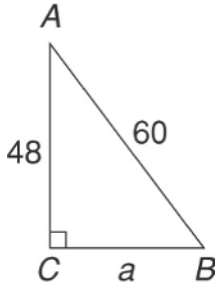
The Pythagorean Theorem

Practice and Problem Solving: A/B

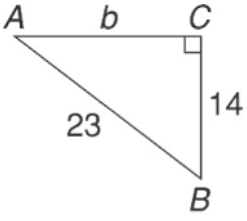
Find the missing side to the nearest tenth.

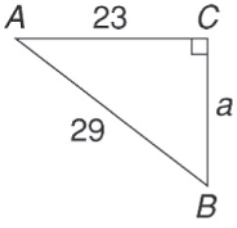
1. 

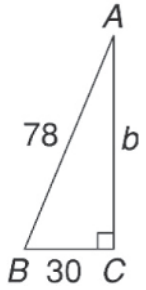
2. 

3. 

_____ _____ _____

4. 

5. 

6. 

_____ _____ _____

Solve.

7. Jane and Miguel are siblings. They go to different schools. Jane walks 6 blocks east from home. Miguel walks 8 blocks north. How many blocks apart would the two schools be if you could walk straight from one school to the other?

_____

8. The base of a rectangular box has a width of 3 inches and a length of 4 inches. The box is 12 inches tall.
   a. Draw a picture of the box below.

   b. How far is it from one of the box's top corners to the opposite corner of the base of the box?

_____

4. Both triangles contain angle D and a right angle. The triangles are similar by AA similarity.
5. a. ED b. AB
6. $\frac{x}{32} = \frac{4}{10}$; 12.8 ft

Success for English Learners

1. The angles are congruent, and the sides are proportional.
2. If two angles of one triangle are congruent to two angles of another triangle, the third angles are congruent and the triangles are similar.

MODULE 11 Challenge

1. $180 = 58 + 9n - 8 + 7n + 2$
   $180 = 52 + 16n$
   $128 = 16n$
   $8 = n$
   $9(8) - 8 = 72 - 8 = 64$
   $\angle x = 180 - 64 = 116$
   $\text{m}\angle x = 116°$
2. $\text{m}\angle x = 48°$ Angle x and the angle marked 48° are alternate interior angles, and therefore congruent.
3. $\text{m}\angle x = 35° + 45° = 80°$ Angle x is made up of two alternate interior angles. Part is an alternate interior angle to a 45° angle, and part is an alternate interior angle to a 35° angle. I can use those measures to add because the angles are congruent.
4. $\text{m}\angle x = 70° - 30° = 40°$ The angle marked 70° and the angles marked x and 30° are alternate interior angles and therefore congruent. I can subtract 30° from 70° to find the missing part, x, of the angle.

MODULE 12 The Pythagorean Theorem

LESSON 12-1

Practice and Problem Solving: A/B

1. $c = 6.4$
2. $b = 20$
3. $a = 36$
4. $b = 18.2$
5. $a = 17.7$
6. $b = 72$
7. 10 blocks
8. a. Drawings will vary, but should show a rectangular solid 12 units high with a base 3 units wide and 4 units long
   b. 13 in.

Practice and Problem Solving: C

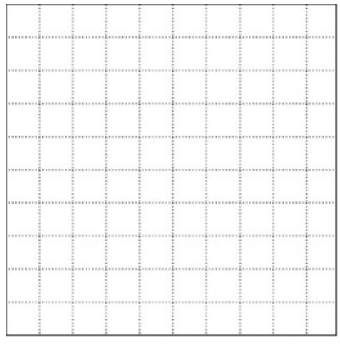
1. 1.4 in.
2. 3.5 km
3. 2.4 ft
4. 6.9
5. 16
6. 2.8
7. 17.3 m

Practice and Problem Solving: D

1. c = 15
2. c = 26
3. c = 12.5
4. 10.4 m
5. 134.2 yd
6. 6.7; 61; 7.8

Reteach

1. Drawings may vary, but should be squares of side 10. Sample:



2. $c = 17$ in.
3. $a = 10$ cm

Reading Strategies

1. side D; sides of length 6 and 12
2. the side connecting the ends of the 9 mm and 12-mm legs; sides of length 9 mm and 12 mm.