Did You Hear About . . .

1	2	3	4	5	6	7
8	9	10	11	12	13	14

?

Write the word next to each correct answer in the box that contains the exercise number (some answers are rounded).

Find the missing side length, if possible.

1

6 cm
11 cm

2

14 ft   14 ft

3

9 in.
16 in.

4

12 yd
13 yd

5

25 cm
38 cm

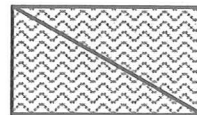**6**

0.8 mi
0.5 mi

7

15 ft   25 ft

8

40 in.   40 in.

9

100 m
70 m
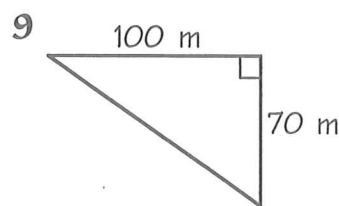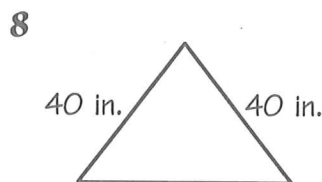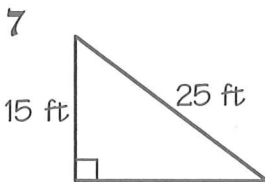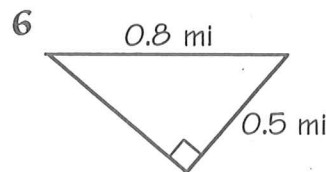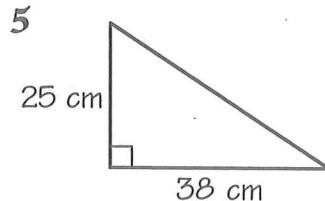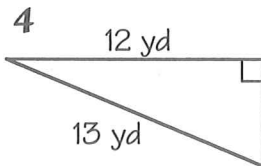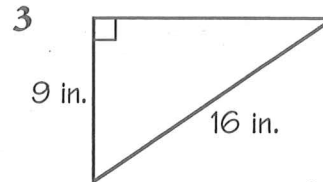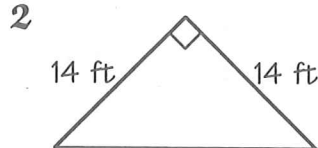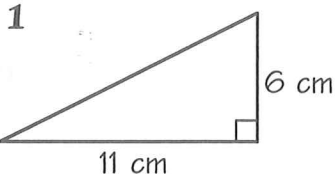
Solve.

10 Mr. Smog just bought a big-screen TV set. The screen is 48 in. wide and 27 in. high. Find the length of its diagonal.

11 An 18-foot ladder is leaned against a wall. If the base of the ladder is 7 feet from the wall, how high up on the wall does the ladder reach?

12 Hulk left home and walked 8 blocks west. Then he turned and walked 6 blocks north. If each block is 500 ft long, how far is Hulk from home?

13 Each side of an equilateral triangle measures 9 cm. Find the height, h, of the triangle.

9 cm
h
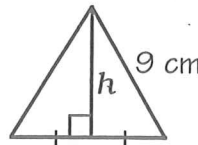
14 The lawn in front of Kermit Middle School is in the shape of a rectangle 30 yd long and 16 yd wide How much shorter is your walk if you walk diagonally across the lawn rather than along two sides of it?

12.9 in. • BOOK
0.6 mi • AROUND
55.1 in. • BY
12 yd • ROUTE
0.7 mi • FROM
6000 ft • BIGGER
5 yd • WHO
12.5 cm • THE
5000 ft • A
44.9 cm • TRIED
20 ft • A
17.2 ft • PUTTING
13.2 in. • STUDENT
122.1 m • BLOCK
56.5 in. • BECAUSE
45.5 cm • WALKED
16.6 ft • TAKING
8.3 cm • NUMBER
19.8 ft • MATH
7 yd • FIGURE
7.8 cm • SQUARE
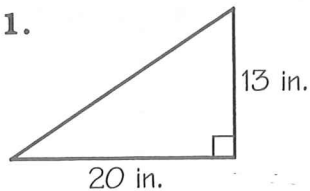121.5 m • COUNTING
not possible • CITY

Where Does the Scent of a Lady's Perfume Go?

Do each exercise and find your answer at the bottom of the page (most answers are rounded). Cross out the letter above each correct answer.
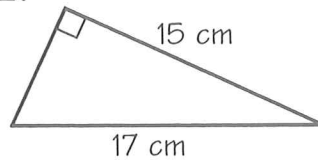
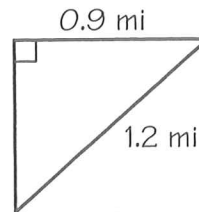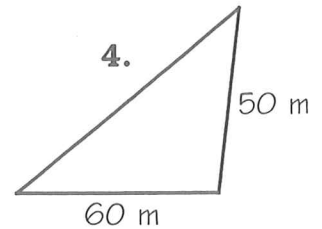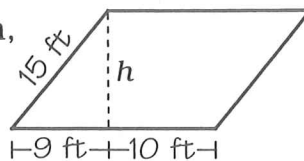**Find the missing side length, if possible.**

1.

13 in.

20 in.

2.

15 cm

17 cm

3.

0.9 mi

1.2 mi

4.

50 m

60 m

Solve.

5. For this parallelogram,
  a. Find the height.
  b. Find the area.

15 ft h

⊢9 ft⊣⊢10 ft⊣

6. These triangles are drawn on 1-cm dot paper. Find the perimeter of each.
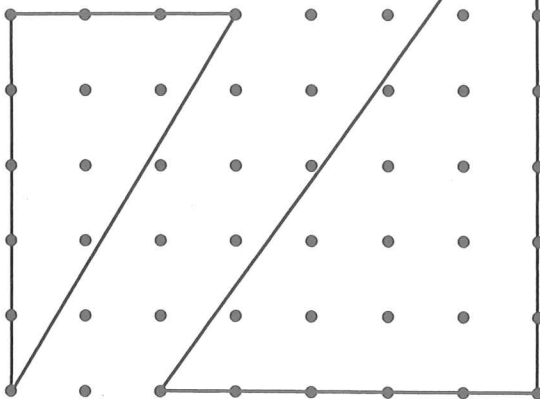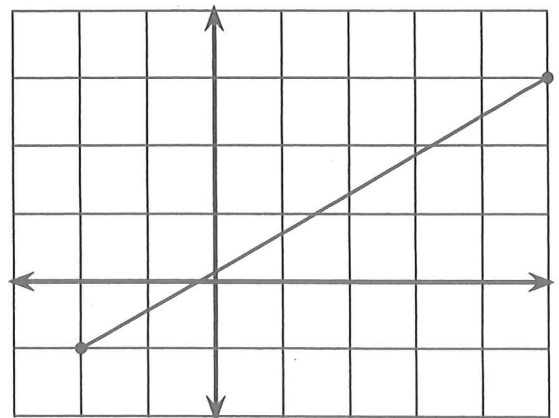
a.
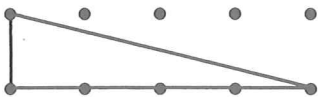
b.

c.

7. A 50-ft cable is stretched from the top of an antenna to an anchor point on the ground 15 ft from the base of the antenna. How tall is the antenna?

8. In a rectangular coordinate system, what is the distance from $(-2, -1)$ to $(5, 3)$?

9. A lifeguard spots a drowning swimmer 40 ft from the beach. She runs 90 ft along the beach at a speed of 15 ft/s, then jumps in the water and swims straight to the swimmer at a speed of 5 ft/s. How long does it take her to reach the swimmer?

90 ft   30 ft

lifeguard

40 ft

swimmer
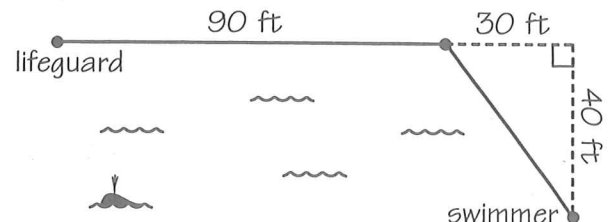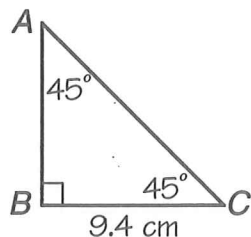
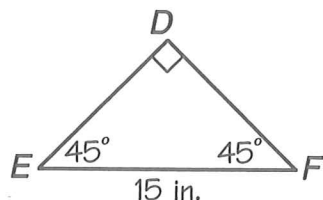| G	O	N	E	T	O	O	S	N	C	E	N	T	G	O	L	E	S	T	E	D
47.7 ft	12 ft	8.4	13.8 cm	16 s	11.4 cm	10.5 ft	228 ft^2	18 s	0.8 mi	21.4 cm	46.9 ft	8.1	23.9 in.	0.6 mi	20.6 cm	not possible	275 ft^2	8 cm	24.2 in.	9.1 cm

Why Did the Tennis Player Decide to Get Glasses?
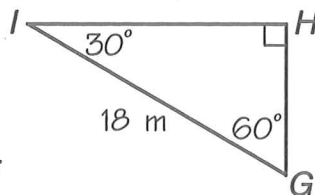
Find the length indicated for each exercise (some answers are rounded).
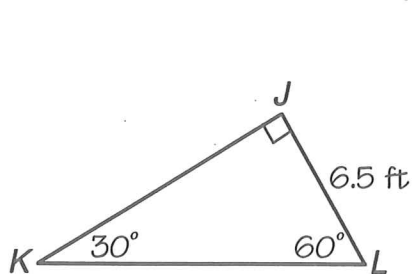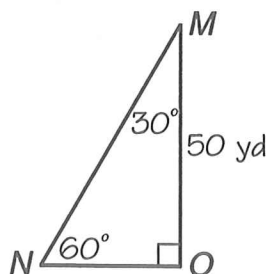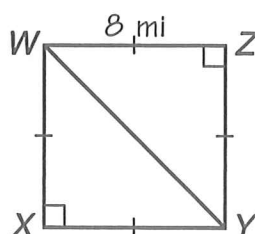Write the letter of the answer in the box containing the exercise number.

Triangle ABC: 45° at A, 45° at C, right angle at B, BC = 9.4 cm
1. AB =
2. CA =

Triangle DEF: right angle at D, 45° at E, 45° at F, EF = 15 in.
3. DE = FD =

Triangle IHG: 30° at I, right angle at H, 60° at G, IG = 18 m
4. GH =
5. HI =

Triangle JKL: right angle at J, 30° at K, 60° at L, JL = 6.5 ft
6. KL =
7. JK =

Triangle MNO: 30° at M, 60° at N, right angle at O, MN = 50 yd
8. NO =
9. MN =

Square WXYZ: WZ = 8 mi
10. WY =

Answers 1-9
- T 62.2 yd
- E 13 ft
- F 31.1 yd
- O 13.3 cm
- L 57.8 yd
- U 11.5 ft
- S 15.6 m
- V 11.2 in.
- E 9.4 cm
- I 11.3 ft
- K 13.8 cm
- N 9 m
- H 28.9 yd
- M 15.2 m
- A 10.6 in.

Answers 10-18
- W 12.5 cm
- T 23.5 ft
- S 34.6 ft
- N 9.2 m
- G 11.3 mi
- E 79.2 ft
- I 6.2 in.
- U 15.6 ft
- H 12.2 cm
- S 9.6 m
- B 21.2 ft
- R 81.5 ft
- D 1.6 mi
- E 6.5 in.
- Y 2.1 mi

11. In a 45°–45° right triangle, the length of a leg is 4.6 in. How long is the hypotenuse?

12. In a 45°–45° right triangle, the length of the hypotenuse is 22 ft. How long is a leg of the triangle?

13. In a 30°–60° right triangle, the length of the side opposite the 30° angle is 7.2 cm. How long is the side opposite the 60° angle?

14. In a 30°–60° right triangle, the length of the side opposite the 60° angle is 8.3 m. How long is the hypotenuse?

15. The bases of a softball diamond are 56 ft apart. How far is it from home plate to second base? (56 ft)

16. A hillside is inclined at an angle of 30° with the horizontal. How much elevation has Scott gained after hiking 3.2 mi up the hill?

17. A 40-ft cable extends from the top of an electrical tower to the ground. If the cable forms a 60° angle with the ground, how tall is the tower?

18. A 30-ft waterslide forms a 45° angle with the surface of the water. How high is the top of the slide? (30 ft, 45°)
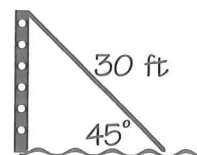
8	11	13	3	5	17	1	15	7	4	10	16	2	12	18	9	6	14