Name ______________________ Class ______________ Date ______________

Practice 1-6

Converse of the Pythagorean Theorem

Is it possible to construct a triangle with the given side lengths? Explain.

1. 2 yd, 3 yd, 7 yd

2. 4 cm, 4 cm, 8 cm

3. 12 ft, 14 ft, 15 ft

4. 5.4 m, 8.6 m, 13 m

5. $\frac{4}{5}$ in., $3\frac{2}{5}$ in., 4 in.

6. 18 mm, 25 mm, 52 mm

Determine whether the given lengths can be side lengths of a right triangle. Explain.

7. 6 ft, 10 ft, 12 ft

8. 10 in., 24 in., 26 in.

9. 20 m, 21 m, 29 m

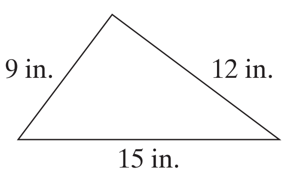
10. 15 cm, 17 cm, 21 cm

11. 14 ft, 22.5 ft, 26.5 ft

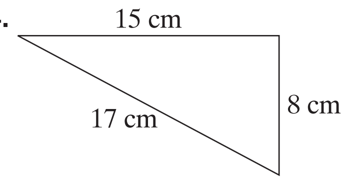
12. 12 yd, 35 yd, 38 yd

Determine whether the triangles are right triangles. Explain.

13.



14.



15. A company is designing a new logo in the shape of a triangle. Two of the sides each measure 2 cm. Which of the following is a possible measure for the third side: 3 cm, 4 cm, 5 cm?

16. Three nature trails intersect to form a triangle around a park. The lengths of the trails are 2.8 mi, 3.2 mi, and 4.1 mi. Do the trails form a right triangle? Explain.

17. The sides of a triangular game board are 1 ft, 1 ft, and $\sqrt{2}$ ft in length. Is the game board in the shape of a right triangle? Explain.

18. How do you know that the lengths 6 in., 8 in., and 25 in. cannot form a right triangle without using the Converse of the Pythagorean Theorem?