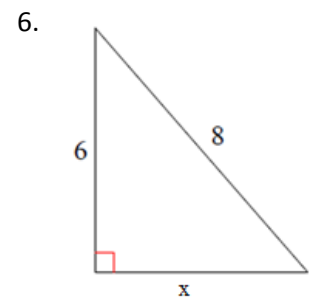
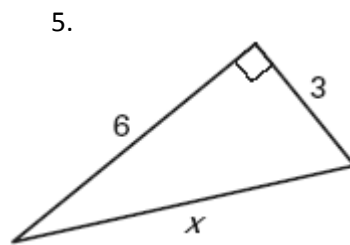
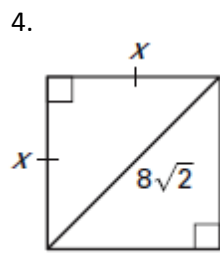
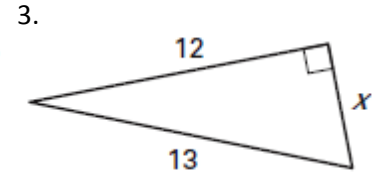
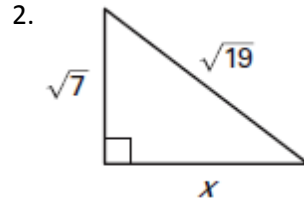
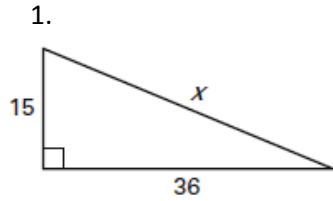


Geometry A
Section 7.1 Homework

Name: _____
Date: _____ Period: _____



Two sides of a right triangle are given. Please find all of the possible lengths for the missing side and state whether the missing side is a leg or a hypotenuse. (Hint : Sketch a picture for each scenario)

7. 8 and 12

8. 6 and 12

Answer the following questions. It may be helpful to draw a diagram.

9. Tom is afraid of heights above 9 feet. He is asked to repair the side of a high deck. The base of the ladder must be placed 6 feet from the deck, and the ladder is 10 feet long. How far above the ground does the ladder touch the deck? Should Tom be afraid of how high he is off the ground?

10. How long is a string reaching from the top of a 20-foot pole to a point on the ground that is 10 feet from the bottom of the pole? Round to the nearest tenth of a foot.

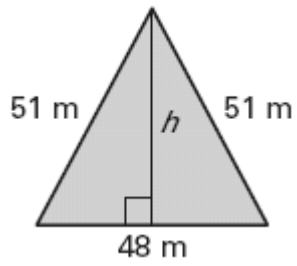
11. To avoid a large, shallow reef, a ship set a course from point A and traveled 9 miles east to point B. The ship then turned and traveled 18 miles south to point C. If the ship could have traveled in a straight line from point A to point C, how many LESS miles would the ship have traveled? Round your answer to the nearest tenth of a mile.

12. A soccer field is a rectangle that is 90 meters wide and 120 meters long. The coach asks players to run from one corner to the corner diagonally across and back again. What is the distance the players must run?

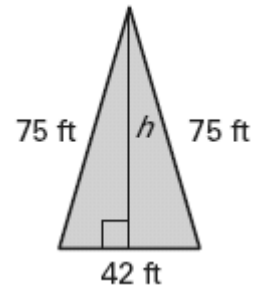
13. A baseball diamond is in the shape of a square. The distance between consecutive bases is 90 feet. How far would a catcher have to throw the ball from home plate to second base?

Find the area of the isosceles triangle.

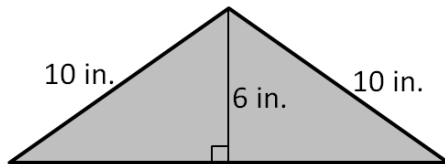
14.



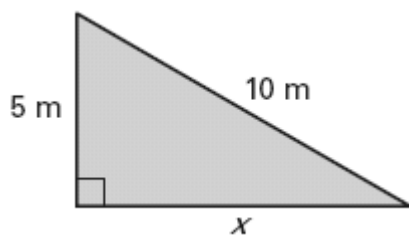
15.



16.



17. Find the area and perimeter of the right triangle. Write your answer in simplest radical form.



Answer Key:

1. 39

2. $2\sqrt{3}$

3. 5

4. 8

5. $3\sqrt{5}$

6. $2\sqrt{7}$

7. $4\sqrt{13}$; hypotenuse, $4\sqrt{5}$; leg

8. $6\sqrt{5}$; hypotenuse, $6\sqrt{3}$; leg

9. 8 feet, no

10. 22.4 feet

11. 6.9 miles

12. 300 meters

13. 127.3 feet

14. 1080 feet²

15. 1512 feet²

16. 48 inches²

17. $P = 15 + 5\sqrt{3}$ m; $A = \frac{25\sqrt{3}}{2}$ meters²