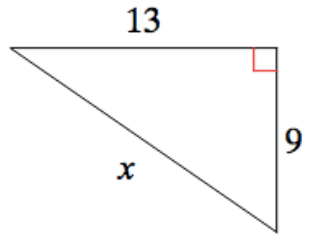


LEVEL: EMERGING

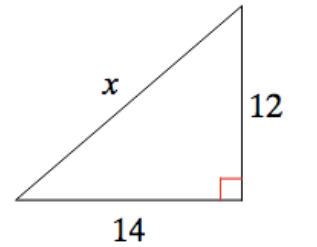
Directions: Find the length of the missing side. Round all answers to two decimal places.

1)



$x = \underline{\hspace{2cm}}$

2)



$x = \underline{\hspace{2cm}}$

3) $a = 7, b = 8, c = ?$

$c = \underline{\hspace{2cm}}$

4) $b = 5\sqrt{2}, c = \sqrt{66}$

$a = \underline{\hspace{2cm}}$

LEVEL: PROFICIENT

Directions: A new Pythagorean triple can be formed from the given sides. Find two other sets.

5) 15, 36, 39

Set #1: _____

Set #2: _____

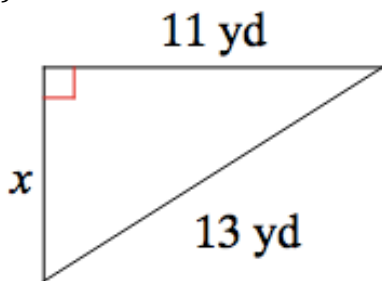
6) 21, 72, 75

Set #1: _____

Set #2: _____

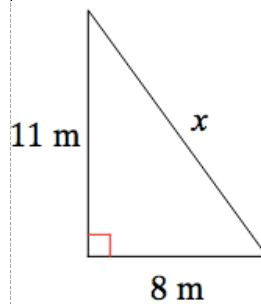
Directions: Find the value of x . Round to two decimal places. Then find the area and the perimeter of the triangle. ($A = \frac{1}{2}b \cdot h$).

7)



$x = \underline{\hspace{2cm}}$ Area: _____ Perimeter: _____

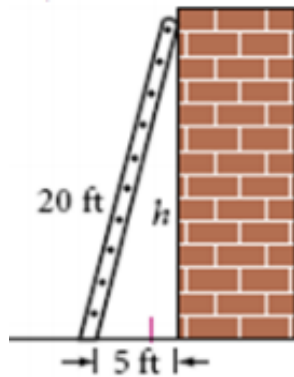
8)



$x = \underline{\hspace{2cm}}$ Area: _____ Perimeter: _____

Directions: Round all answers to two decimal places.

9) A 20-foot ladder is leaning against a wall. If the base of the ladder is 5 feet away from the wall, how high up the wall does the ladder reach?



$h =$ _____

10) An isosceles triangle has sides of 15 cm. The base is 10 cm long. What is the area of the triangle?

Area: _____

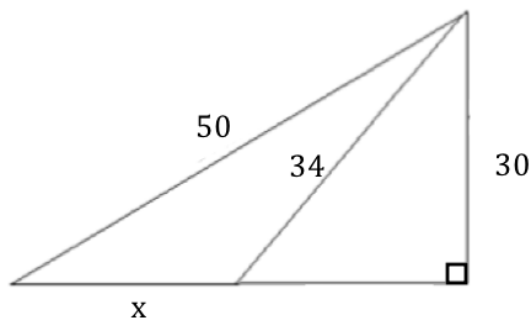
11) A soccer field has dimensions of 124 meters by 72 meters. The coach asks the players to run from one corner diagonally across the field. If the team runs at 8 m/s, how long will it take them to get to the other corner?

Answer: _____

12) A car drives 50 miles east and 40 miles due south. If the car is travelling an average speed of 45 mph, about how much less time would the person travel going directly southeast?

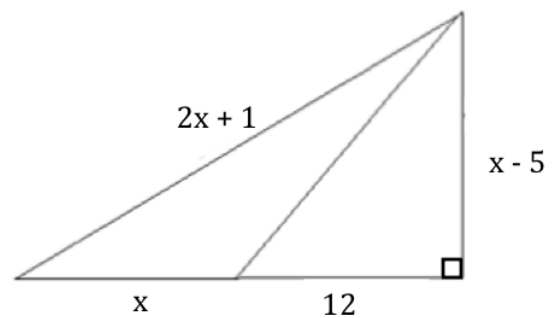
Answer: _____

13) Solve for x.



$x =$ _____

14) Solve for x.



$x =$ _____