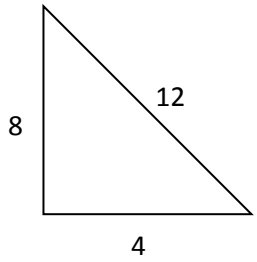
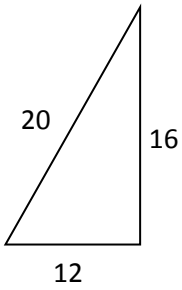
NAME _____ Date: _____

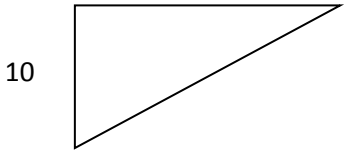
1. Are these right triangles? Use the Pythagorean Theorem ($a^2 + b^2 = c^2$) to justify your response.



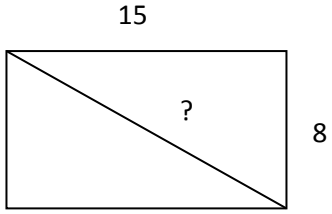


Use the Pythagorean Theorem to find the length of the Hypotenuse. Round to the nearest tenth if necessary.

(2)

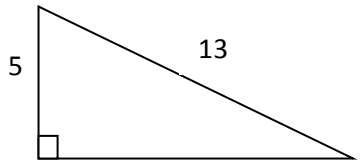


(3)

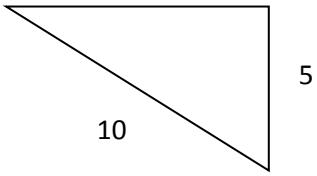


Use the Pythagorean Theorem to find the length of the missing leg. Round to the nearest tenth if necessary.

(4)



(5)



(6) Determine if the following sides form a right triangle. (Use $a^2 + b^2 = c^2$. Remember your c has to be the largest of the three numbers).

a) 6 in, 8 in, 12 in

b) 0.75 in, 0.4 in, 0.85 in

For all word problems below, you must draw a diagram and use Pythagorean Theorem to answer the question.

(7) The hypotenuse of a right triangle is 38 meters long, and one of its legs is 15 meters long. Find the length of the other leg to the nearest tenth.

Draw Diagram:

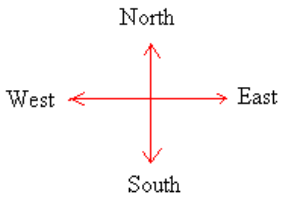
(8) A ladder 8 m long is resting against a building. The bottom of the ladder is 3 m from the wall. To the nearest tenth, how far up the wall does the ladder reach?

Draw Diagram:

(9) The sides of a rectangle are 5 cm and 8 cm. To the *nearest tenth*, what is the length of the diagonal?

Draw Diagram:

(10) George rides his bike 9 KM south and then 12 KM east. How far is he from his starting point?



Draw Diagram:

(11) ramp was constructed to load a truck. The bottom of the ramp is 12 feet long, and the actual incline of the ramp is 15 feet long. How tall is the ramp?

Draw Diagram:

(12) A kite is attached to a wooden stake in the ground. The string of a kite is 24 feet. The kite is located 18 feet from the ground directly over the boy and the distance from the stake to the boy is 12 feet. Is this a right triangle?

Draw Diagram:

(13)A 65 inch TV is being advertised in a store. If the length is 57.2 inches, what is the height of the TV to the nearest tenth of an inch?

(14) What is the area of rectangle ABCD? (Hint: Use Pythagorean Theorem to find side BC of the rectangle. Then use the area formula for a rectangle).