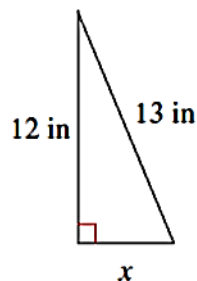


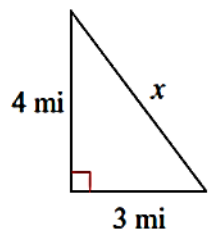
5.7 HW – The Pythagorean Theorem and Its Converse

Find the missing side of each triangle. Round your answers to the nearest tenth if necessary. State if the sides form a Pythagorean Triple.

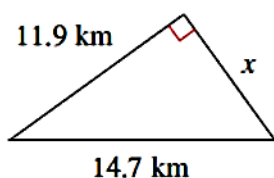
1)



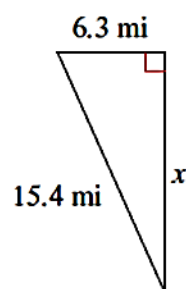
2)



3)

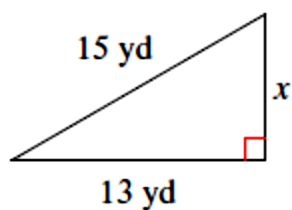


4)

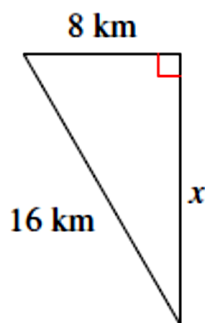


Find the missing side of each triangle. Write your answers in simplest radical form.

5)



6)



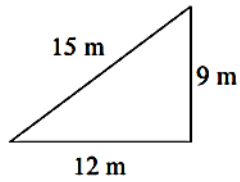
Find the missing side of each right triangle. Side c is the hypotenuse. Sides a and b are the legs. You may leave your answers in radical form.

7) $a = 11$ m, $c = 15$ m

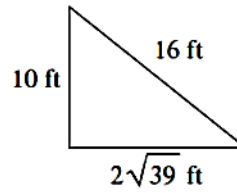
8) $b = \sqrt{6}$ yd, $c = 4$ yd

State if each triangle is a right triangle.

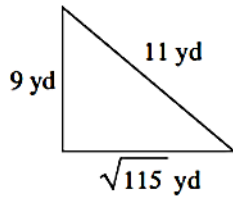
9)



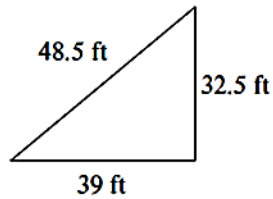
10)



11)



12)



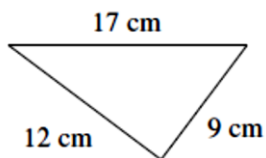
State if the three side lengths form a right triangle.

13) 10 cm, 49.5 cm, 50.5 cm

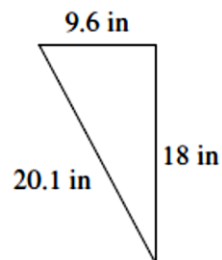
14) 9 in, 12 in, 15 in

State if each triangle is acute, obtuse, or right.

15)



16)



17) 6 mi, $2\sqrt{55}$ mi, 17 mi

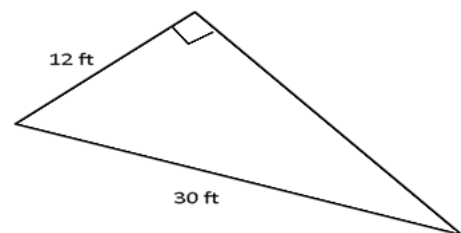
18) 4.8 km, 28.6 km, 29 km

19) Austin, San Antonio and Victoria make a right triangle on a map with the distance from Austin to Victoria being the hypotenuse. The distance from Austin to San Antonio is 74 miles, and the distance from San Antonio to Victoria is about 102 miles. Find the approximate distance from Austin to Victoria.

20) Kitty has a triangle with sides that measure 16, 8, and 13. Kitty concludes the triangle is obtuse. Is Kitty correct? Show work to back up your answer.

21) Find the area of a right triangle with a hypotenuse of 13 inches and one leg of 5 inches.

22) Allen High School hired a landscaping service to plant a row of bushes around a triangular space. If the bushes must be planted 3 feet apart, approximately how many bushes are needed for the space?



23) Which of the following could be dimensions of a right triangle? (Show work)

- a. 12, 16.8, 18.2
- b. 5.4, 10.6, 16
- c. 1.2, 1.6, 2
- d. 8, 10, 12.5

24) A flagpole has cracked 9 feet from the ground and fell as if hinged. The top of the flagpole hit the ground 12 feet from the base. How tall was the flagpole before it fell?

25) The three squares shown below are joined at their vertices to form a right triangle. What is the area of the shaded square?

