Math 99 The Pythagorean Theorem

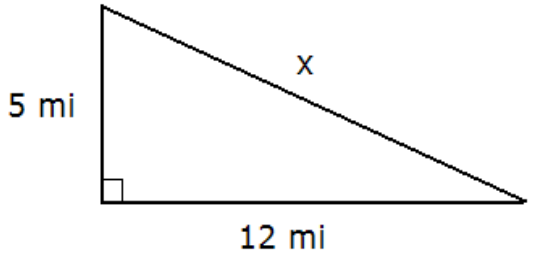
1. In case of each of the following number triples, determine if they can be the lengths of the three sides in a right triangle.

   (a) 1 cm, 2 cm, 7 cm

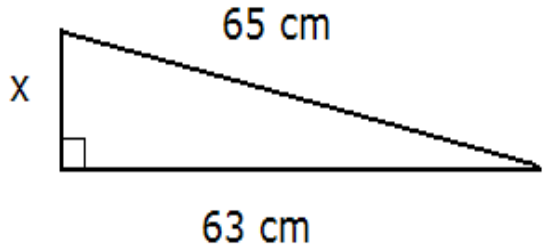
   (b) 35 ft, 37 ft, 12 ft

   (c) 4 m, 5 m, 6 m

2. Find the hypotenuse of the triangle shown on the figure below.



3. Find the missing leg of the right triangle shown on the picture below.



4. Find the length of the diagonal in a rectangle with sides 20 ft and 21 ft long.

5. Find the length of the diagonal of a square with sides 1 unit long.

6. Two sides of a right triangle are 8 cm and 17 cm long. Find the length of the missing side.

7. Find the distance between the points $(-5, -3)$ and $(-2, 1)$.

8. Find the distance between $(-9, -3)$ and $(15, 4)$.

9. One leg of a right triangle is 9 cm. The difference between the other two sides is 1 cm. Find the length of all sides.

10. The hypotenuse of a right triangle is 50 in. The difference between the other two sides is 34 in. Find the length of all sides.