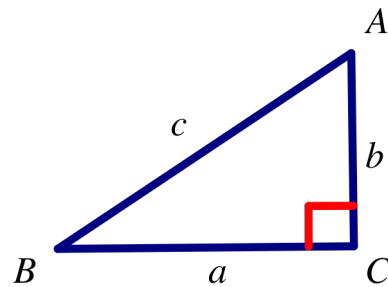# Pythagorean Theorem

The square of the hypotenuse of a right triangle is equal to the sum of the squares of the measures of the legs. $c^2 = a^2 + b^2$

Using the figure on the right to find the missing sides on 1-10.

1.   If a = 3 and b = 4, find c.

2.   If a = 5 and c = 13, find b.

3.   If b = 15 and c = 17, find a.

4.   if a = 7 and b = 25, find c.

5.   If a = 6 and b = 8, find c.

6.   If b = 2 and c = 3, find a.

7.   if a = 1 and c = 2, find b.

8.   If a = 1 and b = 1, find c.

9.   If b = 2 and c = 6, find a.

10.   If a = 10 and b = 5, find c.

11.   If a triangle has sides of length 5, 11 and 13, is it a right triangle?

12.   If a triangle has sides of length 15, 20 and 25, is it a right triangle?

13.   Find the height of an equilateral triangle whose sides measure 6 inches.

14.   Find the measure of a diagonal of a square whose side measures 4 inches.

15.   The lengths of a diagonal and a side of a rectangle are 17 and 15 inches respectively, find the width of the rectangle.