Vocabulary and Symbols

Right Triangle:

Legs of a Triangle:

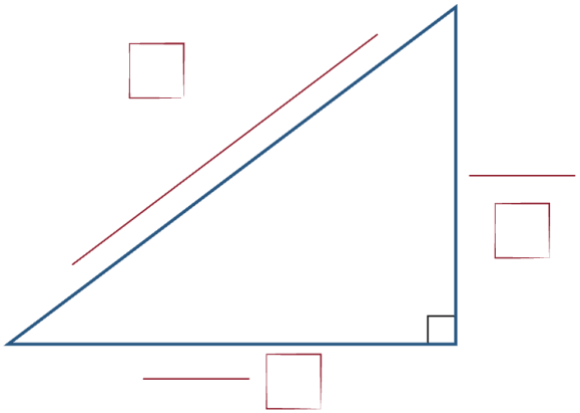
Hypotenuse:

Pythagorean Theorem:

Perfect Squares:

Square Root Symbol:

PYTHAGOREAN THEOREM



What's the relationship between a^2, b^2, and c^2?

Am I Right?

Determine if the following triangles are right triangles using the given sides.

1) $a = 6$ ft. $a^2 =$ _____

$b = 8$ ft. $b^2 =$ _____

$c = 10$ ft. $c^2 =$ _____

Does $a^2 + b^2 = c^2$? Yes / No

Is this a right triangle? Yes / No

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2) $a = 7$ in. $a^2 =$ _____

$b = 8$ in. $b^2 =$ _____

$c = 12$ in. $c^2 =$ _____

Does $a^2 + b^2 = c^2$? Yes / No

Is this a right triangle? Yes / No

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3) A triangle has sides that are 15 m, 12 m, and 9 m long.

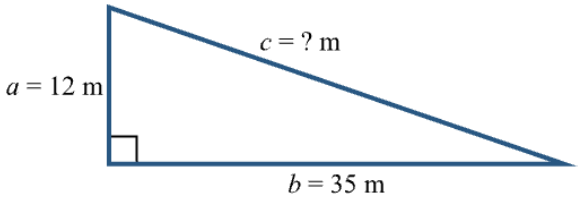
Does $a^2 + b^2 = c^2$? Yes / No

Is this a right triangle? Yes / No

What's My Hypotenuse?

Find the missing side length.

4) Find the length of c, in meters.



Set up the Pythagorean Theorem:

$$a^2 + b^2 = c^2$$
$$(\quad)^2 + (\quad)^2 = c^2$$
$$\_\_\_\_\_ = c^2$$

If we know the value of c^2, then we can use the square root of c^2 to find c.

$\sqrt{c^2} =$ _____, and this is the value of c.

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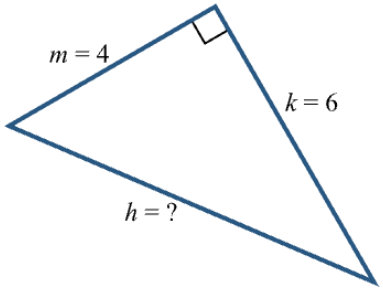
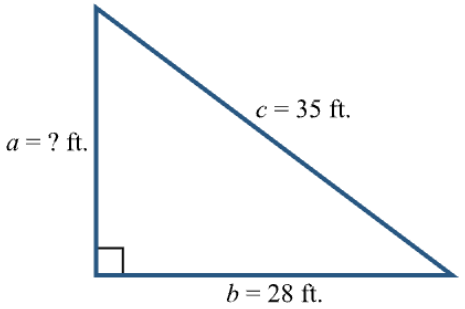
5) Find the length of h.



What's My Leg Length?

Find the missing side length.

6) Find the length of a.



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7) Find the length of y.