FUN - YES, FUN - WITH THE PYTHAGOREAN THEOREM!

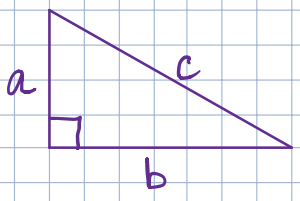
Pythagoras was a Greek mathematician over a thousand years ago. (He's dead.)

He studied right triangles and developed a formula that could be used to find a missing side *if* you knew the other two.

So: ① Right triangles only.

② You need to know the lengths of 2 sides to find the third.

Here's how it works:

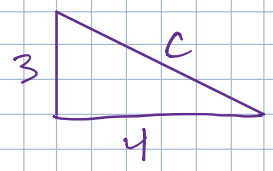


$a^2 + b^2 = c^2$ ← The formula!

- Notice that a and b are legs of the triangle.
- Notice that c is always the long side, across from the right angle.

Like all formulas, you plug in what you know, then you solve the equation.

Example



So... $a^2+b^2=c^2$ ← plug in

So... $3^2+4^2=c^2$ ← do the exponents

$9+16=c^2$ ← add

$25=c^2$ ← Do the square root ($\sqrt{}$) to find what c equals.

$5=c$

A note about square root: It is the opposite of squaring a number.

Take a look: $3^2=9$ so $\sqrt{9}=3$

$5^2=25$ so $\sqrt{25}=5$

$8^2=64$ so $\sqrt{64}=8$

It's nice if you know the square root of a number, but if you don't, finding it is a pain in the behind - unless you have a calculator. Then it's easy!

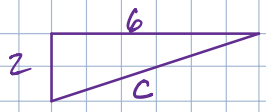
Let's say you want to find the square root of 8.

1.) Punch in [8]

2.) Punch the [√] button. Ta da! 2.828427...

So round it → 2.82 and you're good to go!

Let's do some...



$a^2+b^2=c^2$

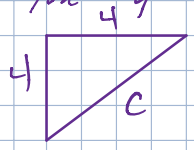
$2^2+6^2=c^2$

$4+36=c^2$

$40=c^2$

$\sqrt{40}=c$ → So $6.32=c$

You try:



$a^2+b^2=c^2$