The Pythagorean Theorem

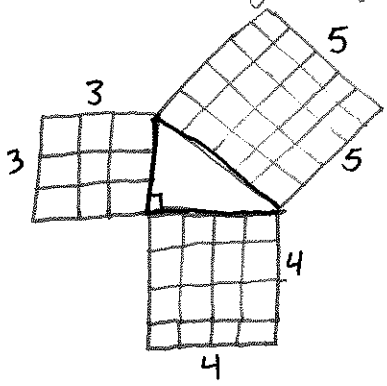
11/20/17

This is used for finding the lengths of sides of a right triangle.

* History Fact:

Pythagoras was a Greek philosopher and mathematician.
Born in 570 bce

Here is what Pythagoras discovered...

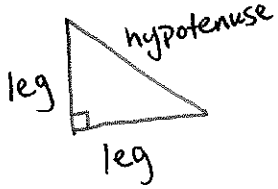


The Squares of the legs added together were equal to the area of the square of the hypotenuse.

$9 + 16 = 25$

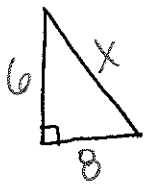
Theorem: $\boxed{a^2 + b^2 = c^2}$

a - leg
b - leg
c - hypotenuse

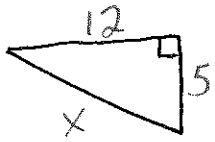


Find the value of x.

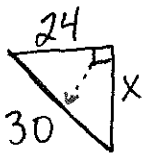
Ex 1:



Ex 2:



Ex 3:



hyp.

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

$24^2+x^2=30^2$

$576+x^2=900$

$-576 \quad -576$

$\sqrt{x^2}=\sqrt{324}$

$\boxed{x=18}$