DRILL

① $3^2 + 4^2 = ?$

$9 + 16 = \boxed{25}$

② $x^2 = 6^2 + 8^2$

$x^2 = 36 + 64$

$\sqrt{x^2} = \sqrt{100}$

$\boxed{x = 10}$

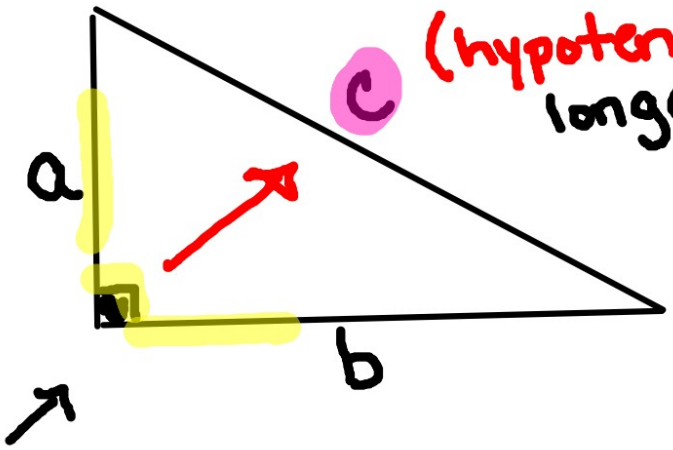
Pythagorean Theorem

(*) $a^2 + b^2 = c^2$

(Solve for x:)

Pythagorean Theorem

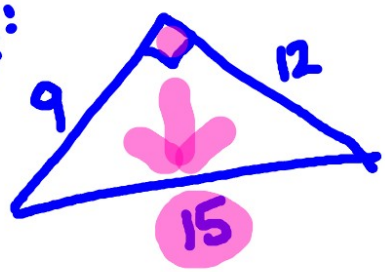
$$a^2 + b^2 = c^2$$



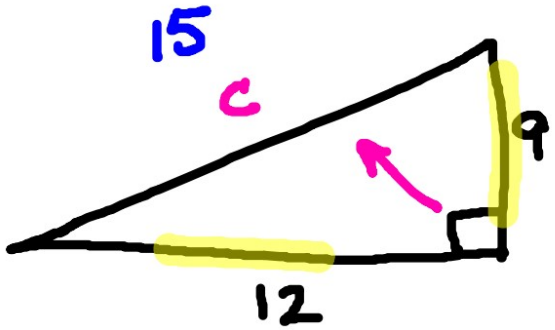
Right Angle (90°)

* Hypotenuse (c) is always across from the right angle.

Ex:



Ex:



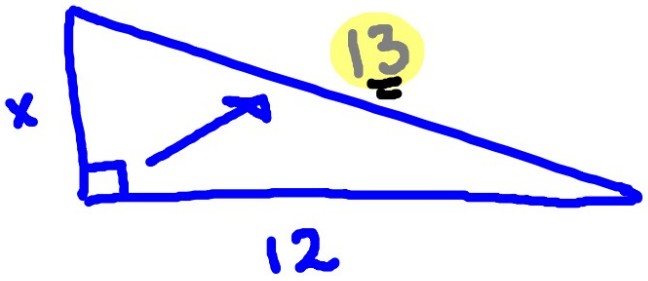
$9^2 + 12^2 = c^2$

$81 + 144 = c^2$

$\sqrt{225} = \sqrt{c^2}$

$15 = c$

Ex:



$$x^2 + 12^2 = 13^2$$

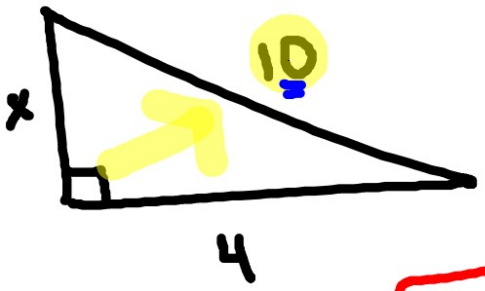
$$x^2 + 144 = 169$$

$$-144 \quad -144$$

$$\sqrt{x^2} = \sqrt{25}$$

$$x = 5$$

Ex:



4
9
16
25
36
.
.
.

$x^2 + 4^2 = 10^2$

$x^2 + 16 = 100$

$-16 \quad -16$

$\sqrt{x^2} = \sqrt{84}$

$X = \sqrt{84} \approx 9.165$

$\sqrt{84}$

$\sqrt{4}\sqrt{21}$

$2\sqrt{21}$

- Simplify in radical form $2\sqrt{21}$
- Round to 2 decimal places

(9.17)