

7.2 - Pyth. Theorem

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

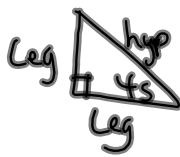
$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Right triangle?

is $a^2 + b^2 = c^2$ true?

Pyth. Triple

- Whole #'s

- Is it a RT Δ ?7.3 - Special Δ 's

$$\text{Leg} = \text{leg}$$

$$\text{hyp} = \text{leg} \cdot \sqrt{2}$$

$$\text{leg} = \frac{\text{hyp}}{\sqrt{2}}$$

Rationalize:



$$\text{leg} = \frac{6}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{6\sqrt{2}}{2} = 3\sqrt{2}$$

30-60-90 Δ 

$$\text{hyp} = \text{short} \cdot 2$$

$$\text{short} = \frac{\text{hyp}}{2}$$

$$\text{long} = \text{short} \sqrt{3}$$

$$\text{short} = \frac{\text{long}}{\sqrt{3}}$$

* Always
find the short
leg first.