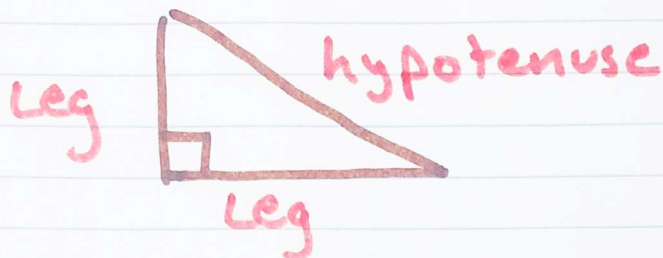


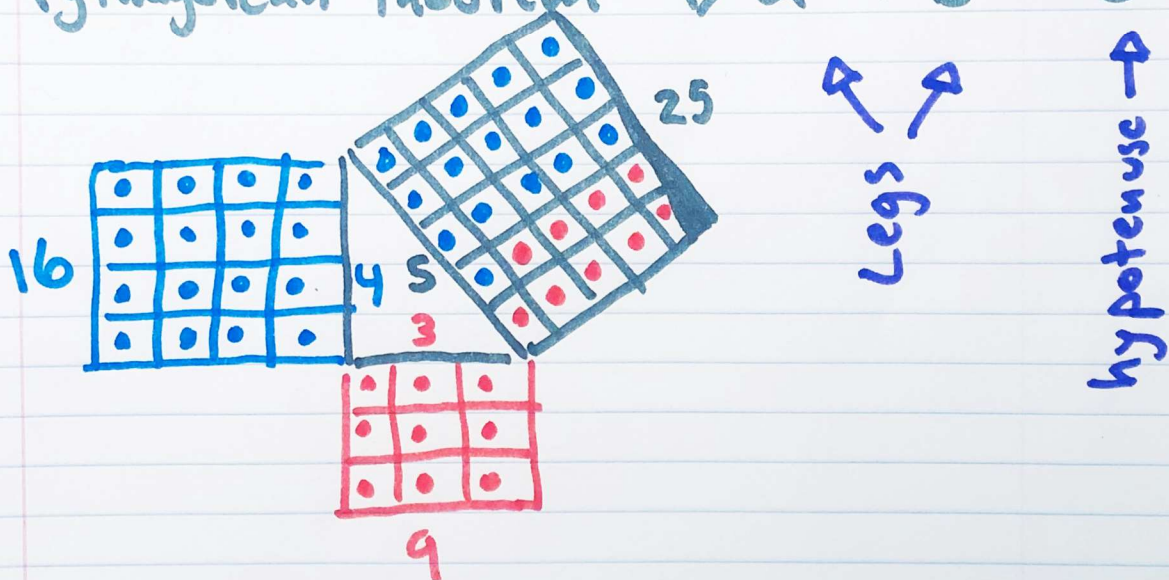
TOPIC 12-1 → Introduction to The Pythagorean Theorem

Notes about The Pythagorean Theorem

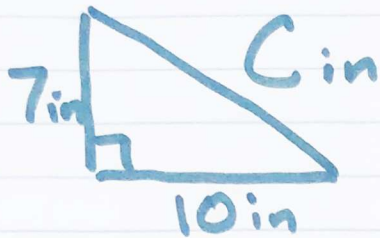
- it only works with right triangles
- the hypotenuse is opposite the right angle
- the hypotenuse is the longest side



Pythagorean Theorem → $a^2 + b^2 = c^2$



What is the value of "C"? Round to the tenth.



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

$$7^2 + 10^2 = c^2$$

$$49 + 100 = c^2$$

$$149 = c^2$$

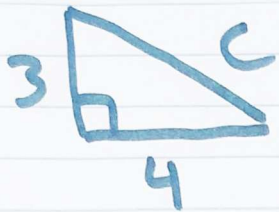
$$\sqrt{149} = \sqrt{c^2}$$

$$\sqrt{149} = \sqrt{c \times c}$$

$$12.20655... = c$$

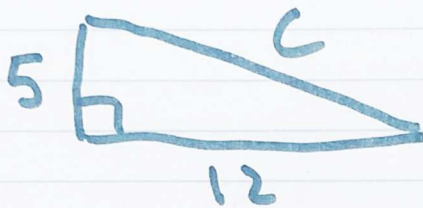
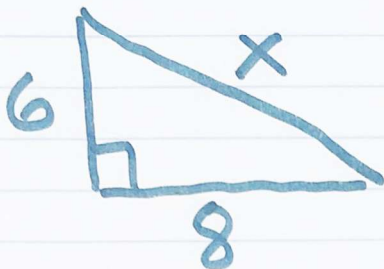
$$12.2 \text{ in.}$$

Famous Right Triangles!



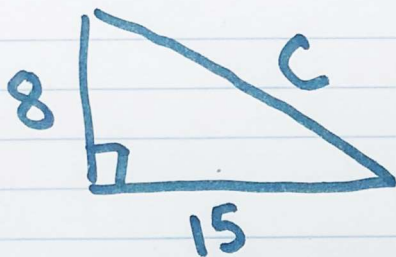
$$\begin{aligned} a^2 + b^2 &= c^2 \\ 3^2 + 4^2 &= c^2 \\ 9 + 16 &= c^2 \\ 25 &= c^2 \\ \sqrt{25} &= \sqrt{c^2} \end{aligned}$$

$$5 = c$$



$$\begin{aligned} a^2 + b^2 &= c^2 \\ 5^2 + 12^2 &= c^2 \\ 25 + 144 &= c^2 \\ 169 &= c^2 \\ \sqrt{169} &= \sqrt{c^2} \end{aligned}$$

$$13 = c$$



$$\begin{aligned} a^2 + b^2 &= c^2 \\ 8^2 + 15^2 &= c^2 \\ 64 + 225 &= c^2 \\ 289 &= c^2 \\ \sqrt{289} &= \sqrt{c^2} \end{aligned}$$

$$17 = c$$