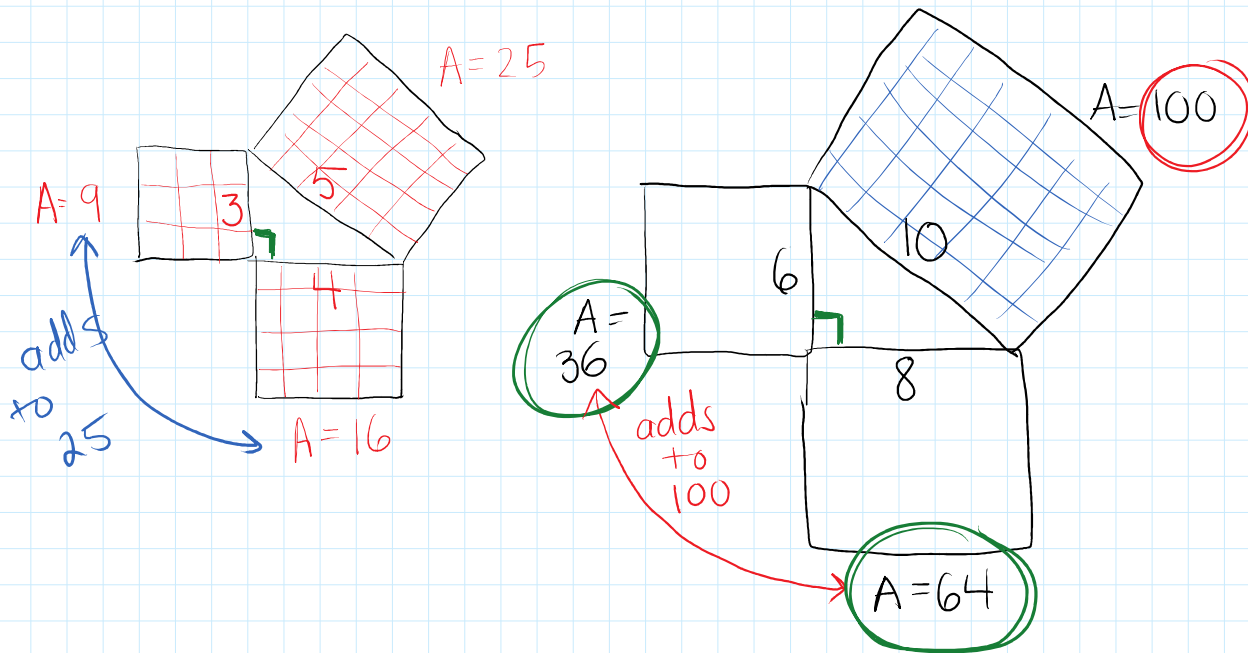


# The Pythagorean Theorem

December 9, 2016 11:07 AM

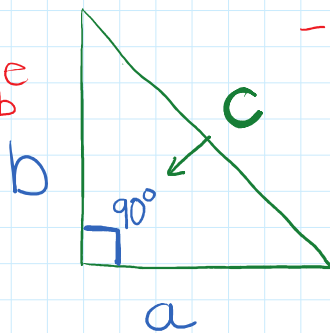


We can find missing side lengths on triangles with the Pythagorean Theorem

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

- interchangeable

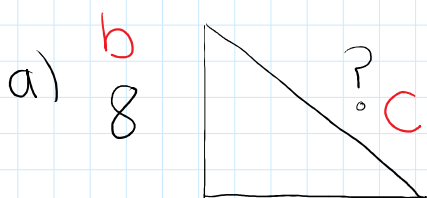
- must make right angle (side a joined to side b to create)



- always longest side

- always across from the right angle

Solve for the missing sides:

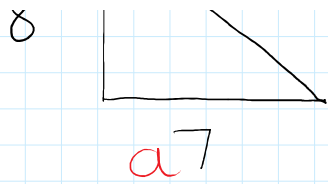


$$a^2 + b^2 = c^2$$

$$7^2 + 8^2 = c^2$$

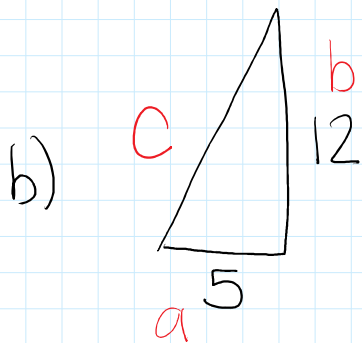
$$49 + 64 = c^2$$

—  $a + c = \dots$  Part



$$49 + 64 = \sqrt{113} = \sqrt{c^2} \quad \text{find Square Root}$$

$$10.6 = c$$



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

$$5^2 + 12^2 = c^2$$

$$25 + 144$$

$$\sqrt{169} = \sqrt{c^2}$$

$$13 = c$$