

Chapter 5 section 8  
Pythagorean Theorem

Pythagoras Greek mathematician and philosopher,  
born 582 BC  
Island of Samos.

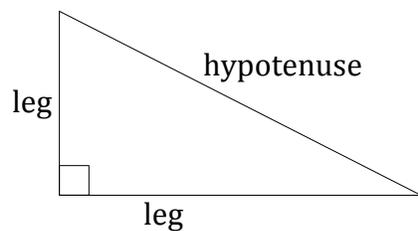
In the movie, Wizard of Oz  
<https://www.youtube.com/watch?v=ky7DMCHQJZY>

Scarecrow gets a brain, but needs more knowledge.

Right triangle Vocabulary:

Triangle that has a right angle ( $90^\circ$ ) is called a right angle.  
the side that is directly opposite the right angle – hypotenuse.  
the sides that include the right angle – legs.

Pythagorean Theorem:



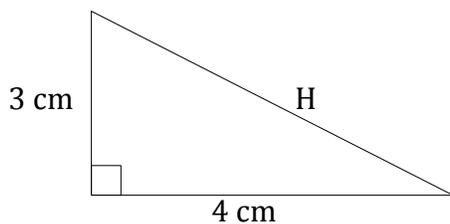
$$(\text{leg})^2 + (\text{leg})^2 = (\text{hypotenuse})^2$$

Example:

Lengths of the legs are 4 cm and 3 cm. Find the length of the missing side.

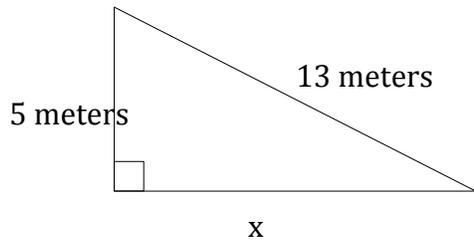
Sketch the figure and put in the given information.

Let H = missing side.

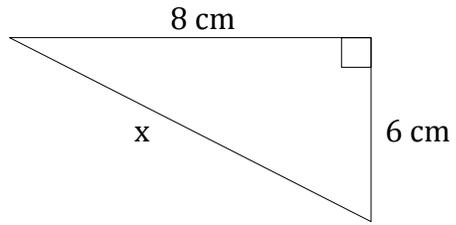


Find the missing side of the right triangle.

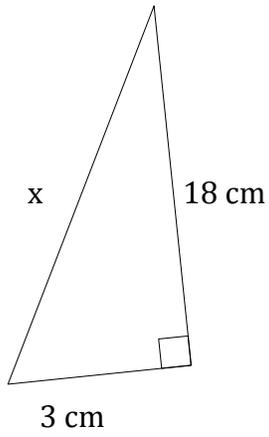
a)



b)



c)



d)

