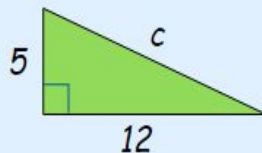


# Day 1: Pythagorean Theorem Lesson

Find the missing side length of a right triangle. Use pythagorean theorem.  $a^2 + b^2 = c^2$

Example: Solve this triangle



Start with:  $a^2 + b^2 = c^2$

Put in what we know:  $5^2 + 12^2 = c^2$

Calculate squares:  $25 + 144 = c^2$

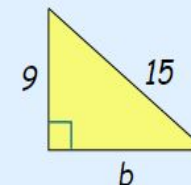
$25 + 144 = 169$ :  $169 = c^2$

Swap sides:  $c^2 = 169$

Square root of both sides:  $c = \sqrt{169}$

Calculate:  **$c = 13$**

Example: Solve this triangle.



Start with:  $a^2 + b^2 = c^2$

Put in what we know:  $9^2 + b^2 = 15^2$

Calculate squares:  $81 + b^2 = 225$

Take 81 from both sides:  $81 - 81 + b^2 = 225 - 81$

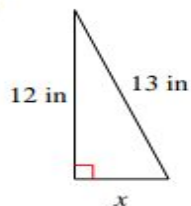
Calculate:  $b^2 = 144$

Square root of both sides:  $b = \sqrt{144}$

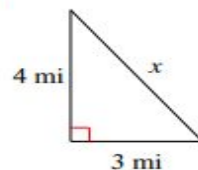
Calculate:  **$b = 12$**

**Find the missing side of each triangle. Round your answers to the nearest tenth if necessary.**

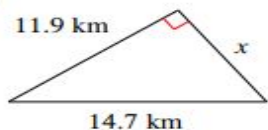
1)



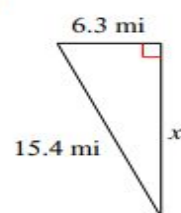
2)



3)



4)



## Lesson Extra Practice Resources:

Online Activity:  
[Pythagorean-Theorem-Jopardy](#)

Video: [Khan Academy Intro Pythagorean Theorem Video](#)