

NOTES: LESSON 7.1 – PYTHAGOREAN THEOREM: Identify and Calculate the **Hypotenuse (c)**

Learning Goal: I can identify which side of a right triangle is the **hypotenuse** and I can use Pythagorean Theorem to calculate the length of the **hypotenuse**.

Meta de Aprendizaje: Puedo identificar qué lado de un triángulo derecho es la **hipotenusa** y puedo usar el teorema de Pitágoras para calcular la longitud de la **hipotenusa**.

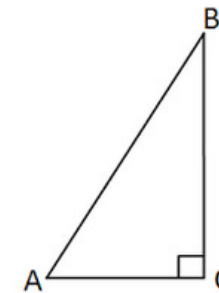
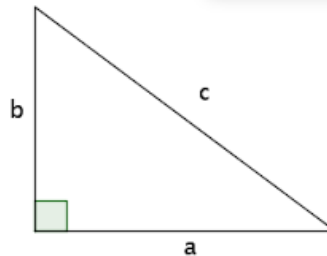
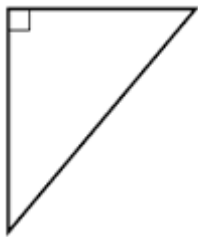
Language Goal: I can discuss with a partner how to determine the **hypotenuse** of a right triangle and write our explanation.

Lenguaje Objetivo: Puedo discutir con un compañero cómo determinar la **hipotenusa** de un triángulo rectángulo y escribir nuestra explicación.

WHAT IS THE PYTHAGOREAN THEOREM?

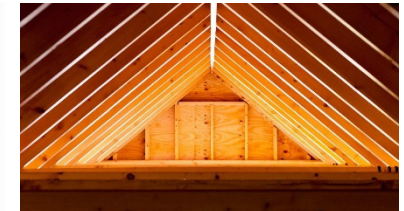
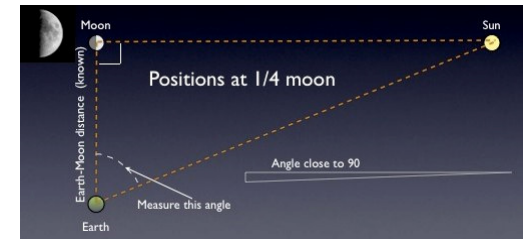
$$\underline{\quad}^2 + \underline{\quad}^2 = \underline{\quad}^2$$

- The _____ is used to calculate the _____ of a missing side.
- The _____ can only be used for _____.
- The _____ is the longest side of a right triangle.



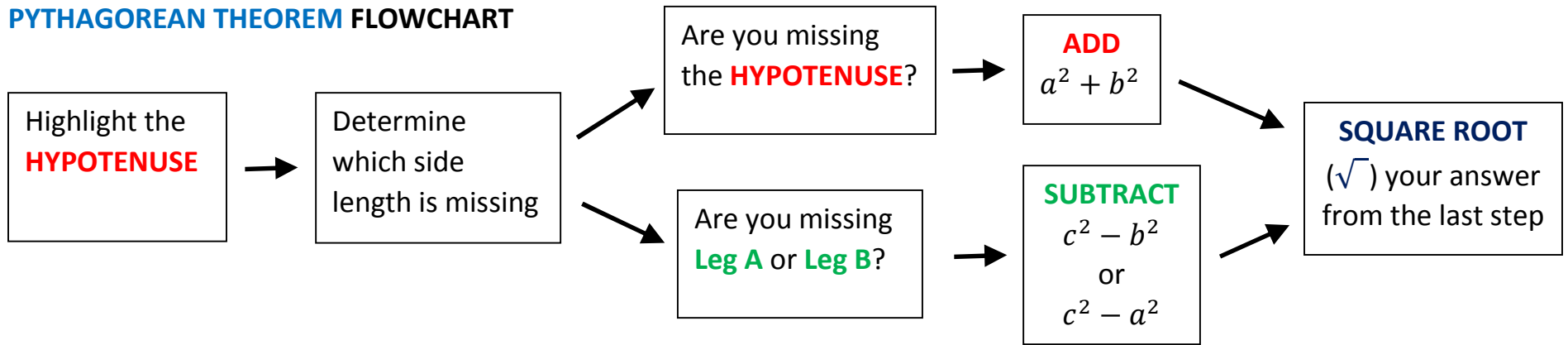
WHY DO WE CARE ABOUT THE PYTHAGOREAN THEOREM?

- Right triangles are used to measure _____ of things.
- Right triangles are _____ in buildings and construction!

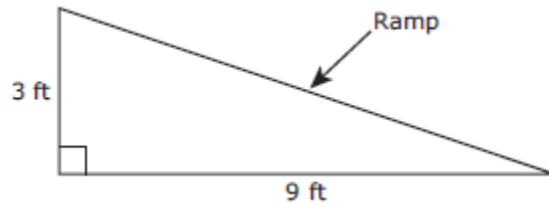


HOW DO WE USE THE PYTHAGOREAN THEOREM?

PYTHAGOREAN THEOREM FLOWCHART

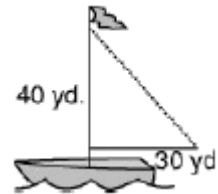


EXAMPLE 1: The diagram below shows the side view of a ramp used to help load and unload a moving van.



What is the length of the ramp? Round your answer to the nearest tenth.

EXAMPLE 2: The world's largest sail is 40 yards tall and 30 yards long as shown below:



How long is the third side of the sail?