

NOTES: LESSON 7.2 – PYTHAGOREAN THEOREM: Identify and Calculate any Missing Side

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 any missing side.

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 cualquier lado faltante.

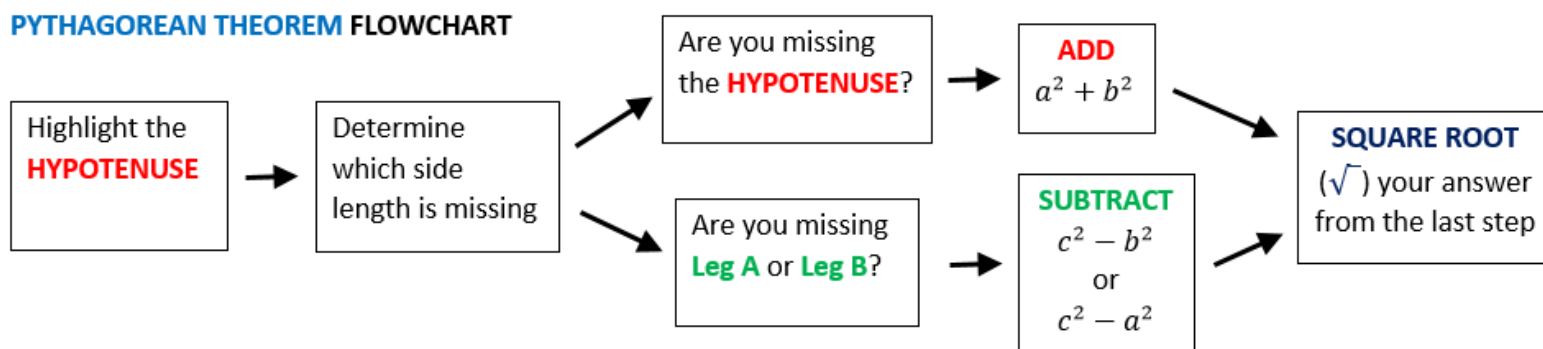
Language Goal: I can discuss with a partner how to calculate the missing side of a right triangle and write an explanation of how to calculate the missing side.

Lenguaje Objetivo: Puedo discutir con un compañero cómo calcular la lado faltante de un triángulo rectángulo y escribir una explicación de cómo calcular la lado faltante.

PYTHAGOREAN THEOREM:

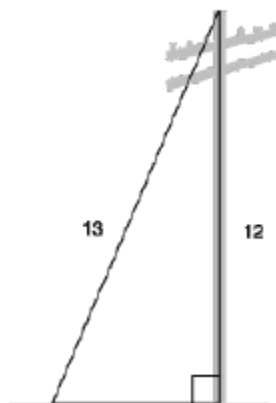
$$\underline{\quad}^2 + \underline{\quad}^2 = \underline{\quad}^2$$

PYTHAGOREAN THEOREM FLOWCHART

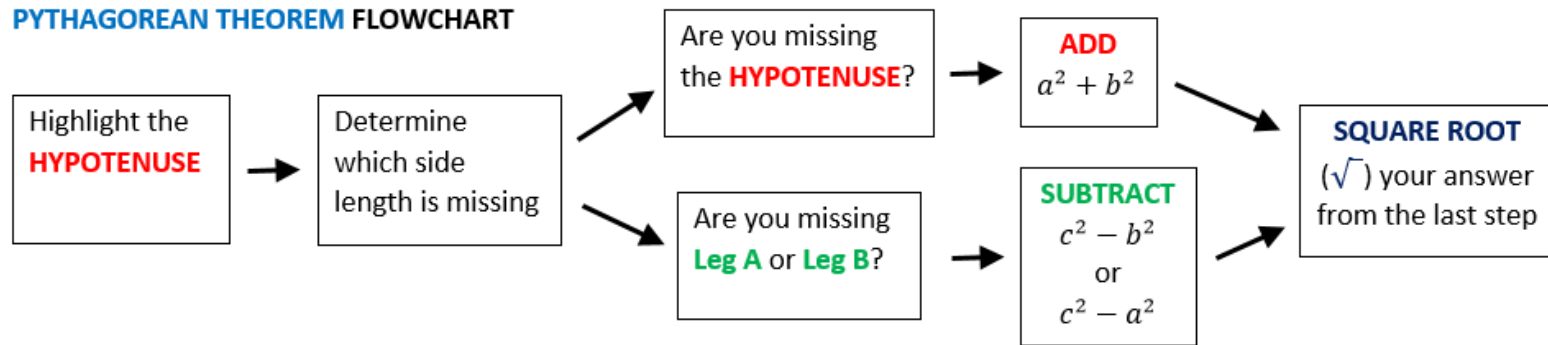


EXAMPLE 1:

A telephone wire that is 13 feet long is attached to the top of a 12-foot telephone pole and fully extended to the ground, as shown below. How far from the base of the telephone pole is the point where the wire touches the ground?

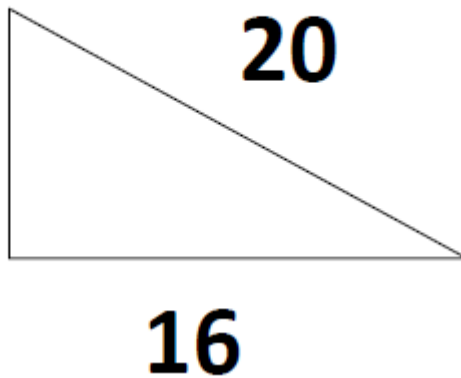


PYTHAGOREAN THEOREM FLOWCHART



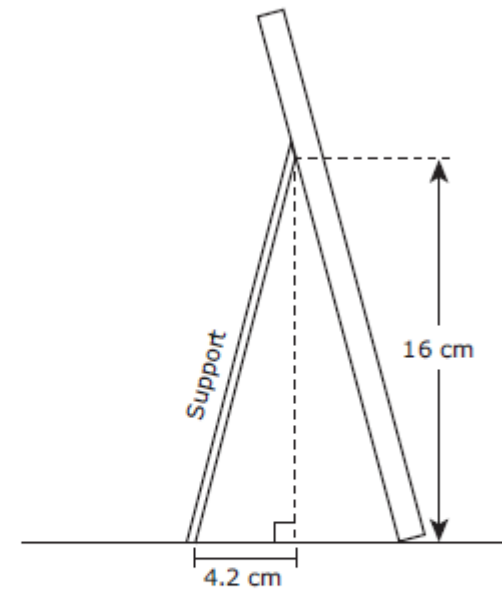
EXAMPLE 2

Find the length of the missing side:



EXAMPLE 3

The drawing below shows a side view of a picture frame on Mary's desk.



Which of the following is closest to the length of the frame support?

- A 20 cm
- B 15 cm
- C 12 cm
- D 17 cm