

**GUÍA 3 MATEMÁTICA**  
**8° BÁSICO MAYO 2021**  
**AUTOEVALUACIÓN**

NOMBRE: \_\_\_\_\_ CURSO: \_\_\_\_\_ FECHA: \_\_\_\_\_

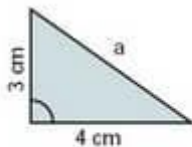
**OBJETIVO PRIORIZADO OA12:** Explicar, de manera concreta, pictórica y simbólica, la validez del teorema de Pitágoras y aplicar a la resolución de problemas geométricos y de la vida cotidiana, de manera manual y/o con software educativo.

**CONTENIDOS:** Teorema de Pitágoras

**ACTIVIDADES:**

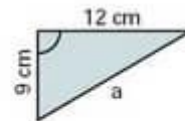
**1** Calcula la hipotenusa de los siguientes triángulos rectángulos.

$$a = \sqrt{b^2 + c^2}$$



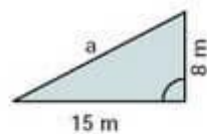
$$a = \sqrt{3^2 + 4^2}$$

$$a = 5 \text{ cm}$$



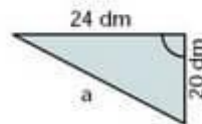
$$\sqrt{81 + 144} = \sqrt{225}$$

$$a = 15 \text{ cm}$$



$$\sqrt{64 + 225} = \sqrt{289}$$

$$a = 17 \text{ m}$$

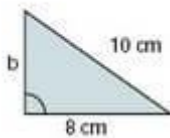


$$\sqrt{576 + 400} = \sqrt{976}$$

$$a = 31,2 \text{ dm}$$

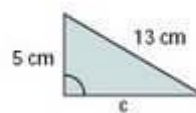
**2** Calcula el cateto que falta en cada triángulo rectángulo.

$$b = \sqrt{a^2 - c^2}$$

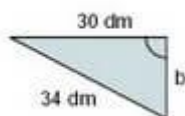


$$b = \sqrt{10^2 - 8^2} = \sqrt{100 - 64} = \sqrt{36} = 6 \text{ cm}$$

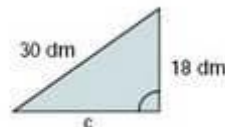
$$c = \sqrt{a^2 - b^2}$$



$$c = \sqrt{13^2 - 5^2} = \sqrt{169 - 25} = \sqrt{144} = 12 \text{ cm}$$



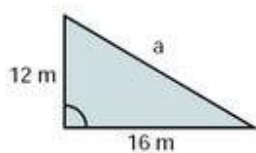
$$b = \sqrt{1156 - 900} = \sqrt{256} = 16 \text{ cm}$$



$$c = \sqrt{900 - 324} = \sqrt{576} = 24 \text{ dm}$$

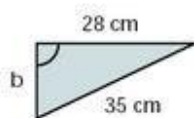
**3**

Calcula en cada triángulo rectángulo el lado que falta.



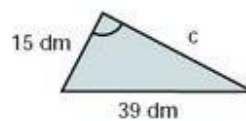
**a =**

$$\sqrt{256} + \sqrt{144} = \sqrt{400} = 20 \text{ m}$$



**b =**

$$\sqrt{1225} - \sqrt{784} = \sqrt{441} = 21 \text{ cm}$$



**c =**  $\sqrt{1521} - \sqrt{225} = \sqrt{1296} = 36 \text{ dm}$

4. Archivar esta guía en tu carpeta.