

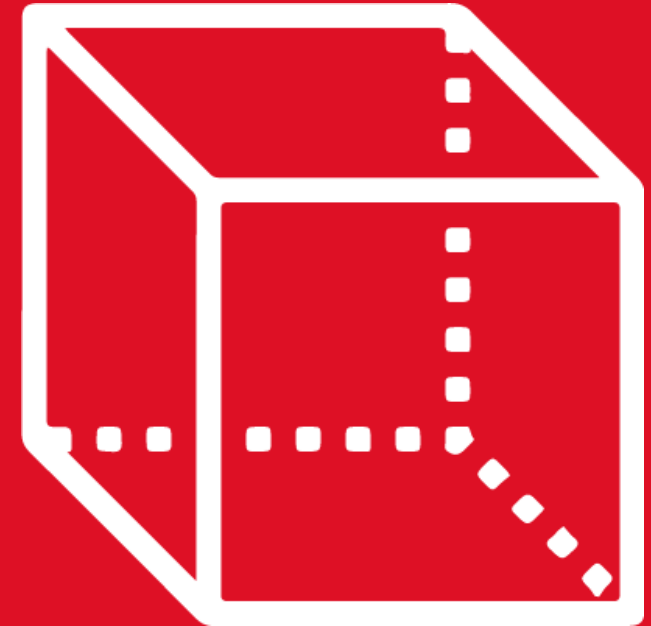


# GEOMETRÍA

**Tomo 3**

**3st**  
SECONDARY

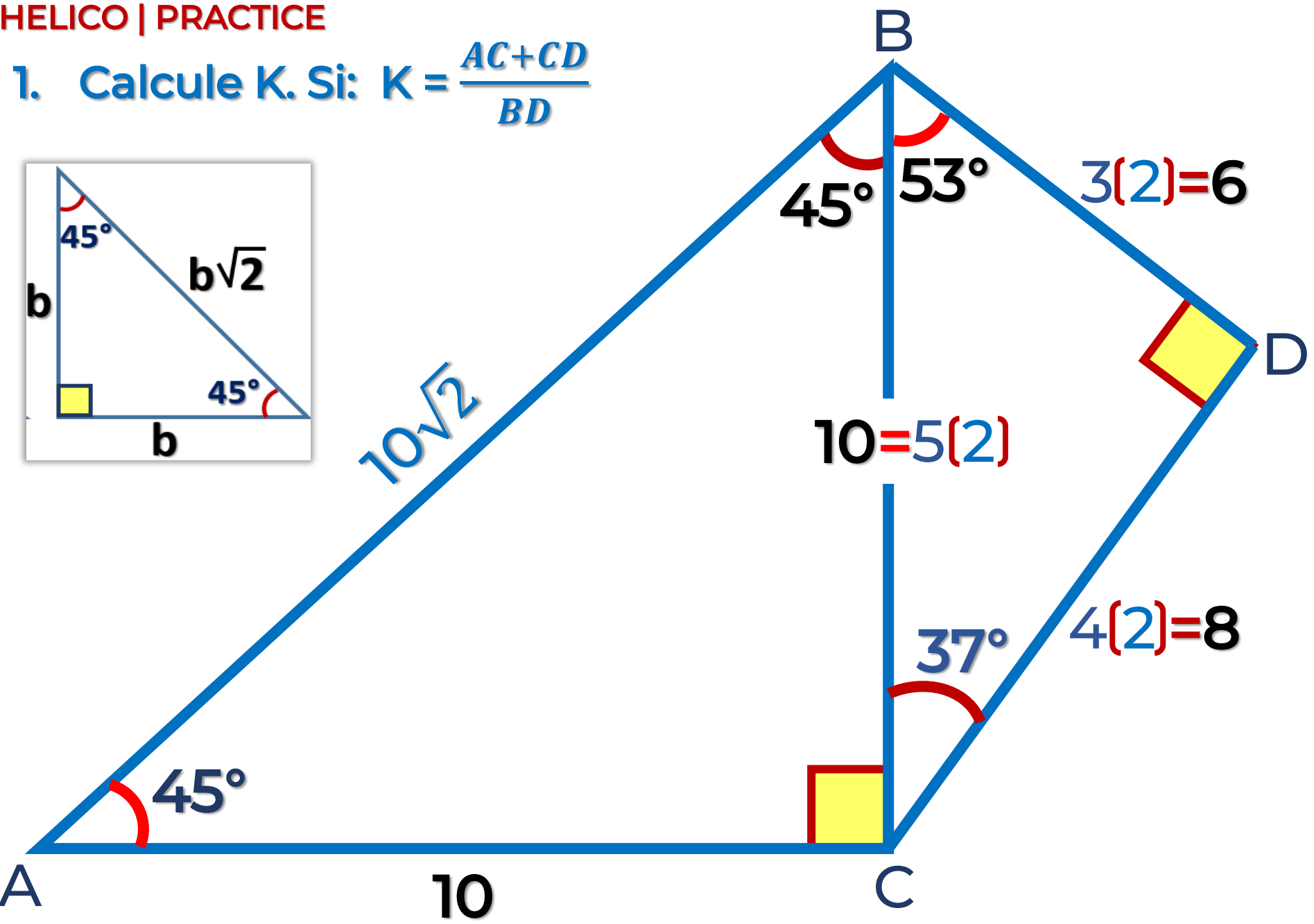
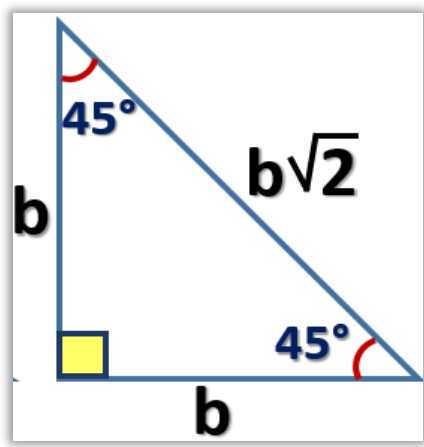
**Retroalimentación**



 **SACO OLIVEROS**



1. Calcule K. Si:  $K = \frac{AC+CD}{BD}$



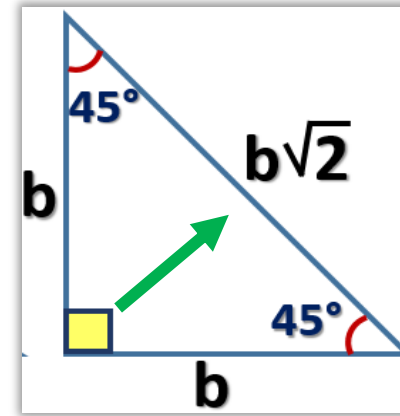
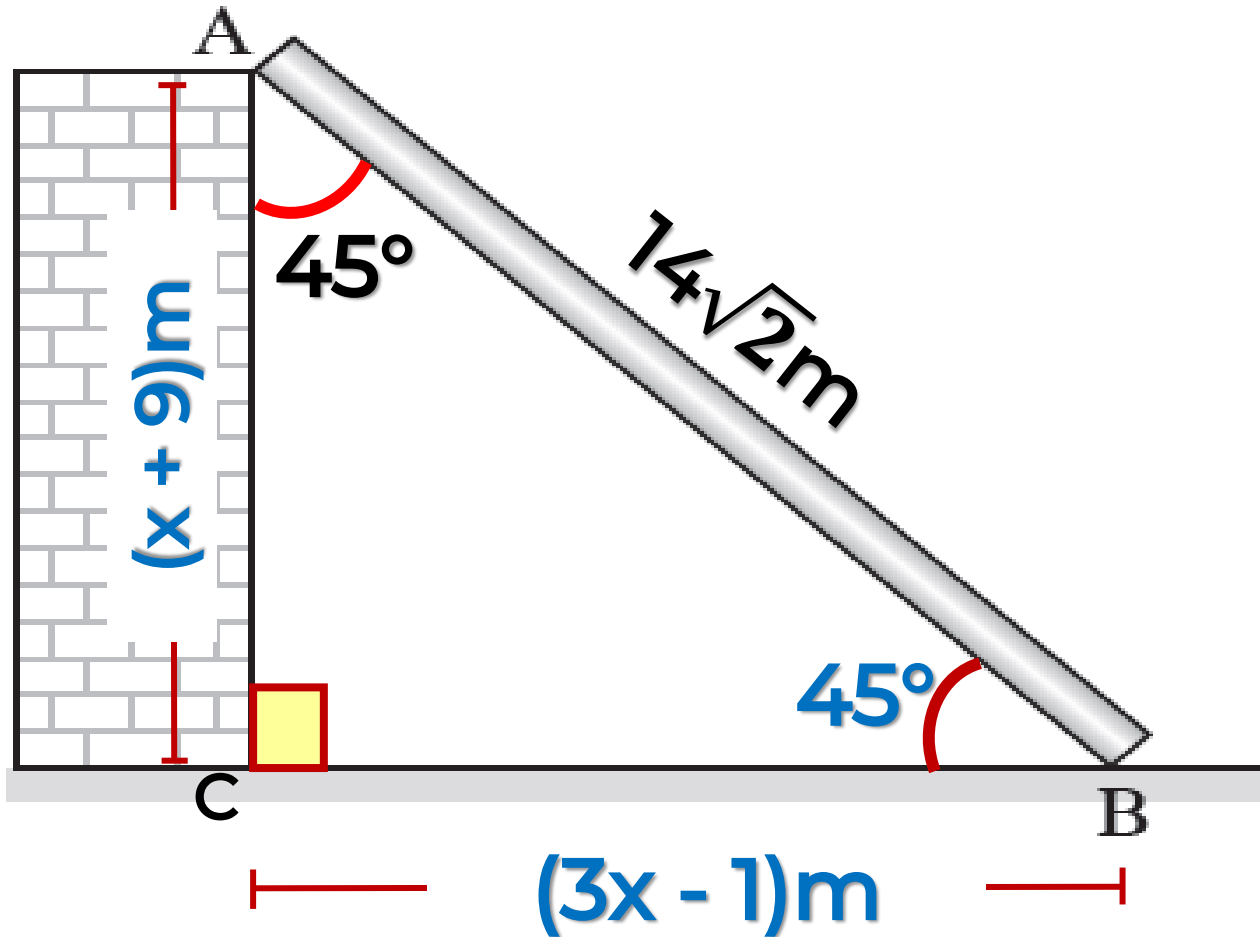
Nos piden

$$K = \frac{AC+CD}{BD}$$

$$K = \frac{10 + 8}{6}$$

**K = 3**

2. Se observa una madera en cuyos extremos están situados los puntos A y B. Si dicha madera forma con el piso un ángulo de  $45^\circ$ , la altura de la pared tiene una medida de  $(x + 9)m$  y la distancia del punto B a la pared es de  $(3x - 1)m$ , ¿cuánto mide la madera?



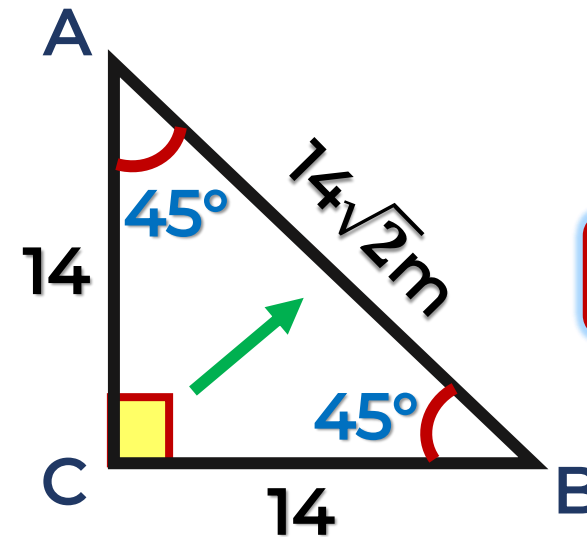
$$3x - 1 = x + 9$$

$$2x = 10$$

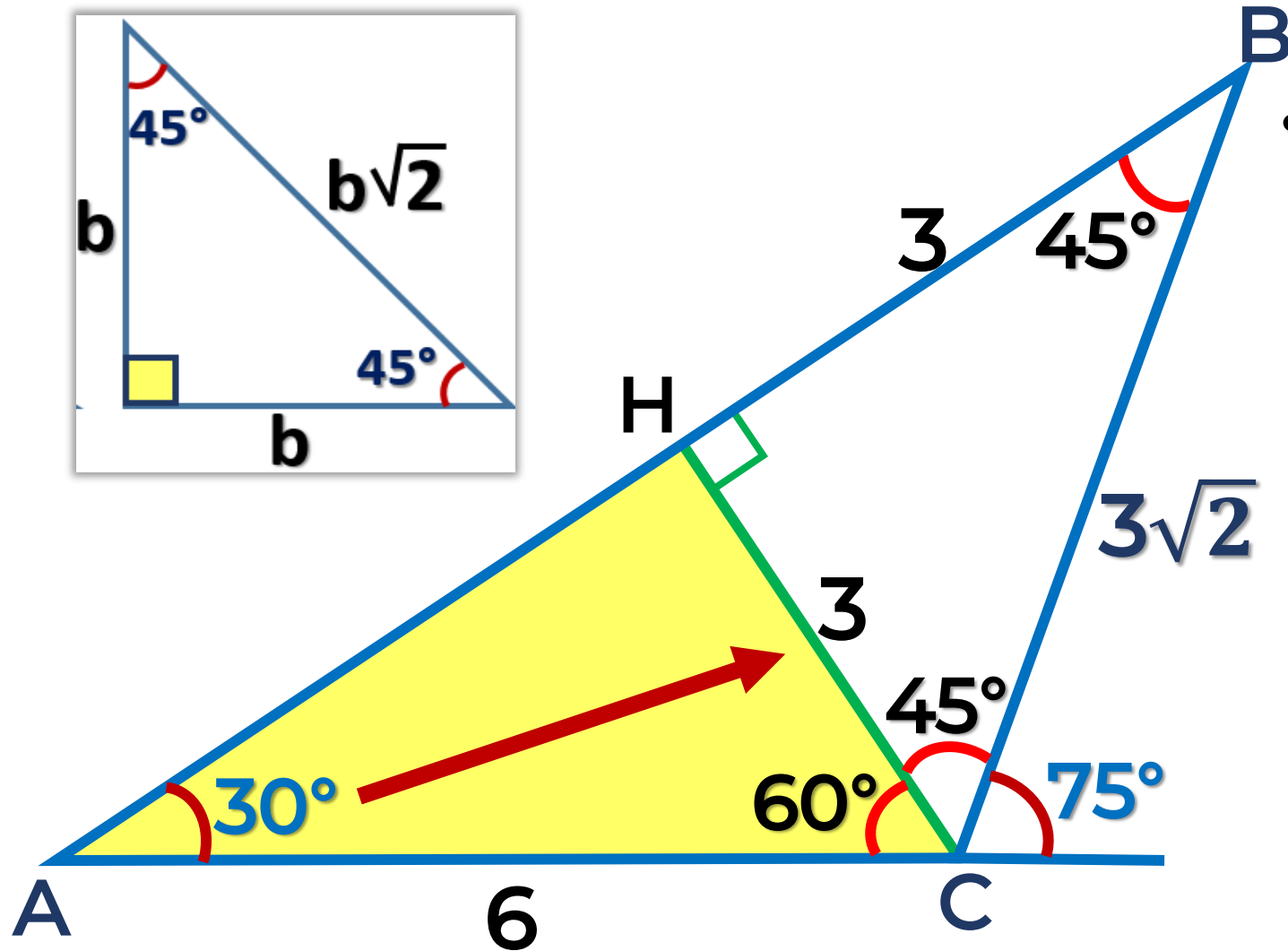
$$x = 5$$

Nos piden

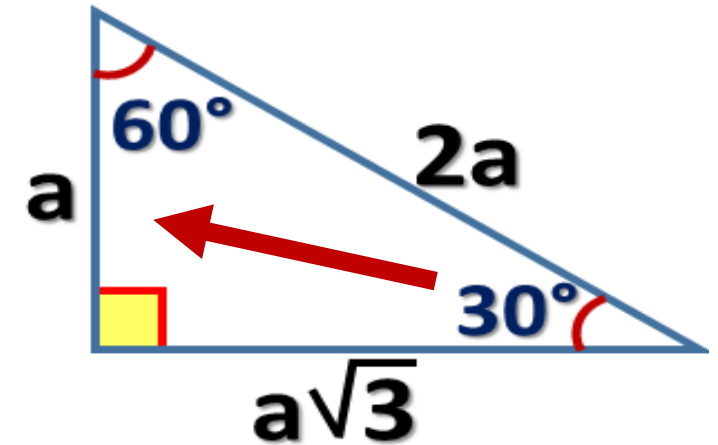
$$AB = 14\sqrt{2}m$$



3. En la figura, calcule AC.



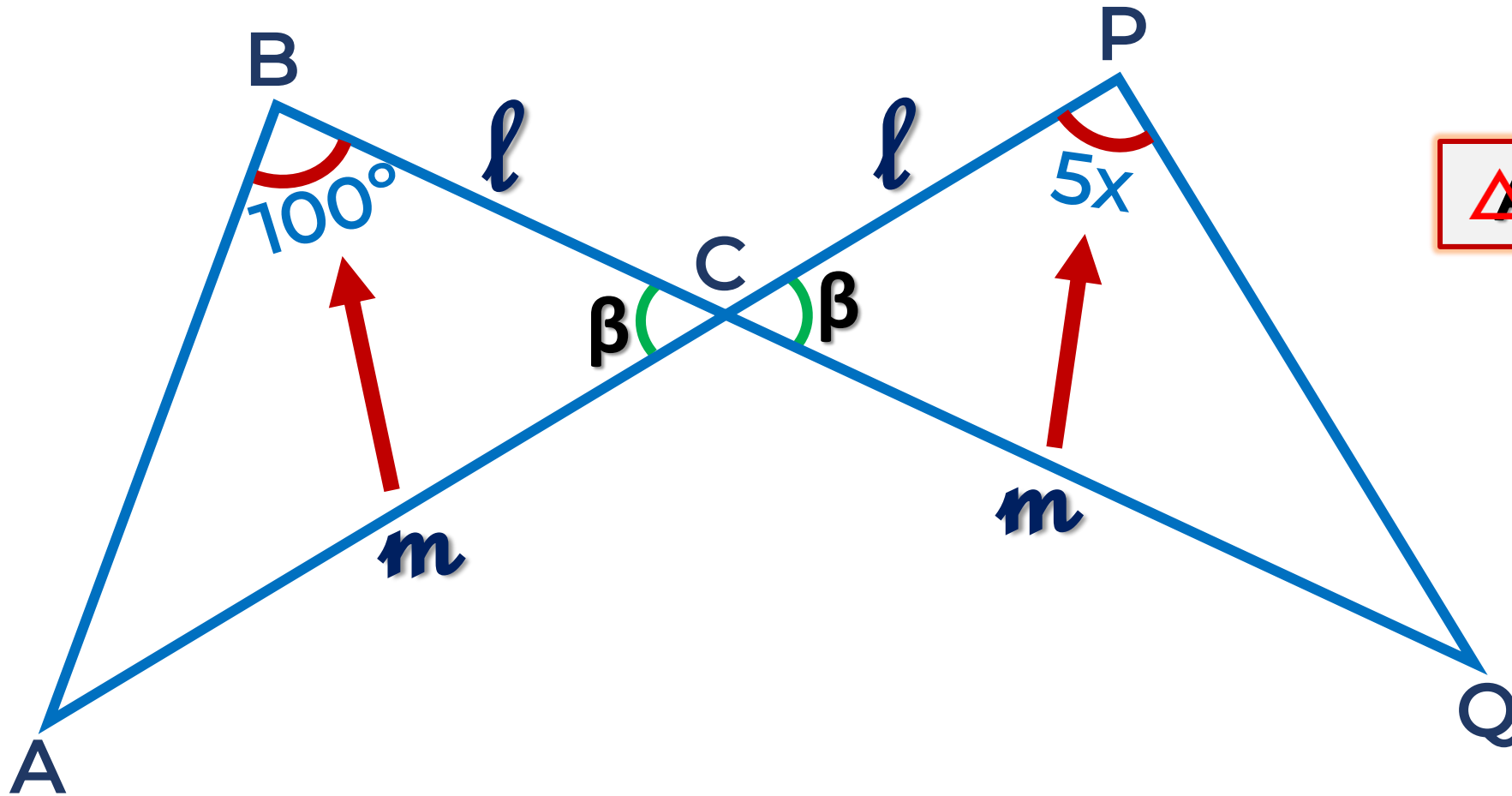
• Trazamos la altura  $\overline{CH}$ .



Nos piden

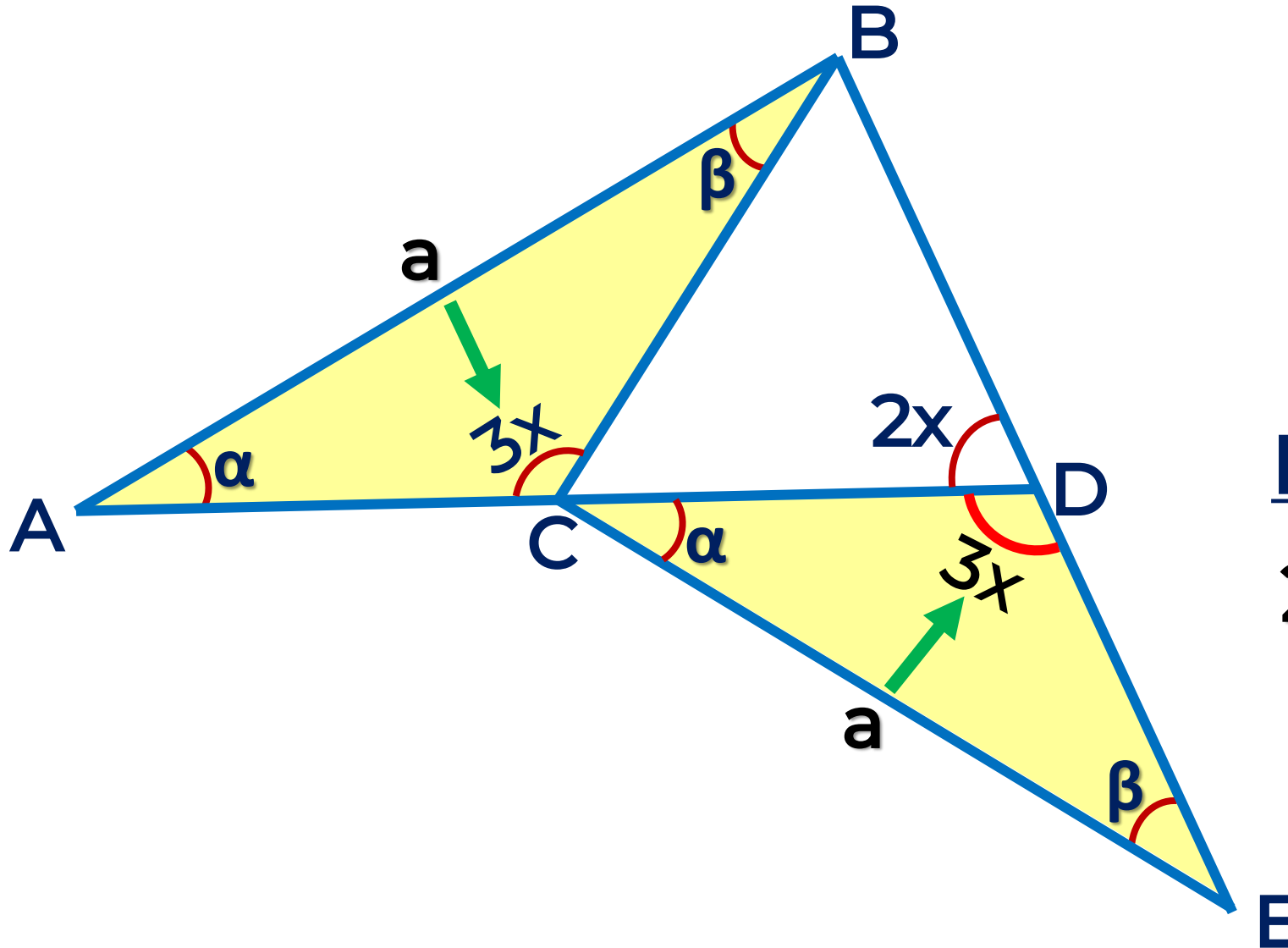
$$AC = 6$$

4. En la figura,  $BC = CP$  y  $AC = CQ$ . Calcule  $x$ .



$$\begin{aligned} \triangle ACB &\cong \triangle PCQ \\ &(\text{L-A-L}) \\ 5x &= 100^\circ \\ x &= 20^\circ \end{aligned}$$

5. En la figura  $AB = CE$ , calcule  $x$ .



$$\triangle ABC \cong \triangle CED$$

( A-L-A )

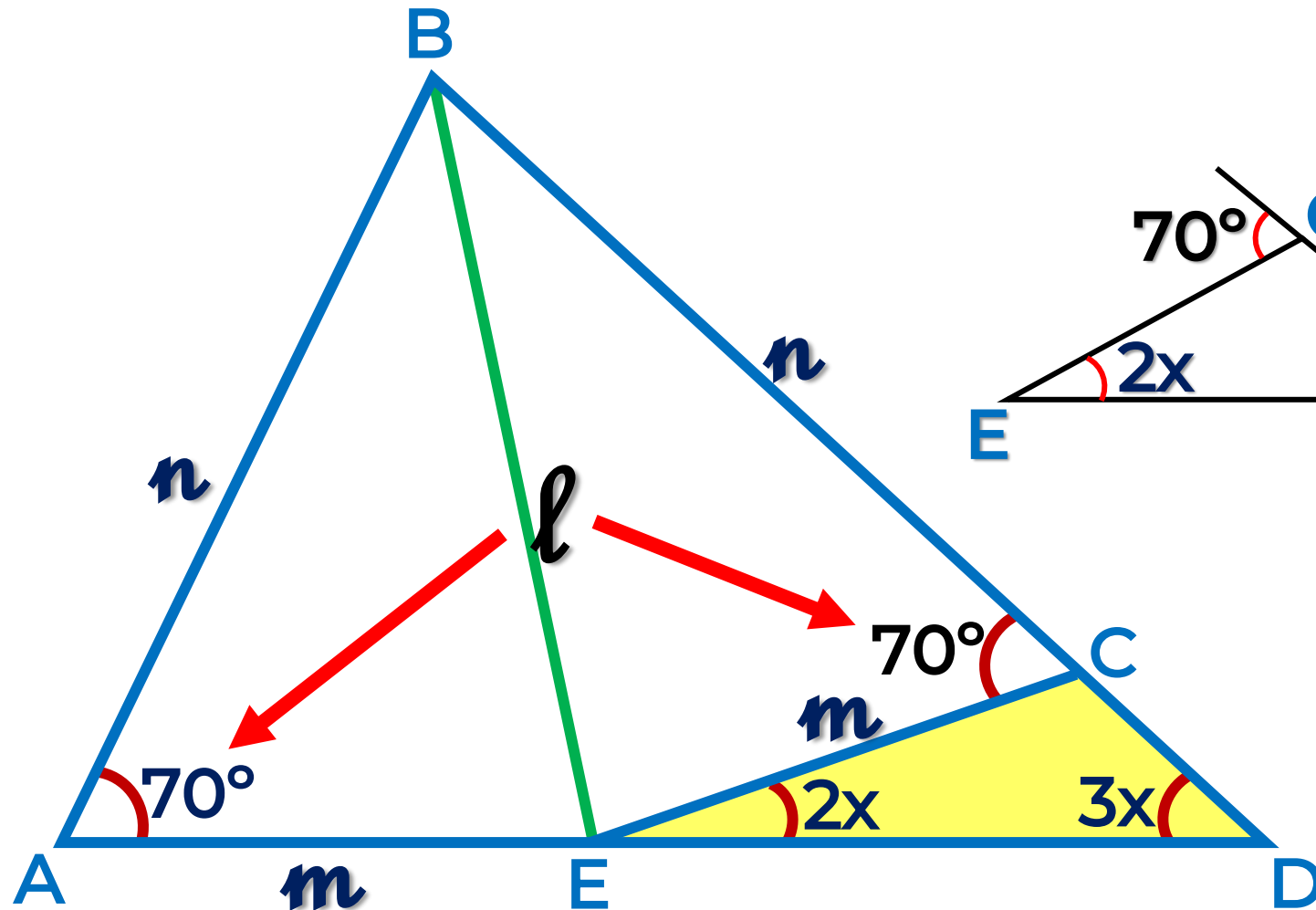
Del gráfico

$$2x + 3x = 180^\circ$$

$$5x = 180^\circ$$

$$x = 36^\circ$$

6. En la figura  $AB = BC$  y  $AE = CE$ , calcule  $x$ .



- Trazamos  $\overline{BE}$

$$\triangle ABE \cong \triangle CBE$$

$$(L-L-L)$$

- Del gráfico:

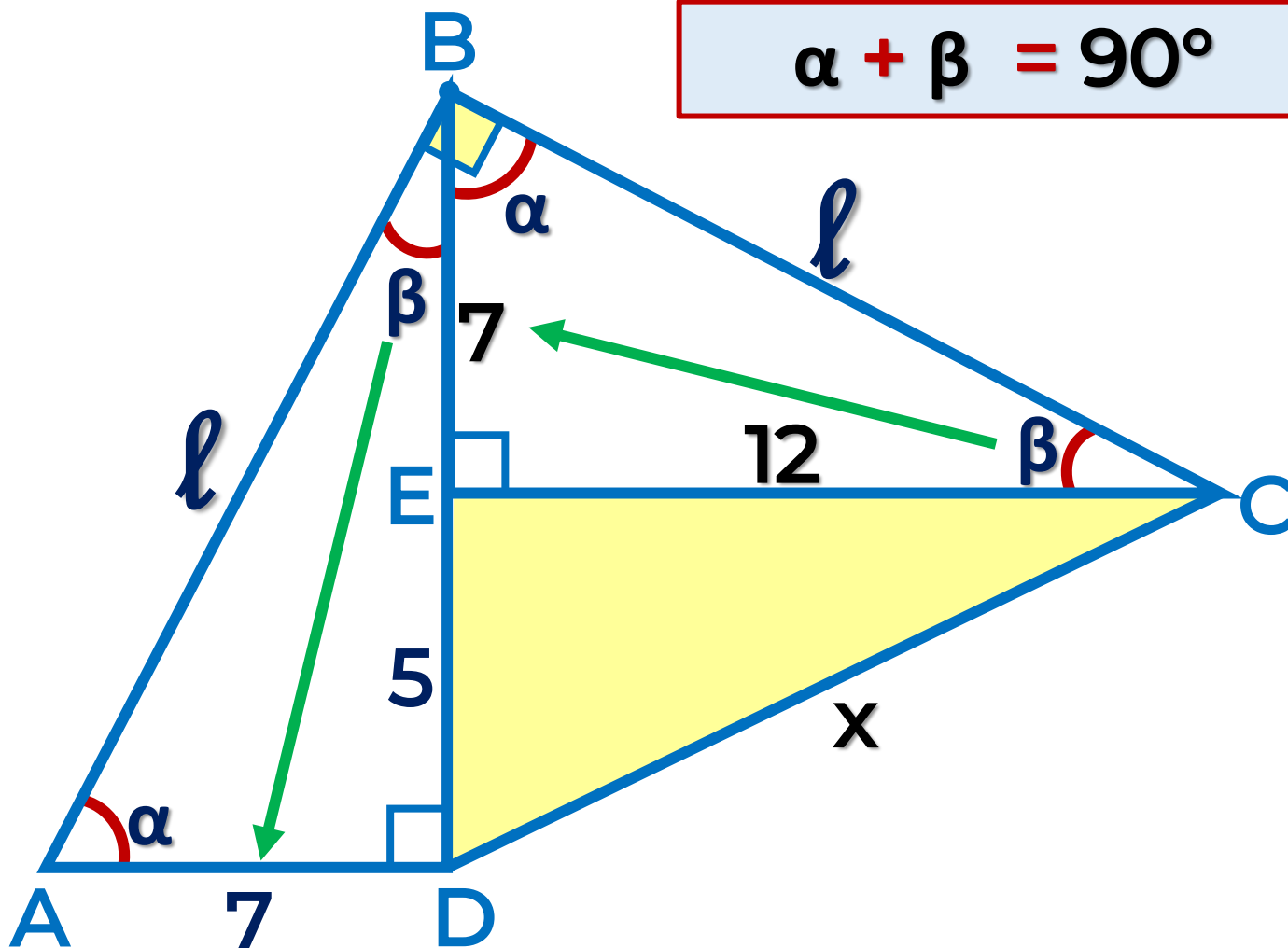
$$2x + 3x = 70^\circ$$

$$5x = 70^\circ$$

$$x = 14^\circ$$



7. En la figura,  $AB = BC$ , calcule  $CD$ .



$$\triangle ABD \cong \triangle BCE$$

$$(A-L-A)$$

$$\bullet AD = BE = 7$$

$$\bullet EC = BD$$

$$EC = 7 + 5$$

$$EC = 12$$

$$\triangle CED \quad \text{T. Pitágoras}$$

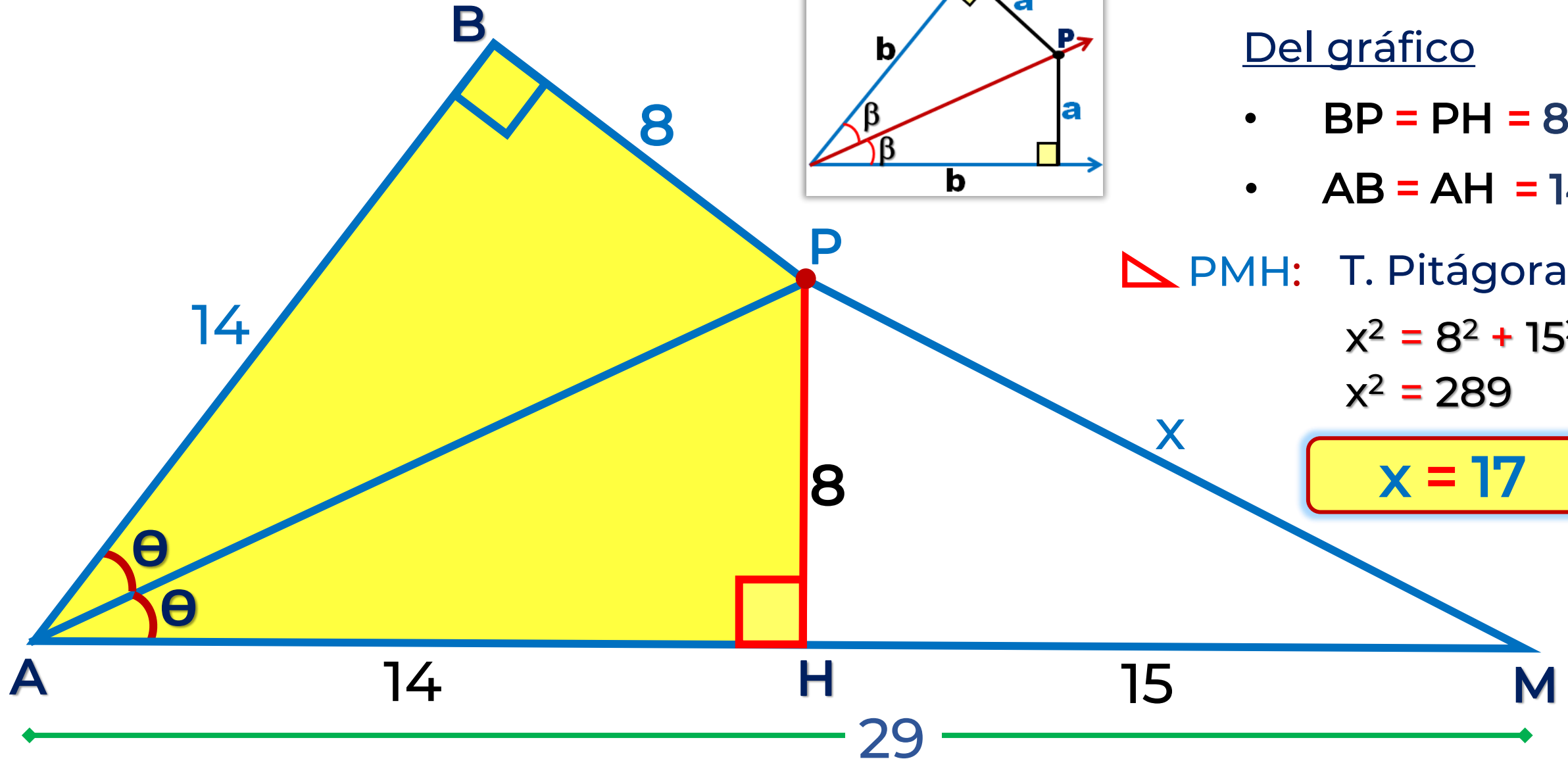
$$x^2 = 5^2 + 12^2$$

$$x^2 = 169$$

$$x = 13$$



8. En la figura, calcule x.



Del gráfico

- $BP = PH = 8$
- $AB = AH = 14$

△ PMH: T. Pitágoras

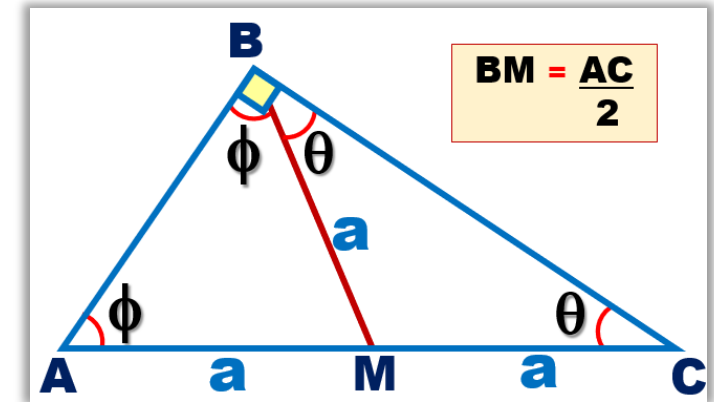
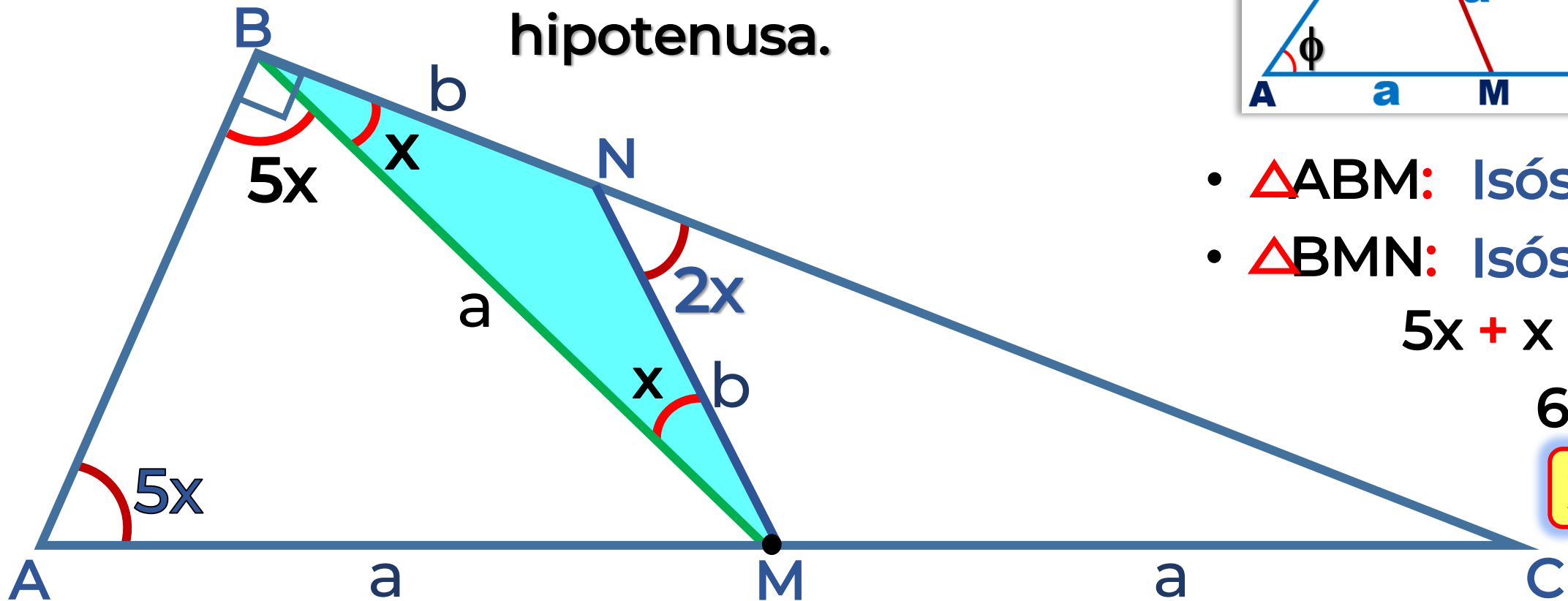
$$x^2 = 8^2 + 15^2$$

$$x^2 = 289$$

$$x = 17$$

## 9. En la figura, calcule $x$ .

- Trazamos  $\overline{BM}$ .
- $\overline{BM}$ : mediana relativa a la hipotenusa.



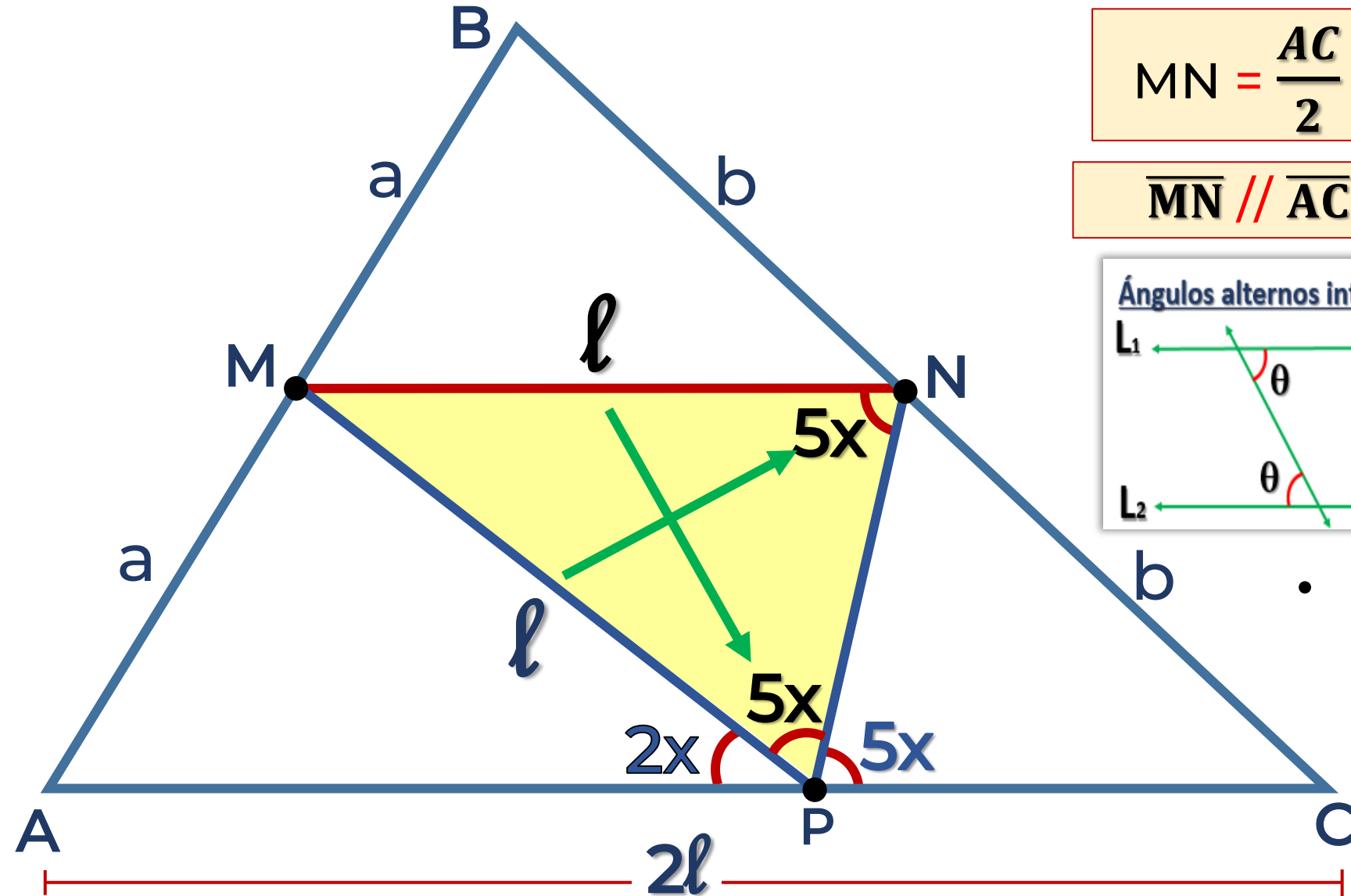
- $\triangle ABM$ : Isósceles
- $\triangle BMN$ : Isósceles

$$5x + x = 90^\circ$$

$$6x = 90^\circ$$

$$x = 15^\circ$$

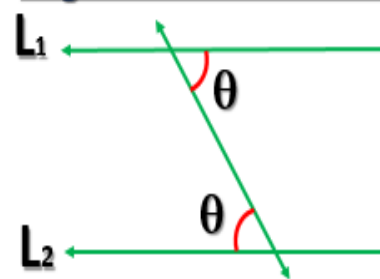
10. En la figura, calcule  $x$ .



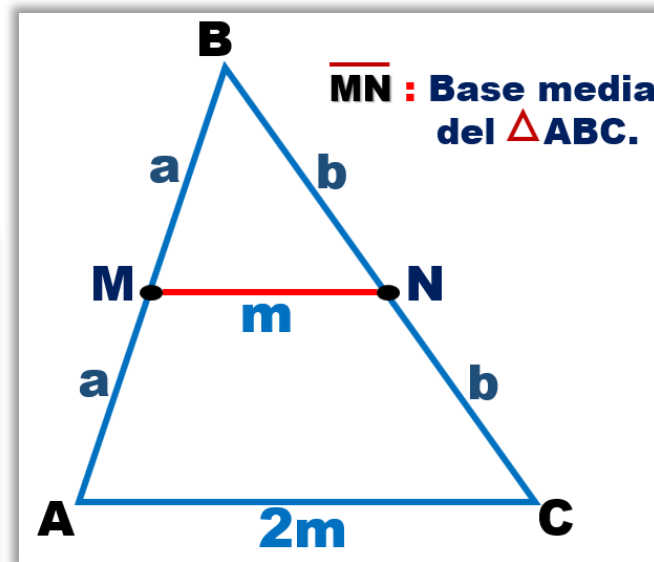
$$MN = \frac{AC}{2}$$

$$\overline{MN} \parallel \overline{AC}$$

Ángulos alternos internos



- Trazamos  $\overline{MN}$   
(*Base media*)



- $\triangle MNP$ : Isósceles

$$2x + 5x + 5x = 180^\circ$$

$$12x = 180^\circ$$

$$x = 15^\circ$$