GEOMETRÍA

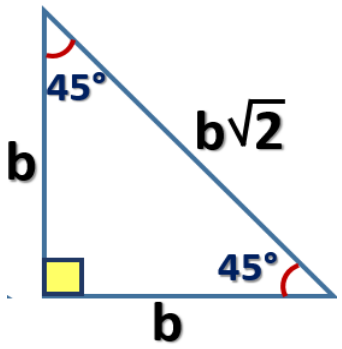
Tomo 3

3st
SECONDARY

Retroalimentación

SACO OLIVEROS

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



B
45°
53°
3(2)=6
D
10√2
10=5(2)
4(2)=8
37°
45°
A
10
C

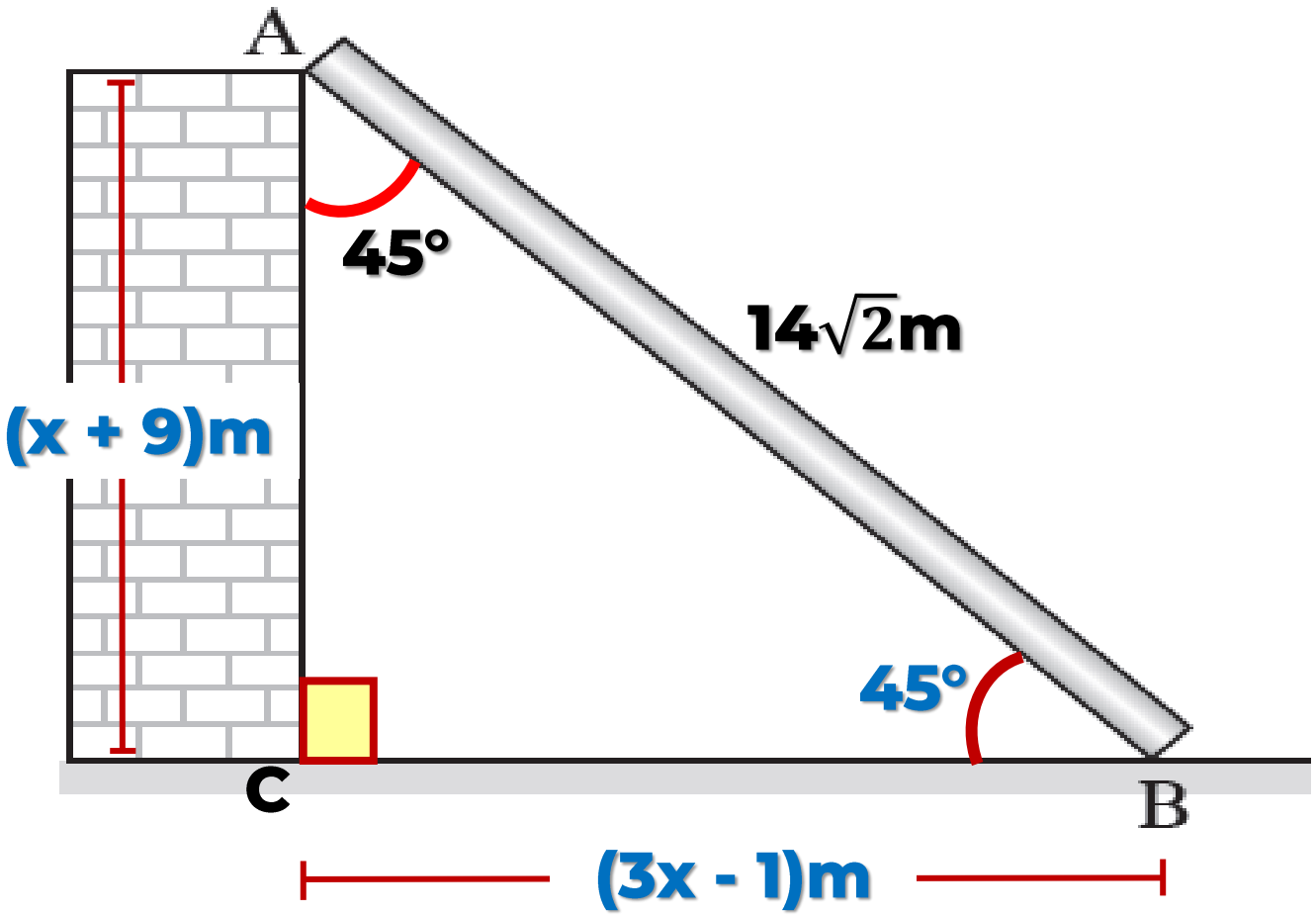
Nos piden

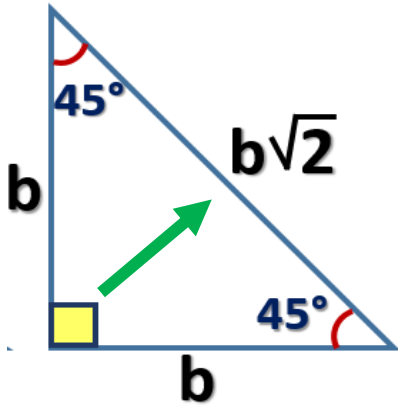
$$K = \frac{AC+CD}{BD}$$

$$K = \frac{10+8}{6} = \frac{18}{6}$$

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°, 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?



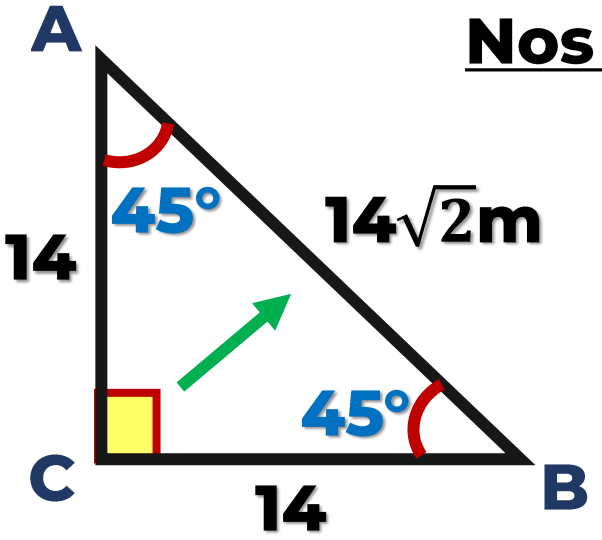


$3x - 1 = x + 9$

$2x = 10$

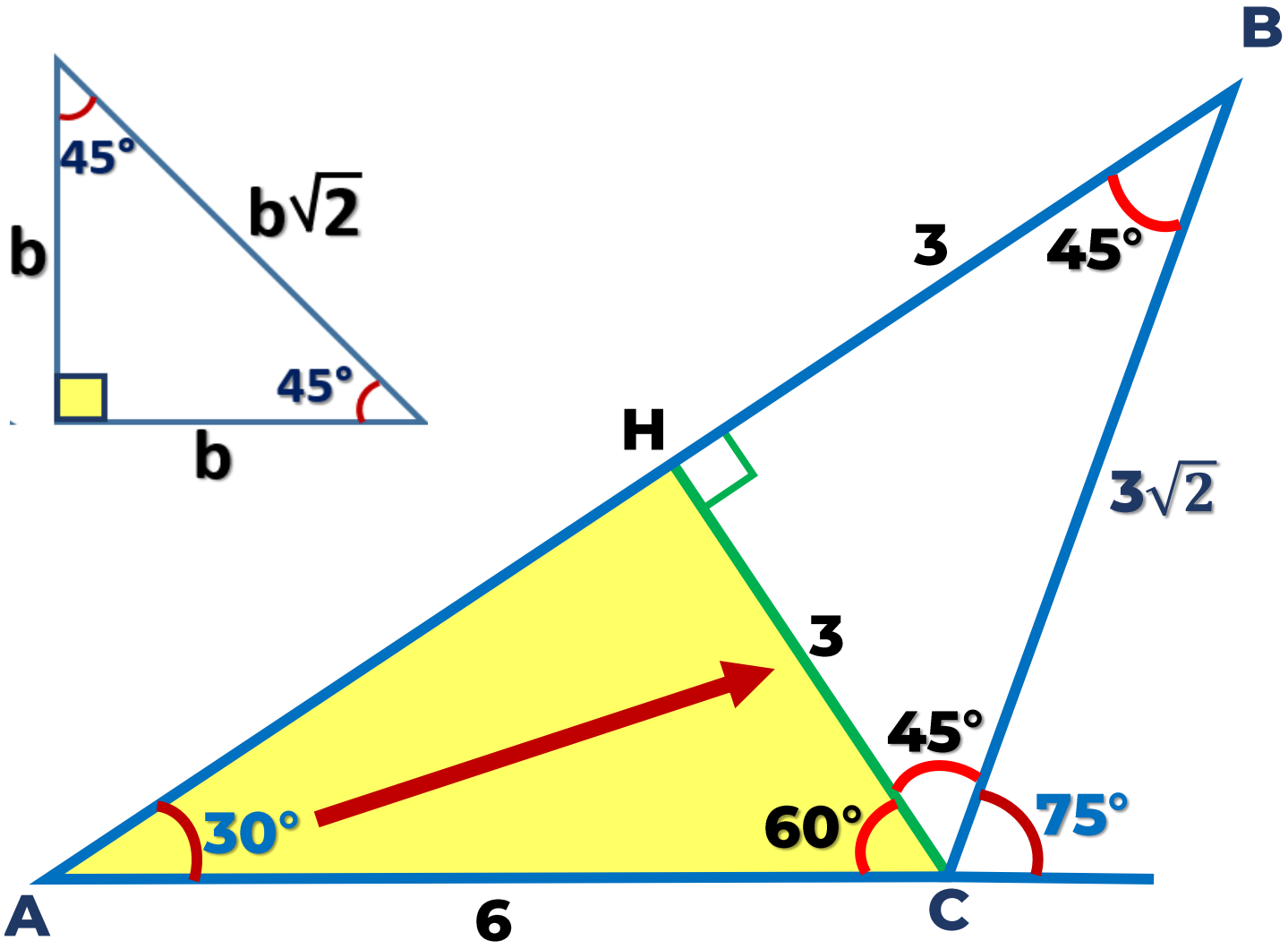
$x = 5$

Nos piden

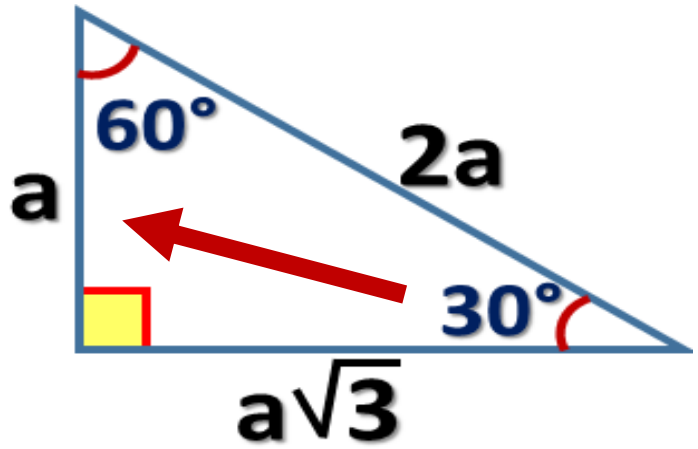


AB = $14\sqrt{2}$m

3. En la figura, calcule AC.



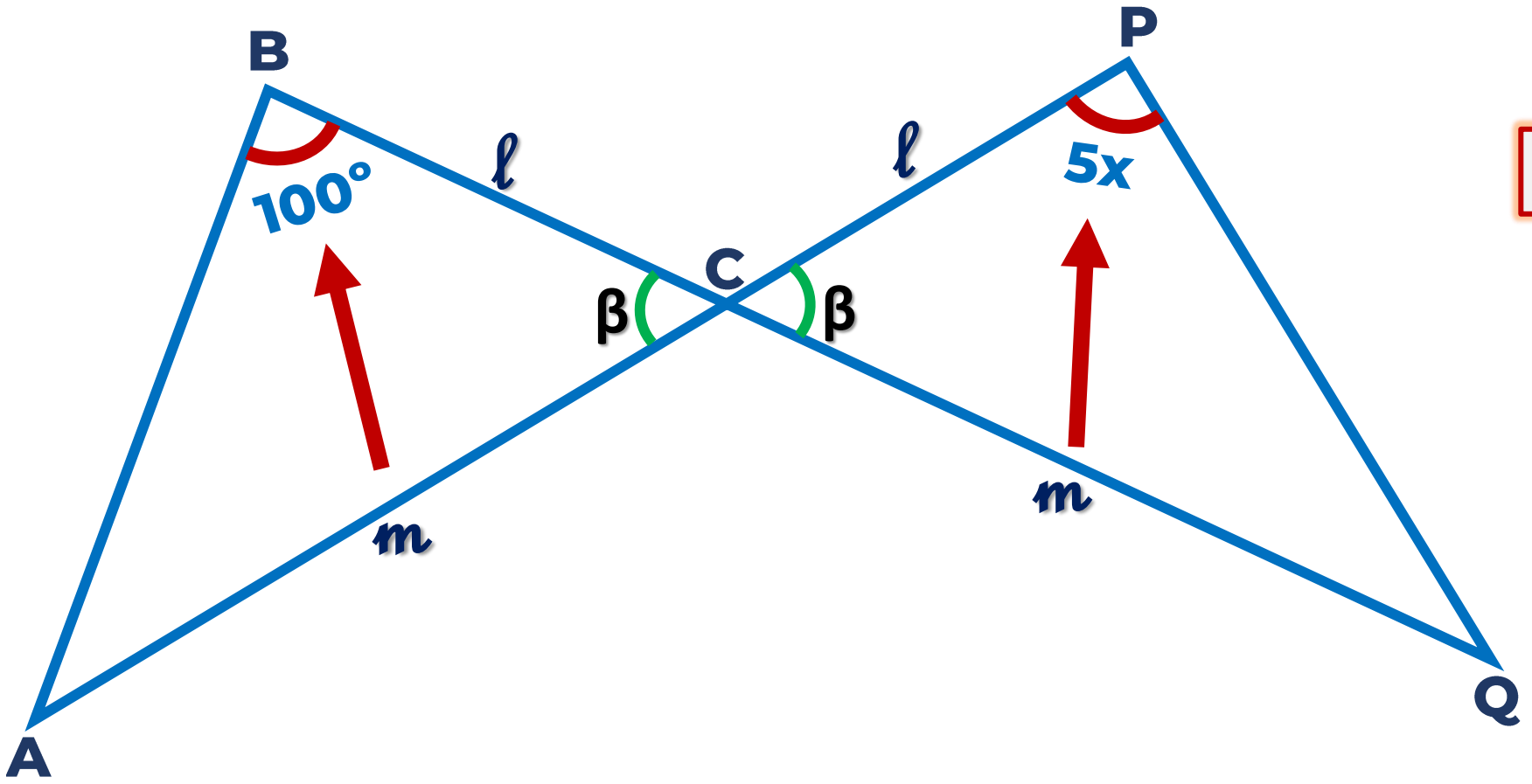
- **Trazamos la altura $\overline{CH}$.**



Nos piden

AC = 6

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



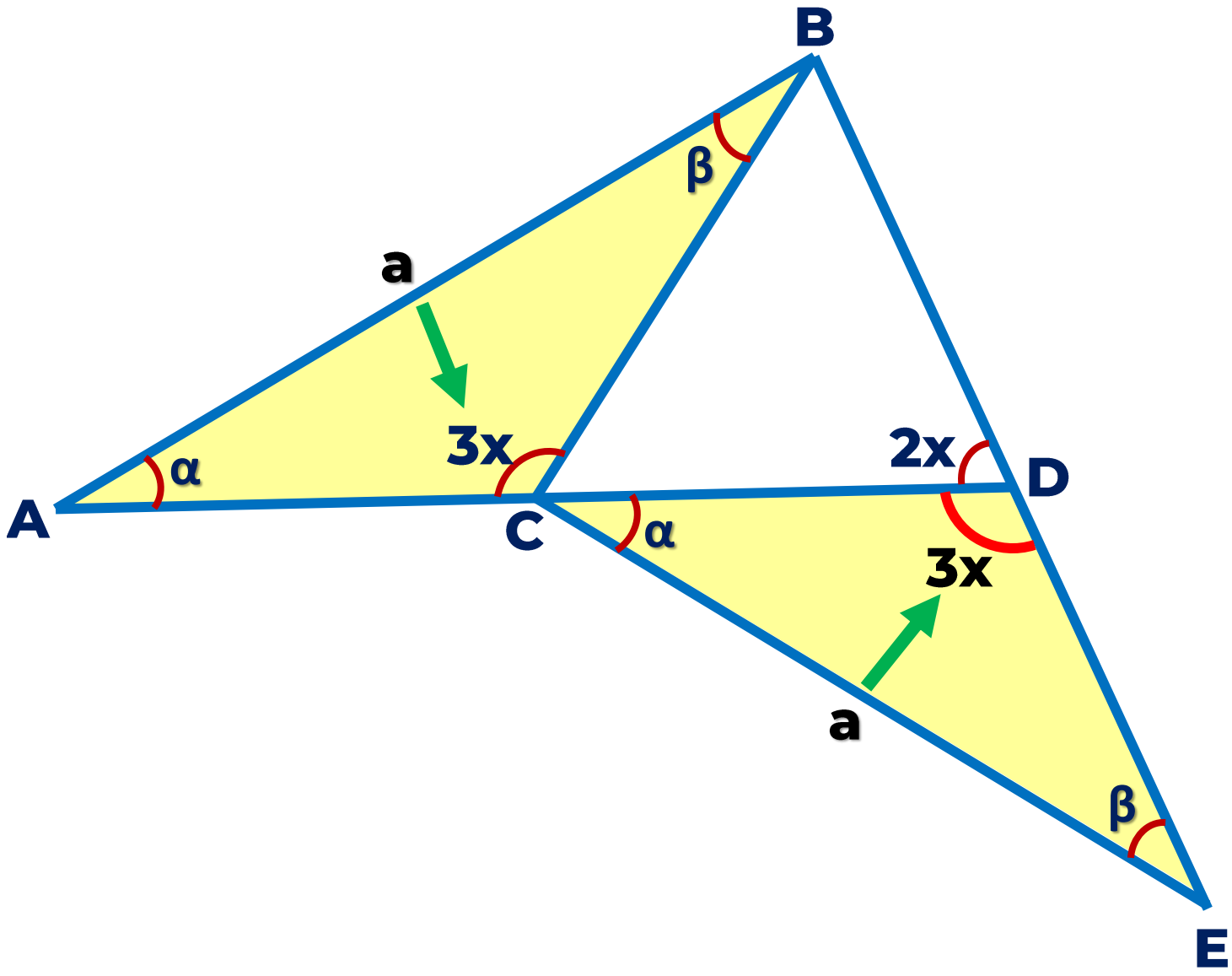
$\Delta ACB \cong \Delta QCP$

(L-A-L)

$5x = 100°$

$x = 20°$

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



$\triangle ABC \cong \triangle CED$

(A-L-A)

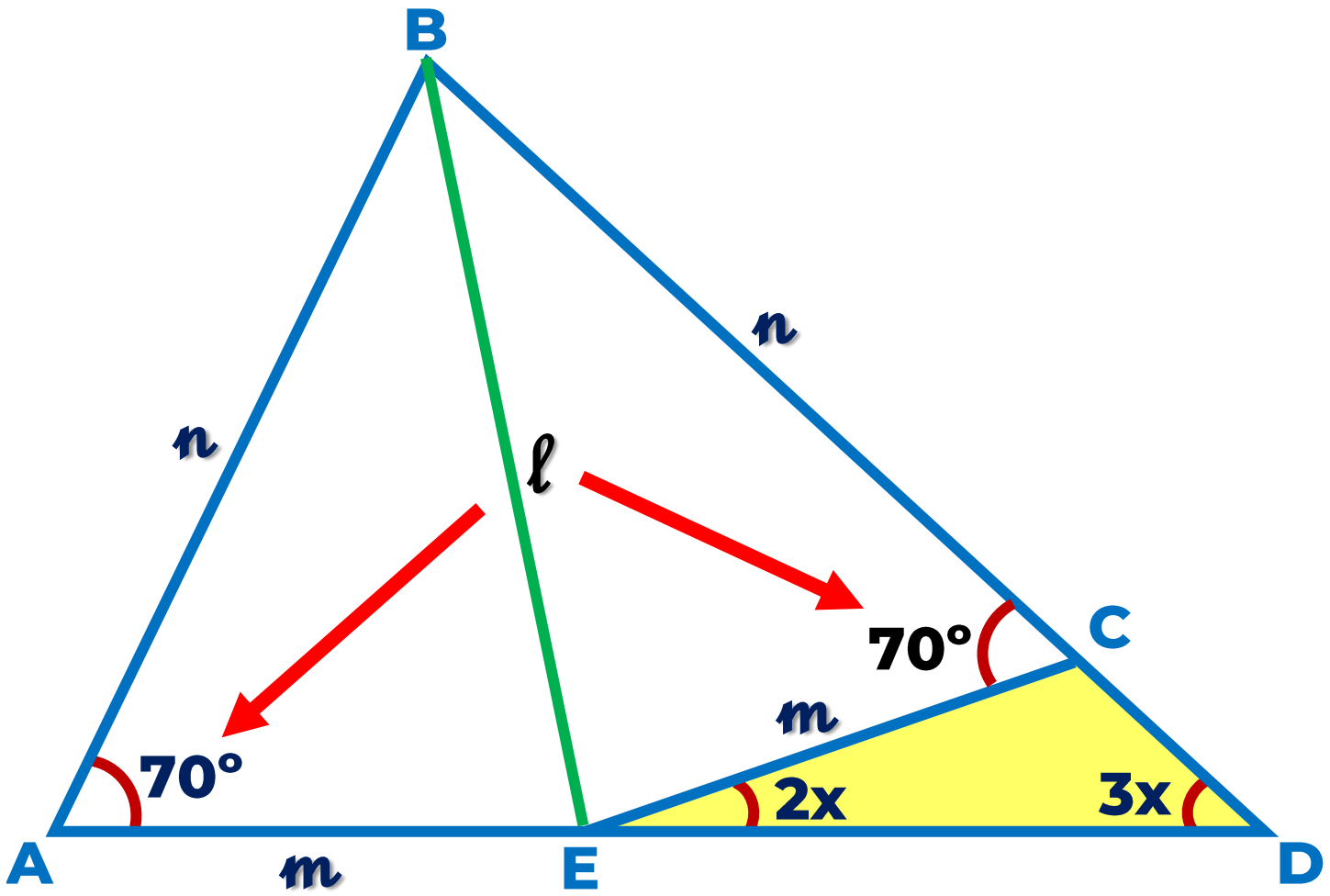
Del gráfico

$2x + 3x = 180°$

$5x = 180°$

$x = 36°$

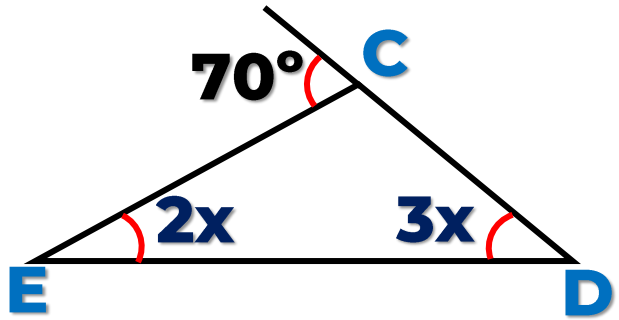
6. En la figura AB = BC y AE = CE, calcule x.



- Trazamos $\overline{BE}$.

$\triangle ABE \cong \triangle CBE$

(L-L-L)



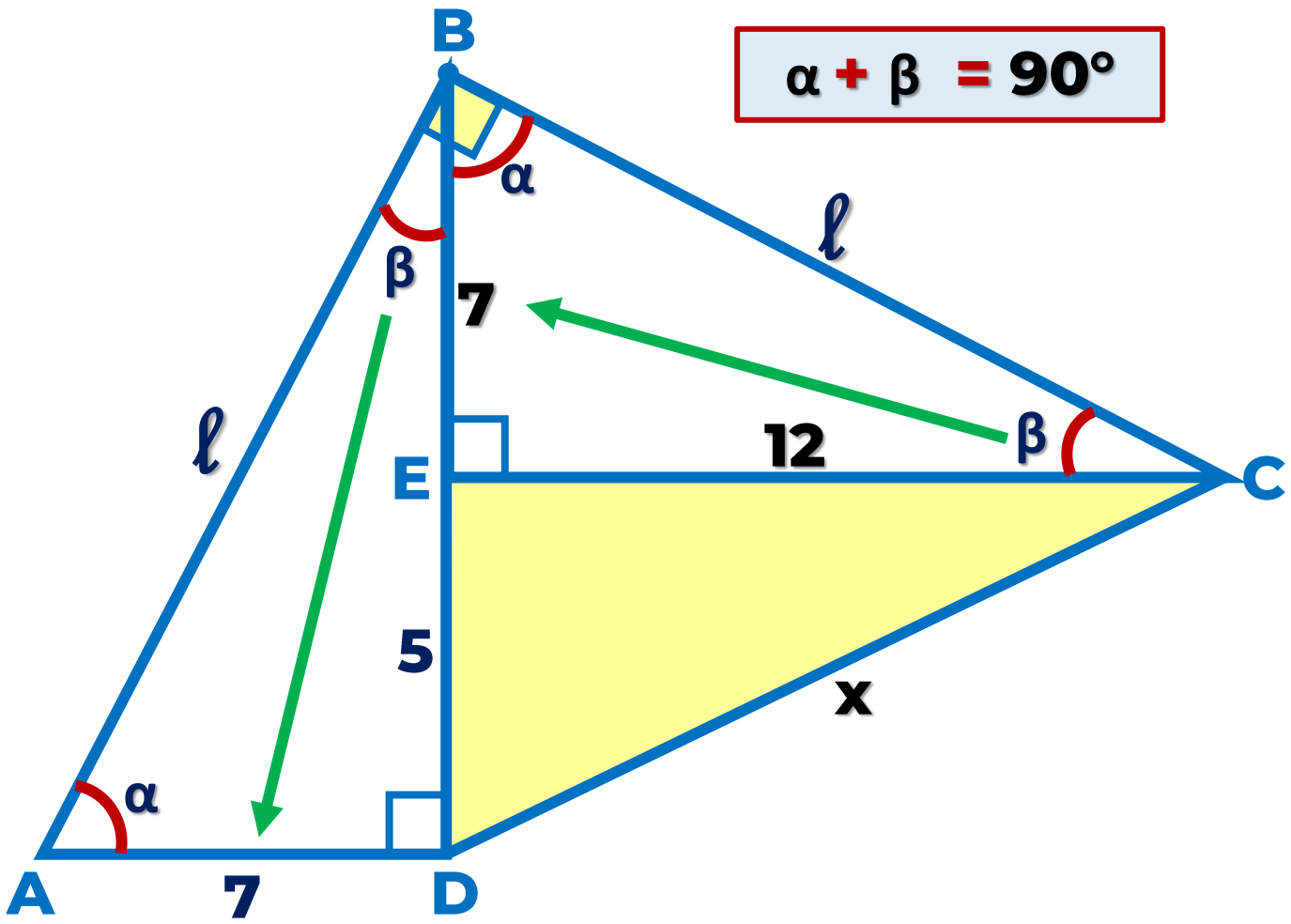
- Del gráfico :

$2x + 3x = 70°$

$5x = 70°$

$x = 14°$

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



$\alpha + \beta = 90°$

$\triangle ABD \cong \triangle BCE$ (A-L-A)

- $AD = BE = 7$
- $EC = BD$

$EC = 7 + 5$

$EC = 12$

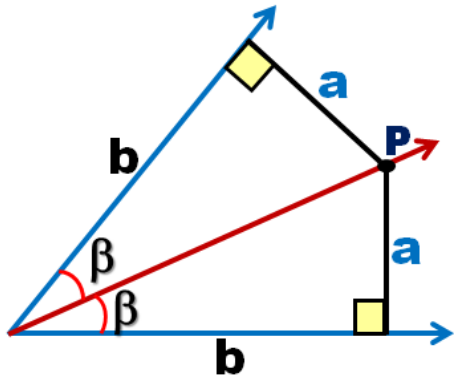
$\triangle CED$ T. Pitágoras

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

$x^2 = 169$

$x = 13$

8. En la figura, calcule x.



Del gráfico

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

△PMH : T. Pitágoras

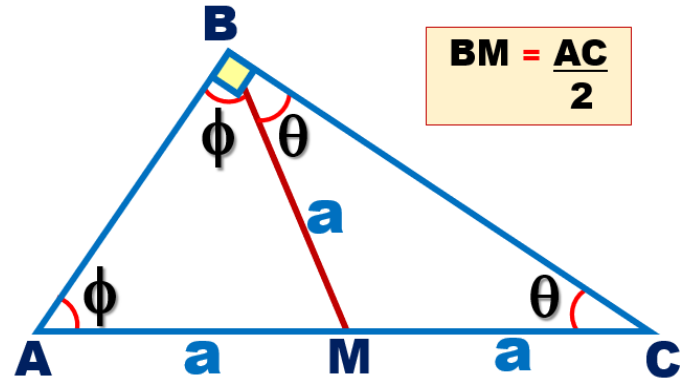
$x^2 = 8^2 + 15^2$

$x^2 = 289$

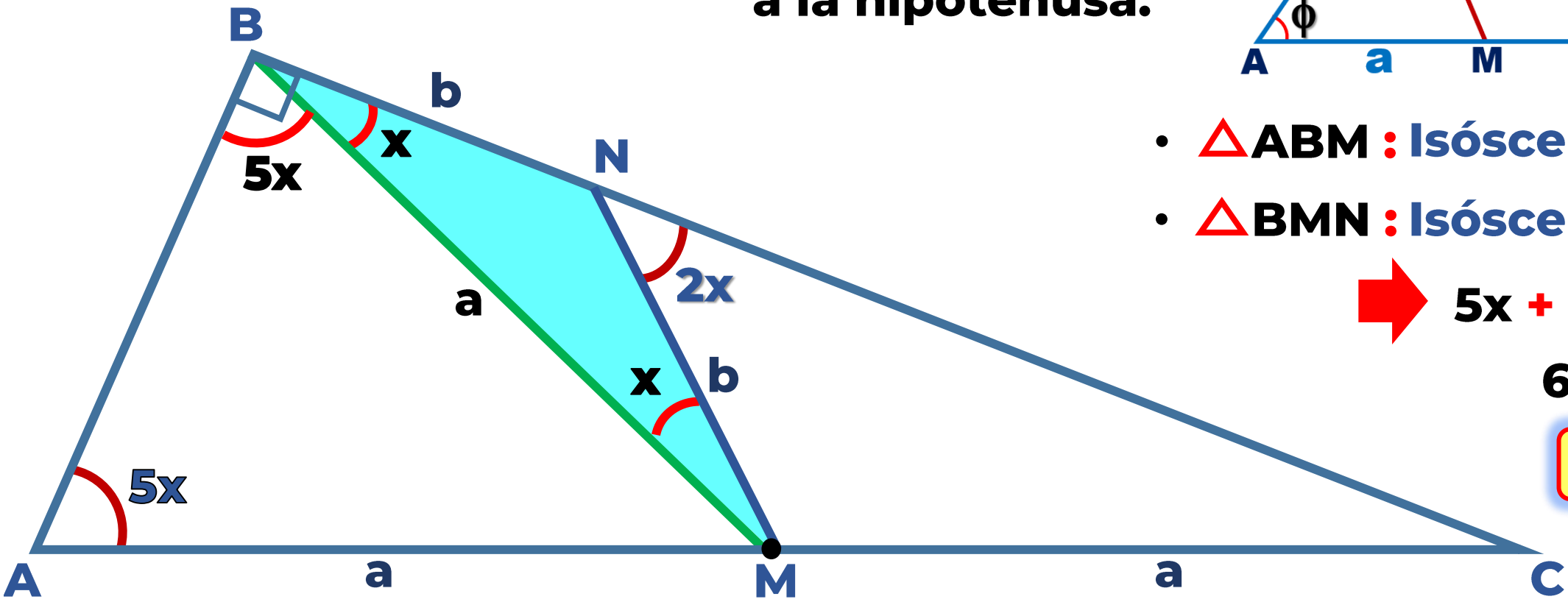
x = 17

B
8
P
14
8
x
θ
θ
A
14
H
15
M
29

9. En la figura, calcule x.



$\overline{BM}$: Mediana relativa a la hipotenusa.



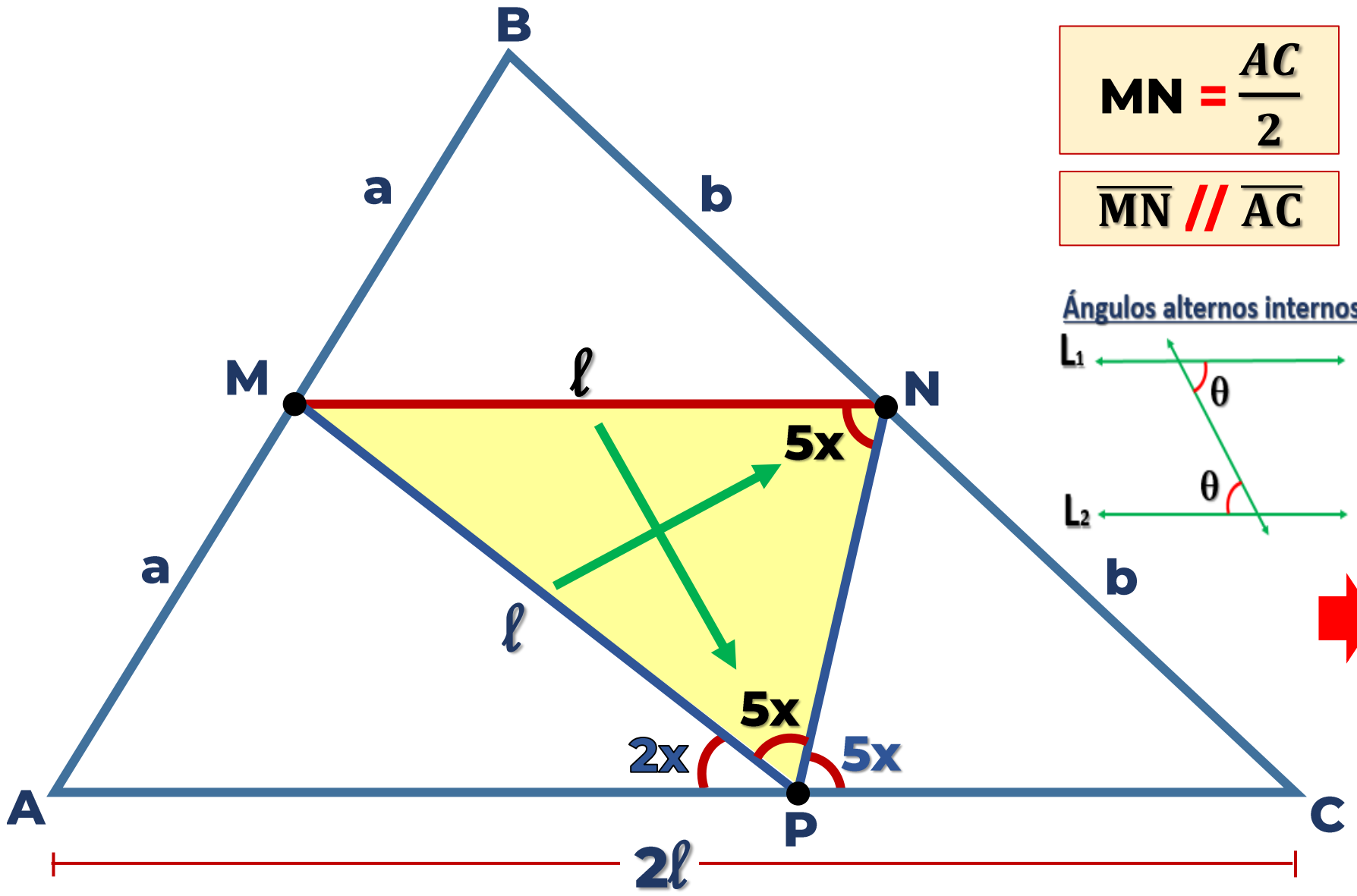
- △ABM : Isósceles
- △BMN : Isósceles

➡ 5x + x = 90°

6x = 90°

x = 15°

10. En la figura, calcule x.

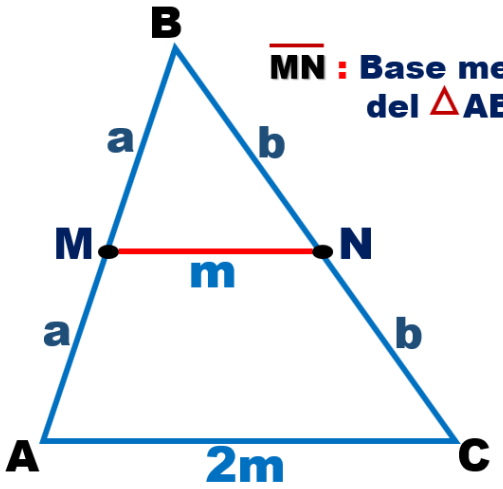


$$MN = \frac{AC}{2}$$

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

Ángulos alternos internos

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



- ΔMNP : Isósceles

$$2x + 5x + 5x = 180°$$

$$12x = 180°$$

$$x = 15°$$