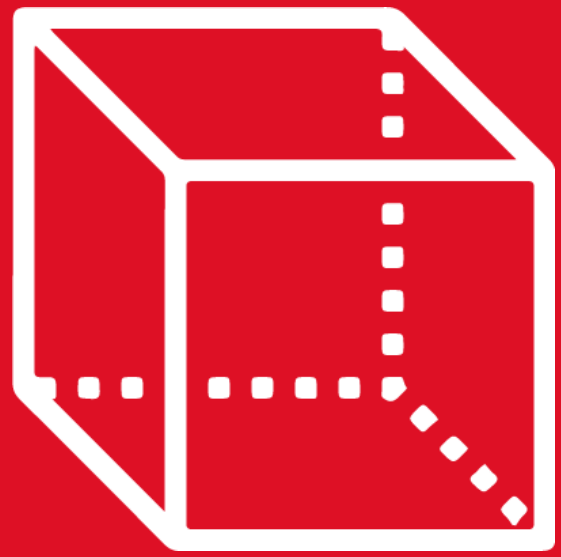
GEOMETRÍA

Repaso



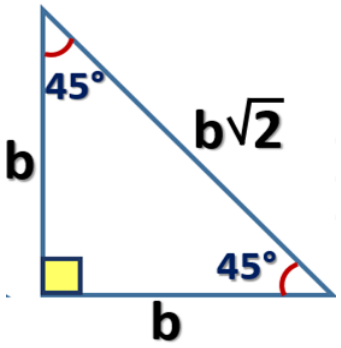
3st

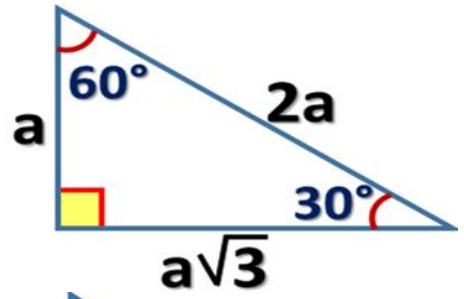
Asesoría

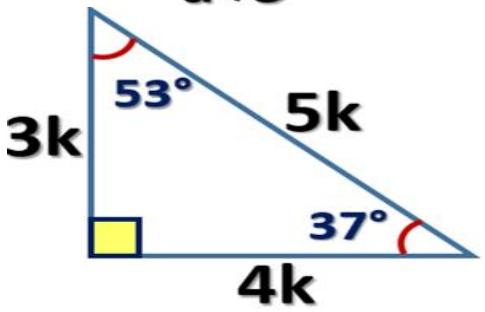
SACO OLIVEROS

1. Calcule K. Si:

$$K = \frac{DE - CD}{AE}$$







Nos piden

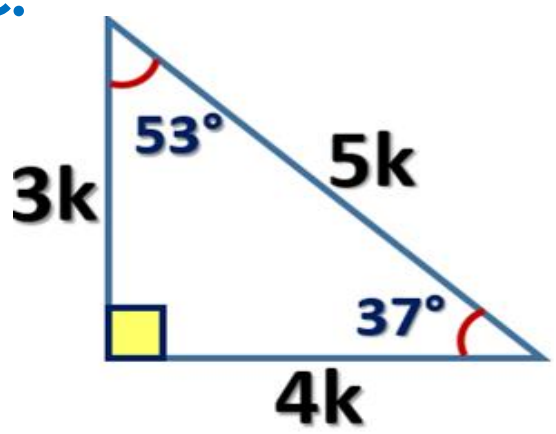
$$\frac{4(4)}{6} = 1$$

$$K = \frac{DE - CD}{AE}$$

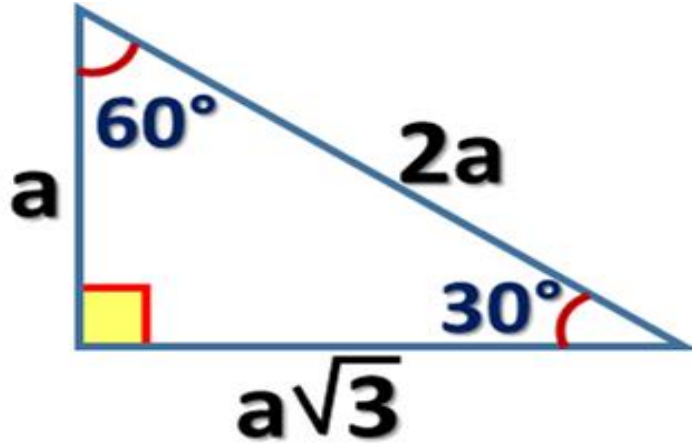
$$K = \frac{16 - 6}{20} = \frac{10}{20}$$

$$K = 1/2$$

2. En la figura, calcule BC.



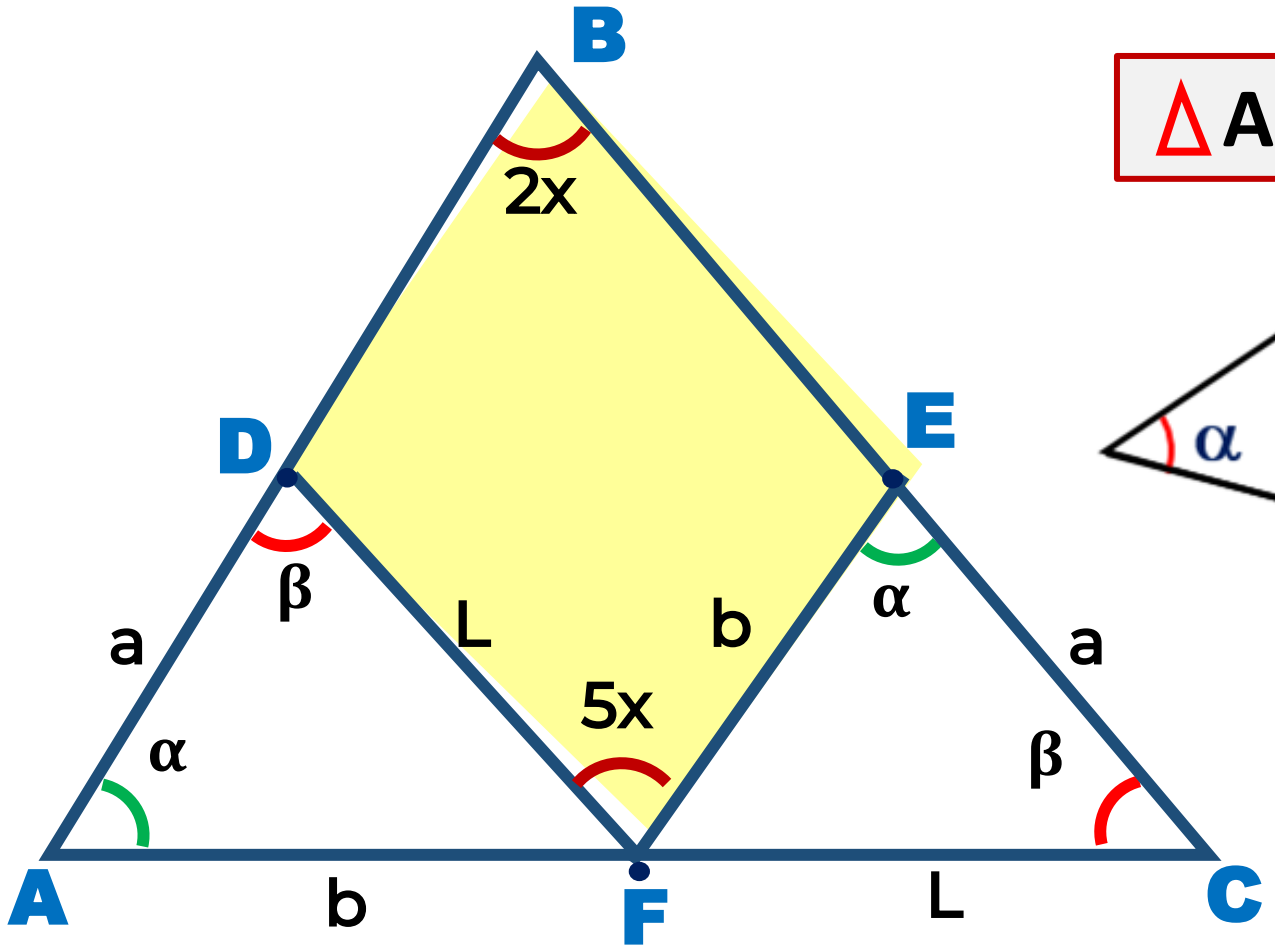
- Trazamos la altura $\overline{CH}$.



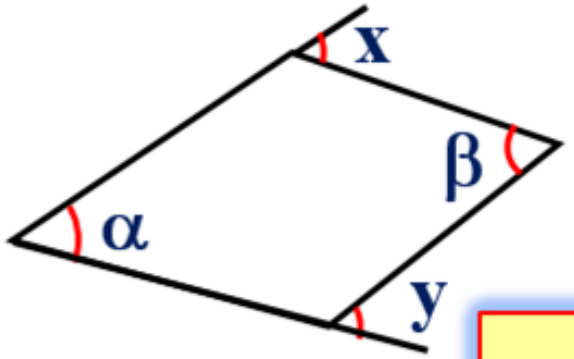
Nos piden

BC = 12

3. Se tiene un triángulo ABC, se ubican los puntos D, E y F sobre los lados $\overline{AB}$, $\overline{BC}$ y $\overline{AC}$, respectivamente, AD = EC, AF = FE , DF = FC, m<ABC = 2x y m<DFE = 5x. Calcule x.



$\Delta ADF \cong \Delta ECF$ (L-L-L)



- $\alpha + \beta = 2x + 5x$
- $\alpha + \beta = 7x$

$x + y = \alpha + \beta$

- Δ ABC :

$\alpha + \beta + 2x = 180°$

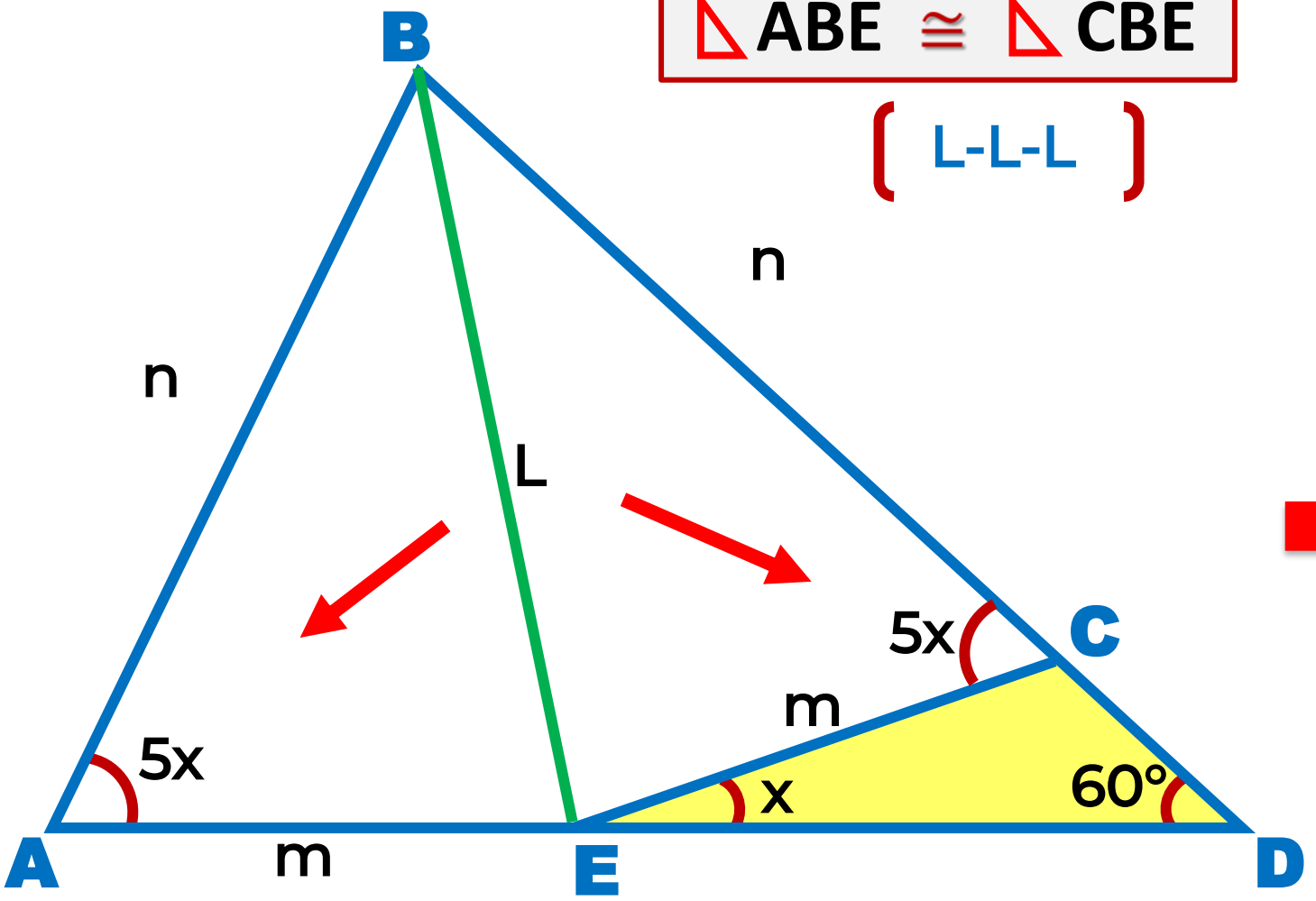
$9x = 180°$

7

x

$x = 20°$

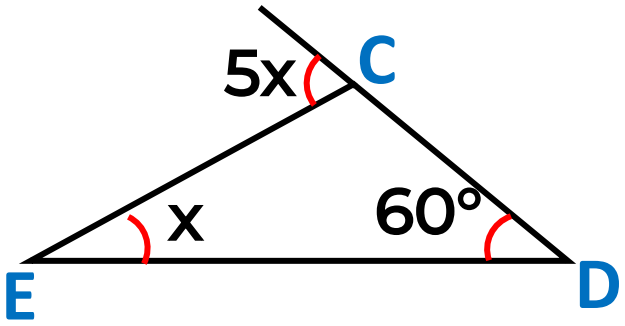
4. En la figura AB = BC y AE = CE, calcule x.



$\triangle ABE \cong \triangle CBE$

(L-L-L)

- Trazamos $\overline{BE}$.

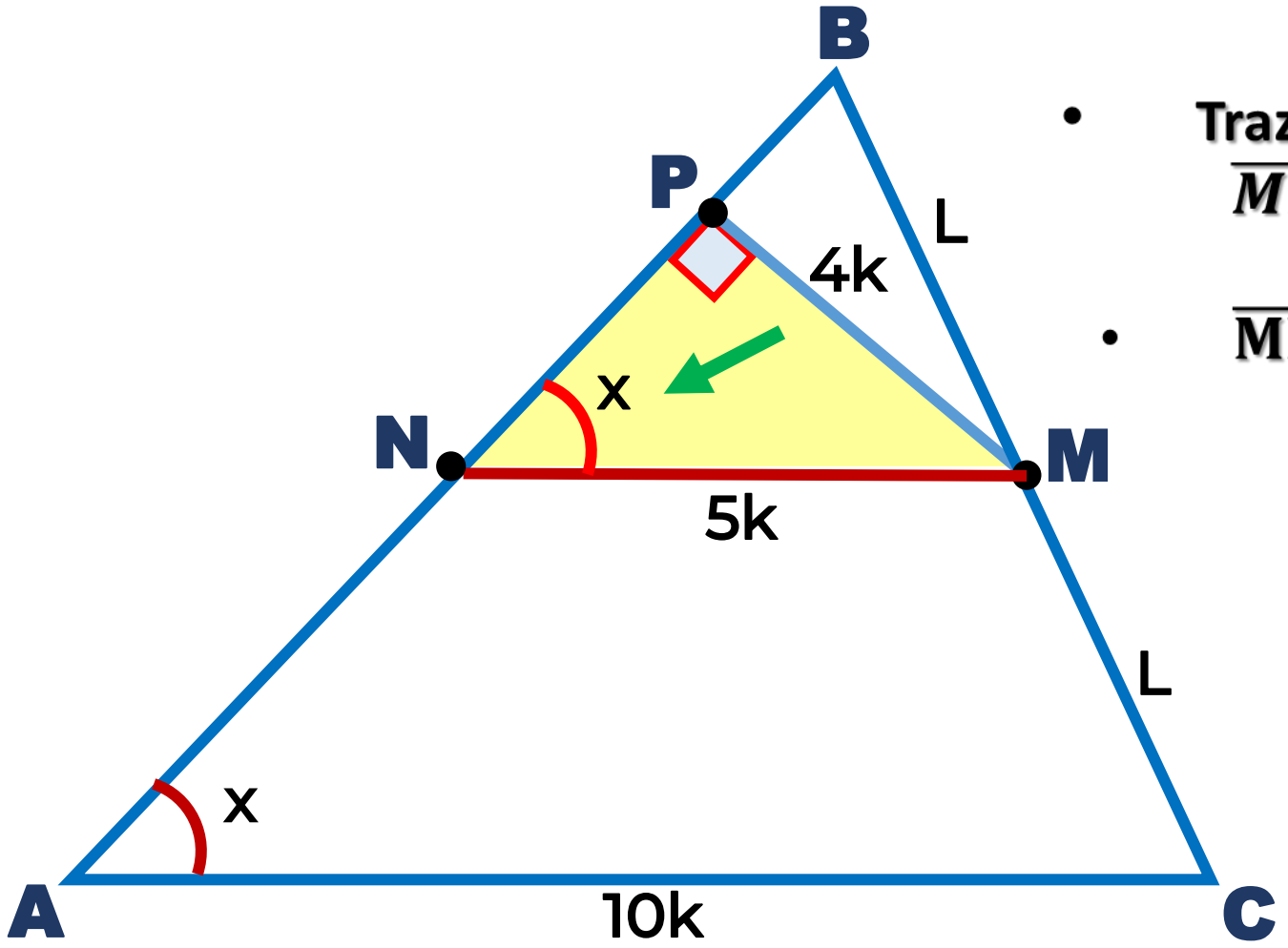


- Del gráfico :
  - $5x = x + 60°$

$4x = 60°$

$x = 15°$

5. En un triángulo ABC, M es punto medio de $\overline{BC}$, se ubica en $\overline{AB}$ el punto P; tal que, m<APM = 90°, PM = 4k y AC = 10k, calcule m<BAC.

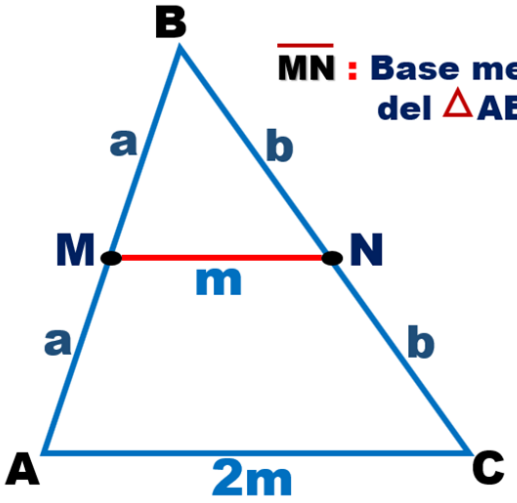


- Trazamos $\overline{MN}$ *paralela a* $\overline{AC}$

- $\overline{MN}$: Base media

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

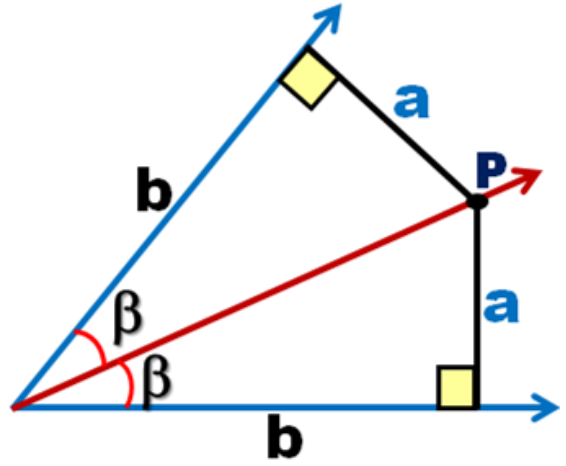
$$\overline{MN} \parallel \overline{AC}$$



MNP: Notable de 37° y 53°

$x = 53°$

6. En la figura, calcule x.



Del gráfico

- BP = PH = 7
- AB = AH = 18

△PMH T. Pitágoras

$x^2 = 7^2 + 24^2$

$x^2 = 625$

$x = 25$

7. Calcule el número total de diagonales de un polígono convexo, cuya suma de las medidas de los ángulos internos es el cuádruple de la suma de las medidas de los ángulos exteriores.

n : número de lados.

$Sm\angle i = 180°(n - 2)$

$Sm\angle e = 360°$

- Por dato
- $Sm\angle i = 4(Sm\angle e)$

$$\frac{180°(n - 2)}{1} = \frac{4(360°)}{2}$$

$$n - 2 = 8$$

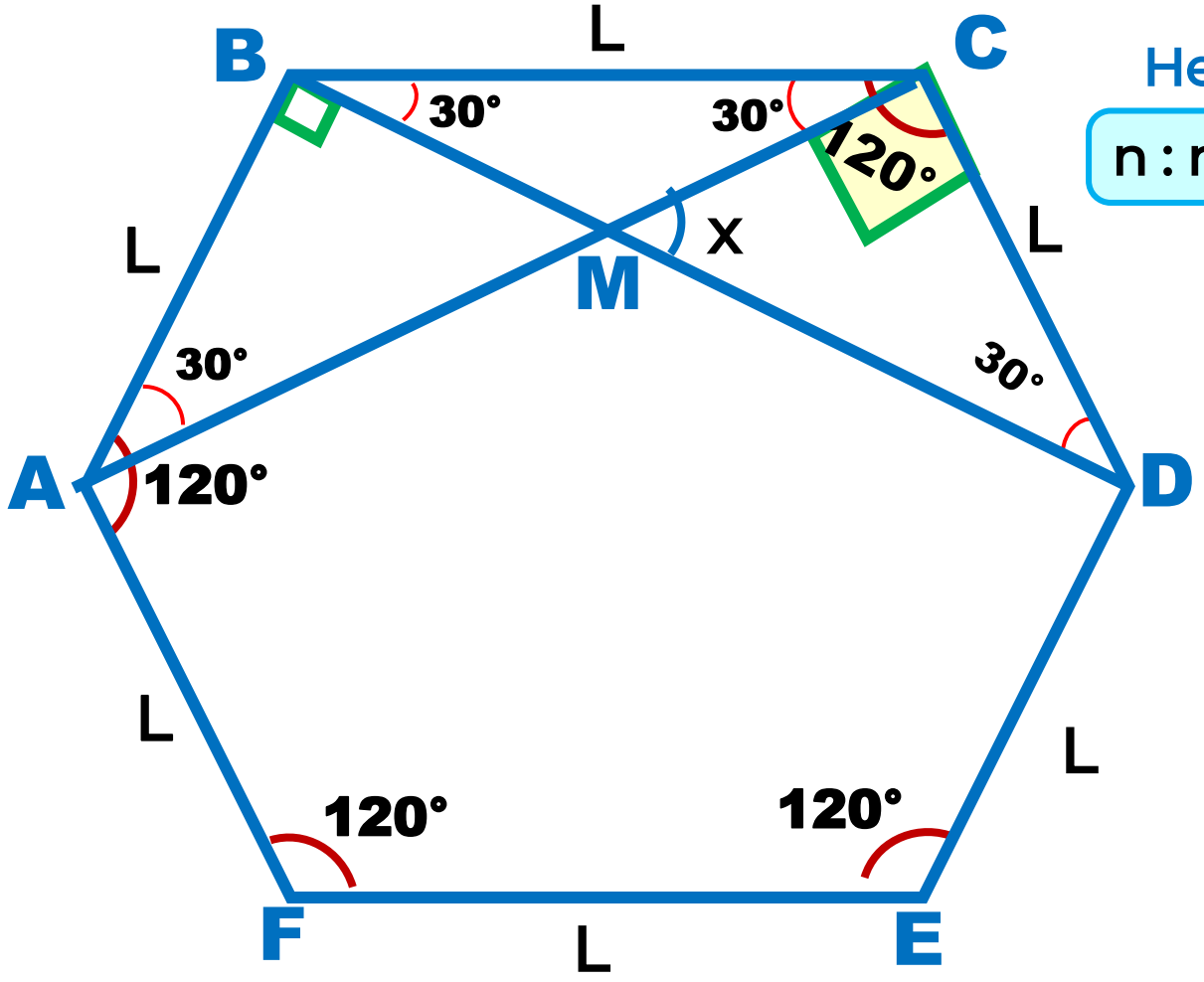
$$n = 10$$

$$NTD = \frac{n(n - 3)}{2}$$

- Nos piden NTD
- $NTD = \frac{10(10 - 3)}{2}$
- $NTD = \frac{10(7)}{2}$ (5 y 1)

NTD = 35

8. Calcule x, si ABCDEF es un hexágono regular.



Hexágono regular

n : número de lados

n = 6

$$m\angle i = \frac{180°(n-2)}{n}$$

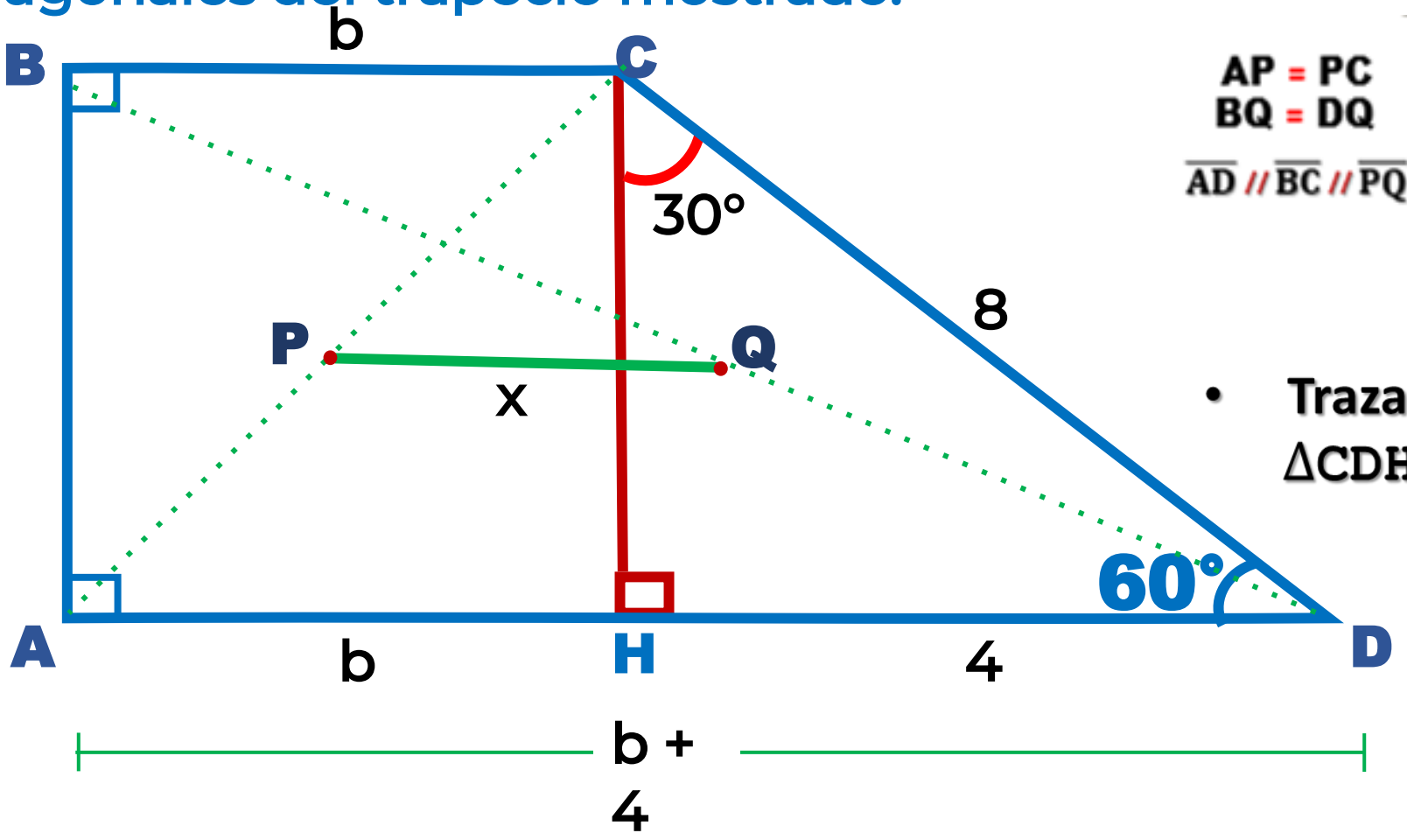
$$m\angle i = \frac{180°(6-2)}{6}$$

$$m\angle i = 120°$$

- $\triangle$ BCD : Isósceles
- $\triangle$ ABC : Isósceles
- $\triangle$ CDM : $x + 30° = 90°$

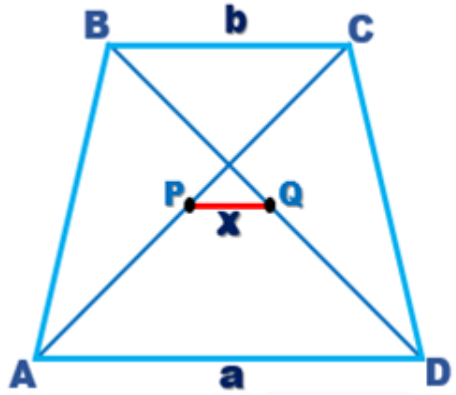
$$x = 60°$$

9. Halle la longitud del segmento que une los puntos medios de las diagonales del trapecio mostrado.



$AP = PC$
$BQ = DQ$
$\overline{AD} // \overline{BC} // \overline{PQ}$

$X = \frac{a-b}{2}$



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

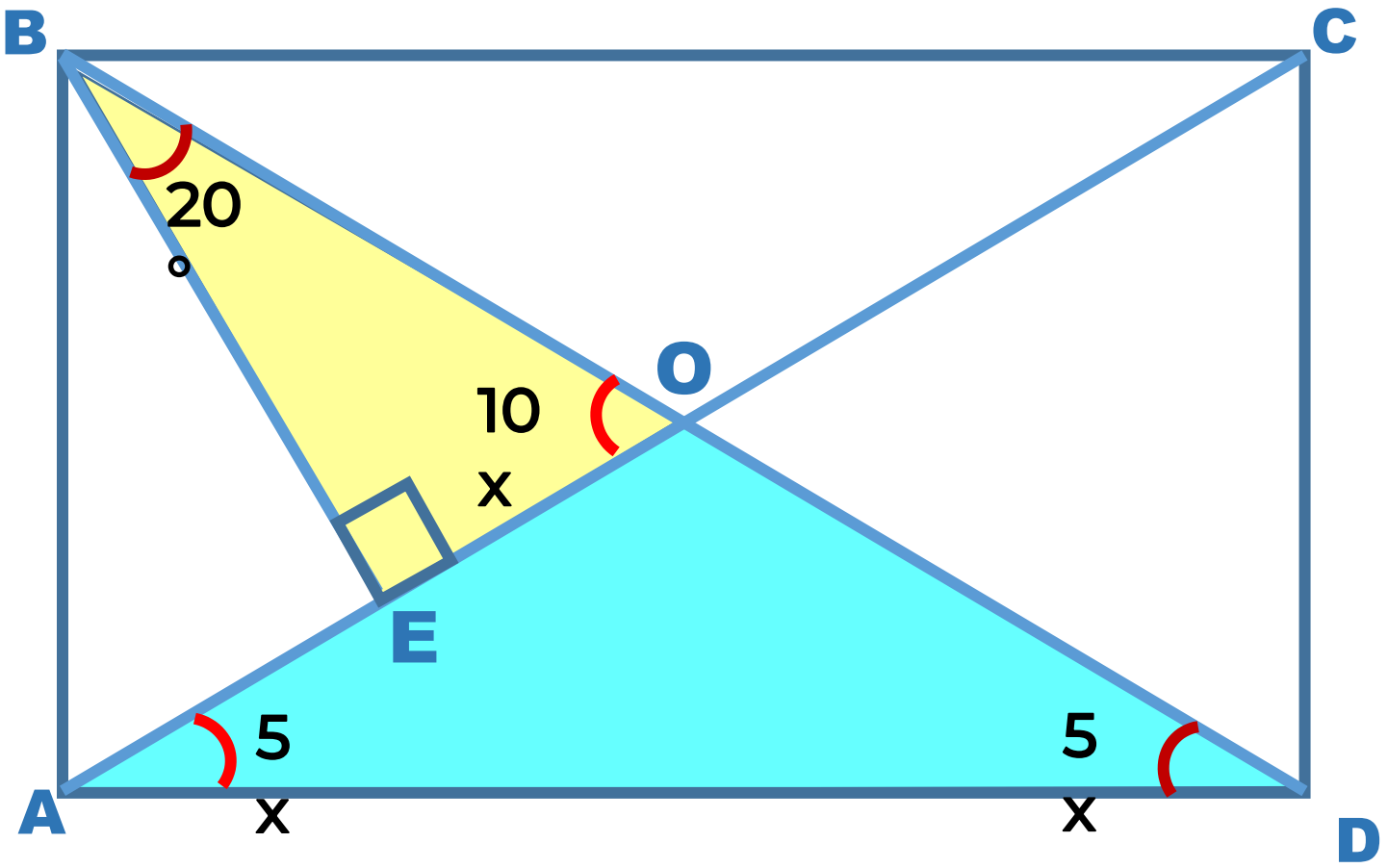
ΔCDH: Notable de 30° y 60°

- Por teorema
- $X = \frac{(b + 4) - b}{2}$

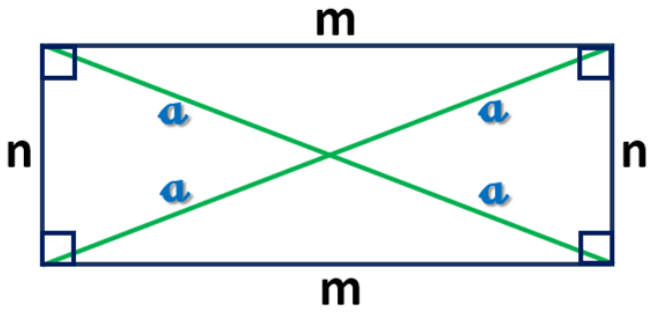
$x = \frac{4}{2}$

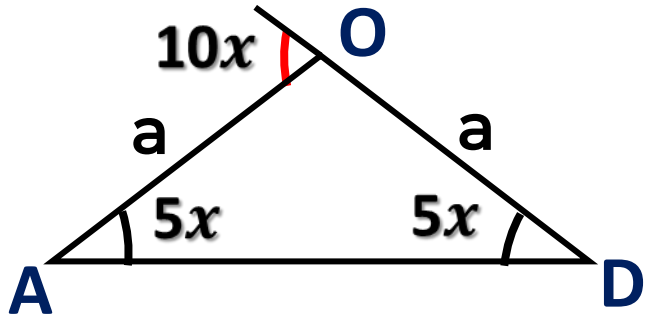
x = 2

10. En la figura, ABCD es un rectángulo, calcule x.



RECTÁNGULO





EBO : $20° + 10x = 90°$

$10x = 70°$

$x = 7°$