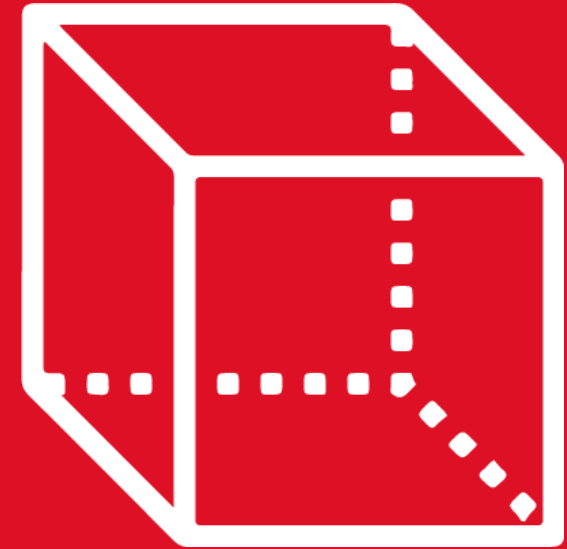




GEOMETRÍA

TOMO 3

3th
SECONDARY



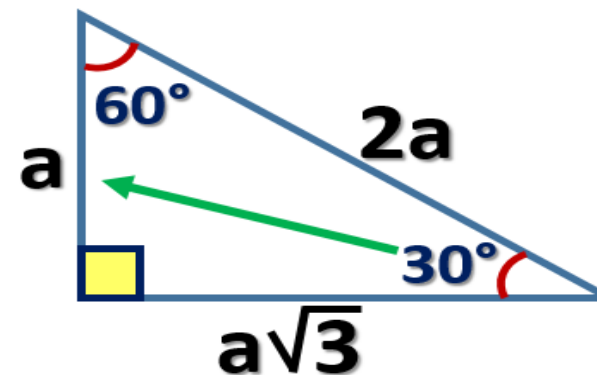
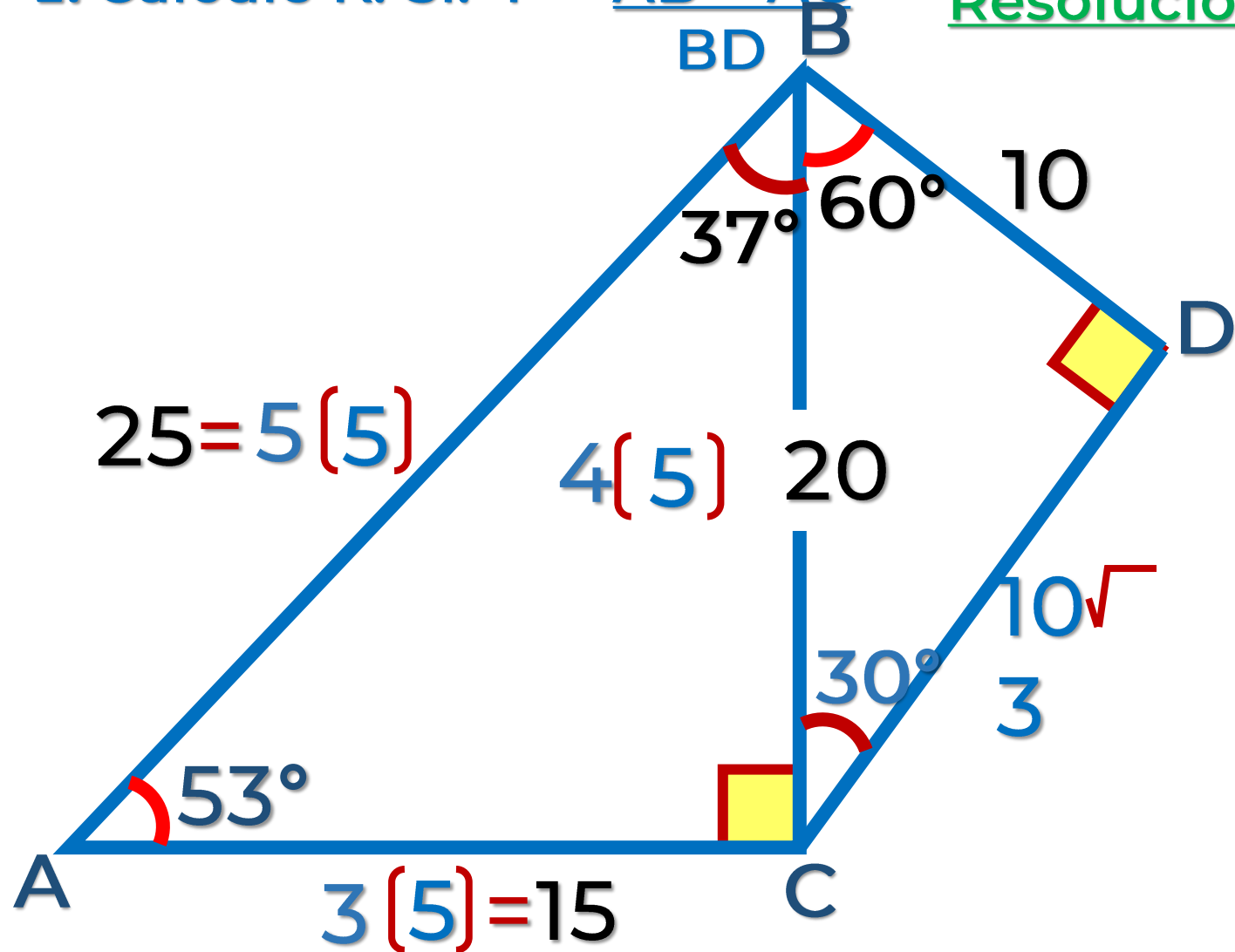
HELICOASESORIA
SESION II

 **SACO OLIVEROS**



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

Resolución



Nos

piden

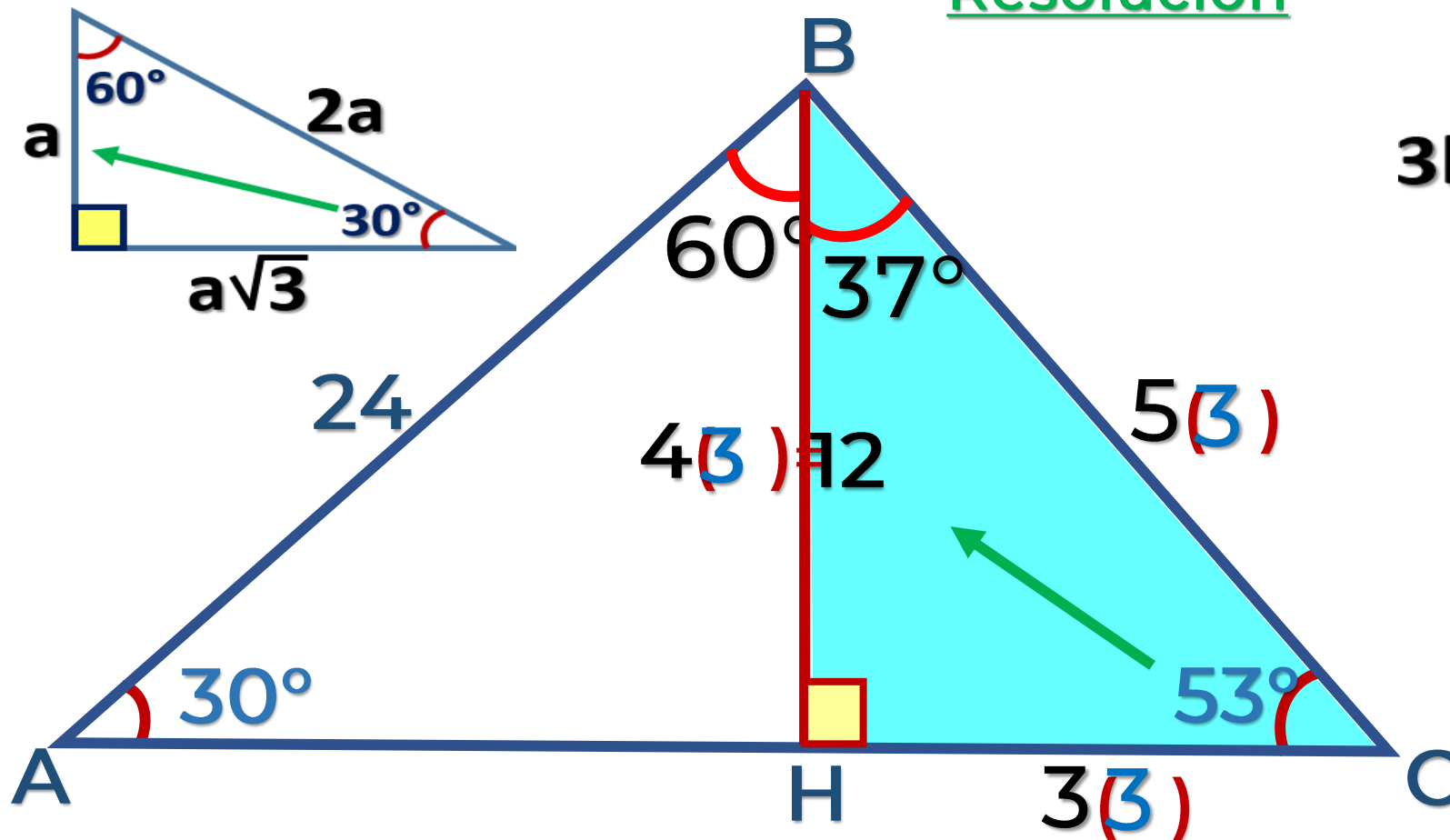
$$P = \frac{AB + AC}{BD}$$

$$\Rightarrow P = \frac{25 + 15}{10} = \frac{40}{10}$$

$$P = 4$$

2. En la figura, calcule BC.

Resolución



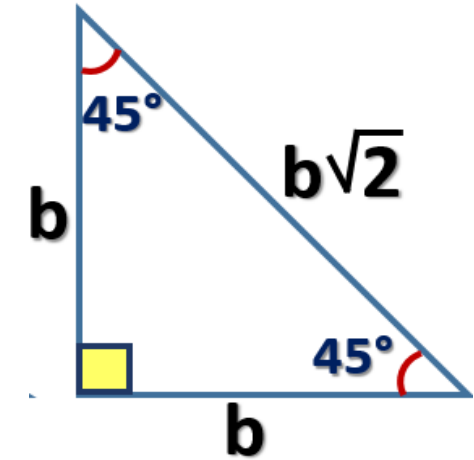
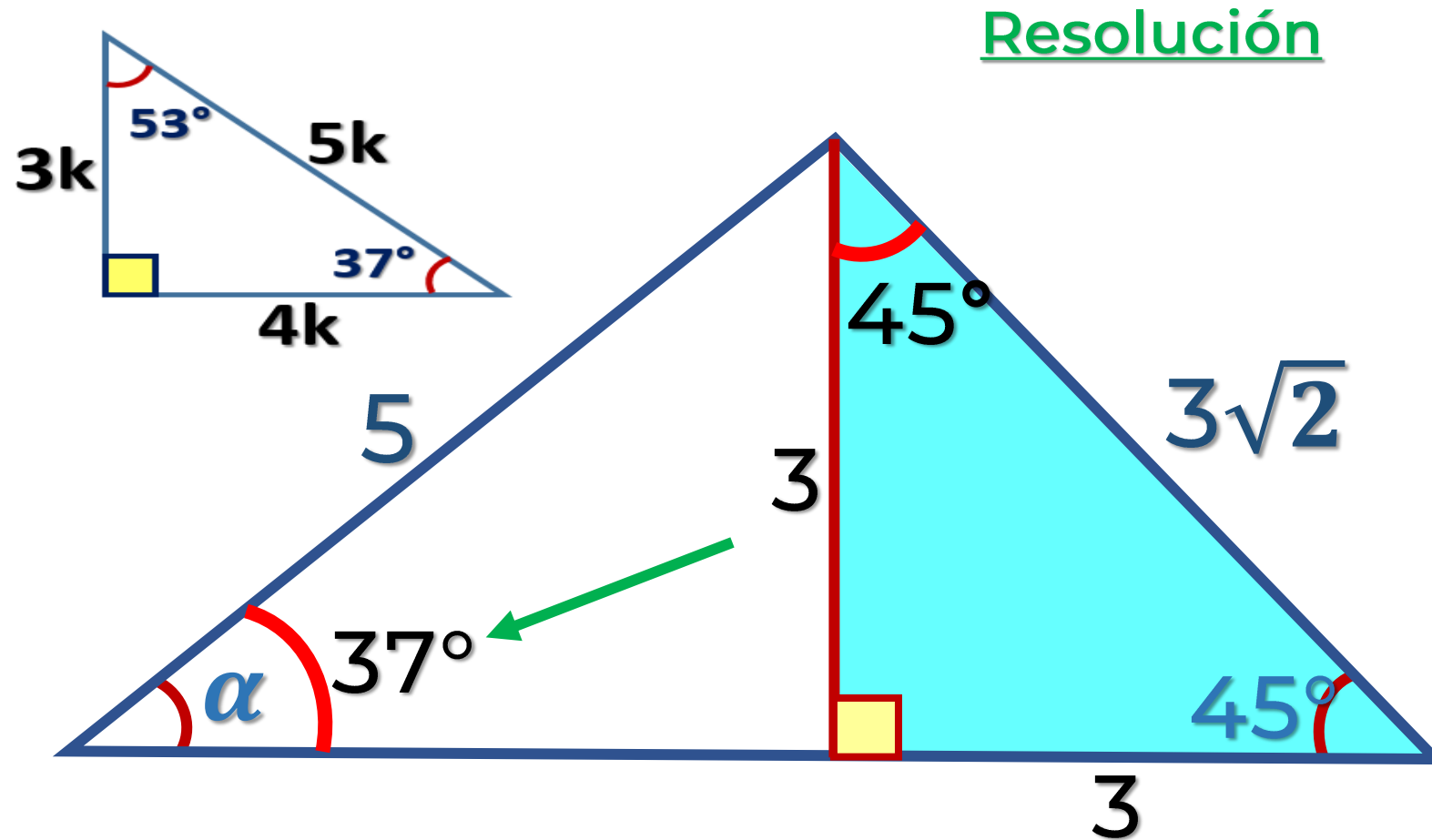
• Nos piden

➔ $BC = 5(3)$

$BC = 15$



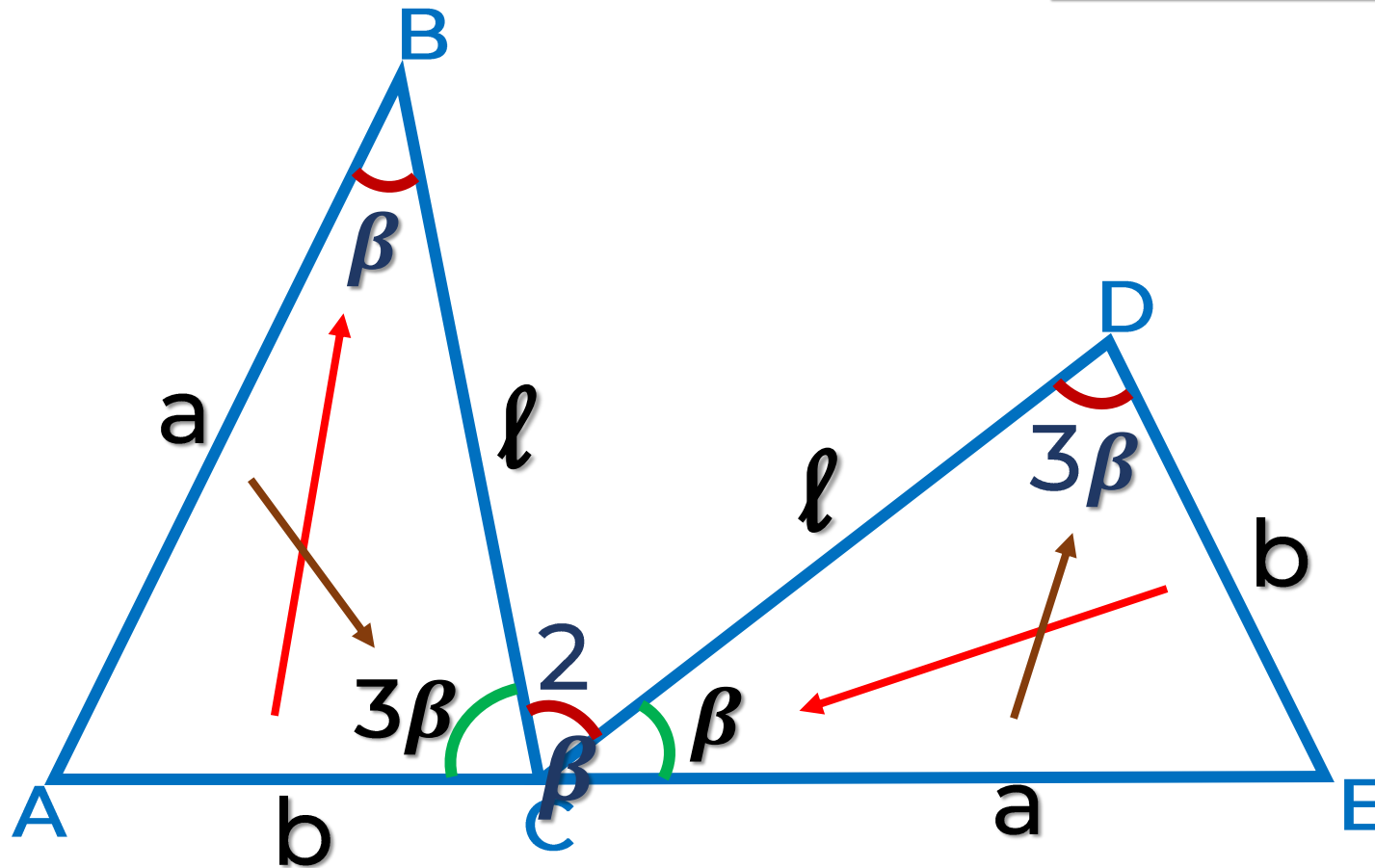
3. En la figura, calcule α .



$$\alpha = 37^\circ$$

4. En la figura, $AB = CE$, $AC = DE$ y $BC = CD$. Calcule β .

Resolución



$\triangle ABC \cong \triangle$

$ECD \quad (-L-L)$

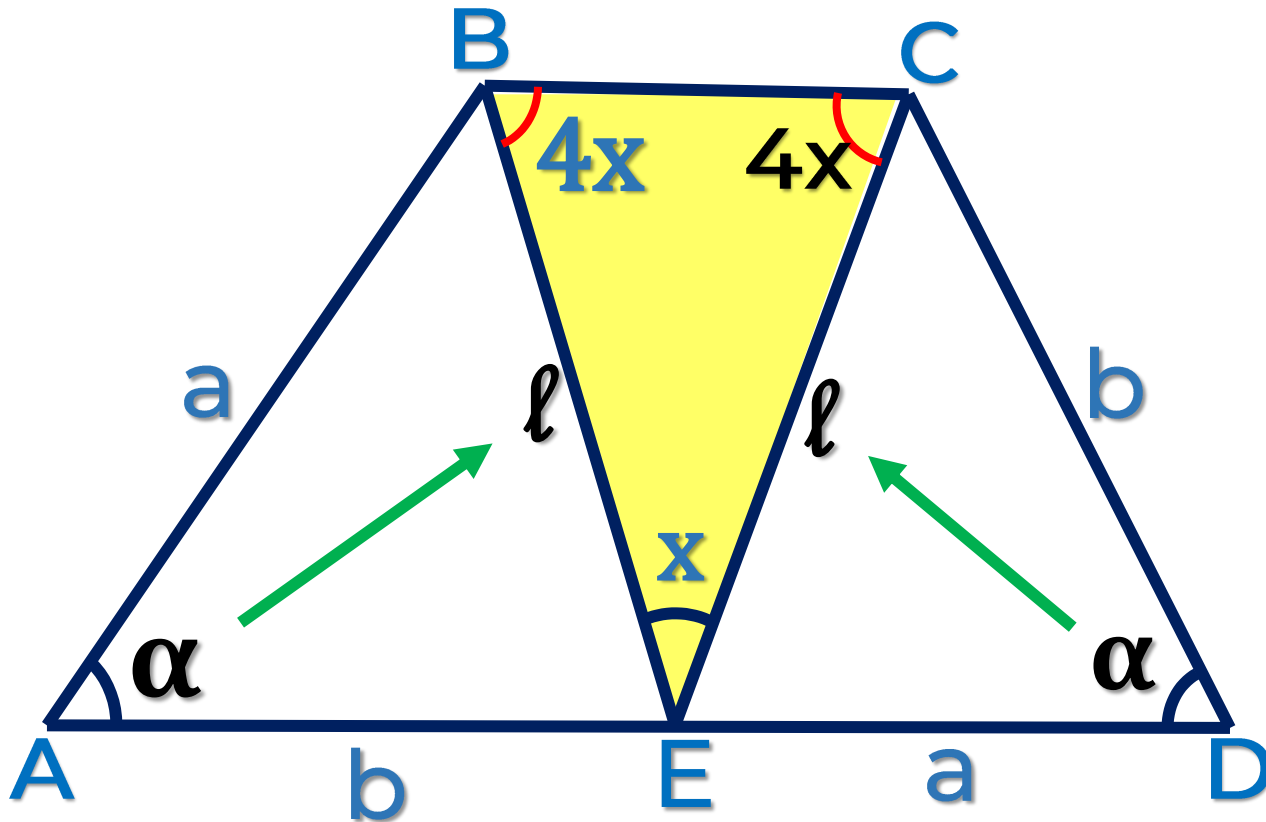
$$\beta + 2\beta + 3\beta = 180^\circ$$

$$6\beta = 180^\circ$$

$$\alpha = 30^\circ$$

5. En la figura, calcule x .

Resolución



- $\triangle ABE \cong \triangle DEC$

L-A-

- BCE : isósceles

$$\Rightarrow 4x + 4x + x = 180^\circ$$

$$9x = 180^\circ$$

$$x = 20^\circ$$



6. En la figura, $AE = DE$. Calcule CD .

Resolución

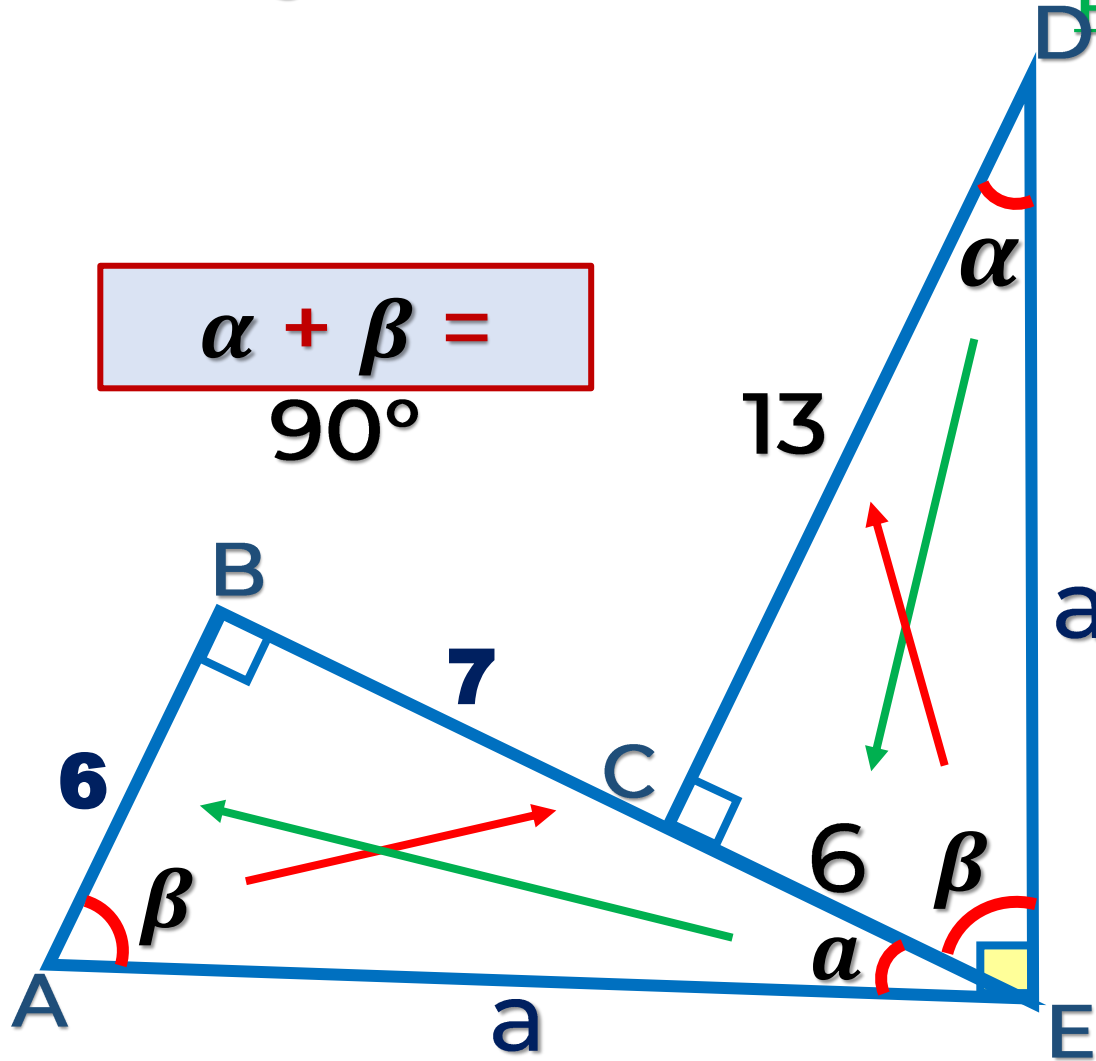
$$\triangle ABE \cong \triangle ECD$$

(A-L-A)

- $AB = CE$
- $CD = BE$

$$\Rightarrow CD = 6 + 7$$

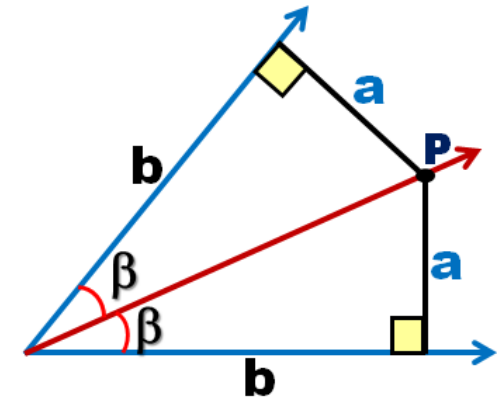
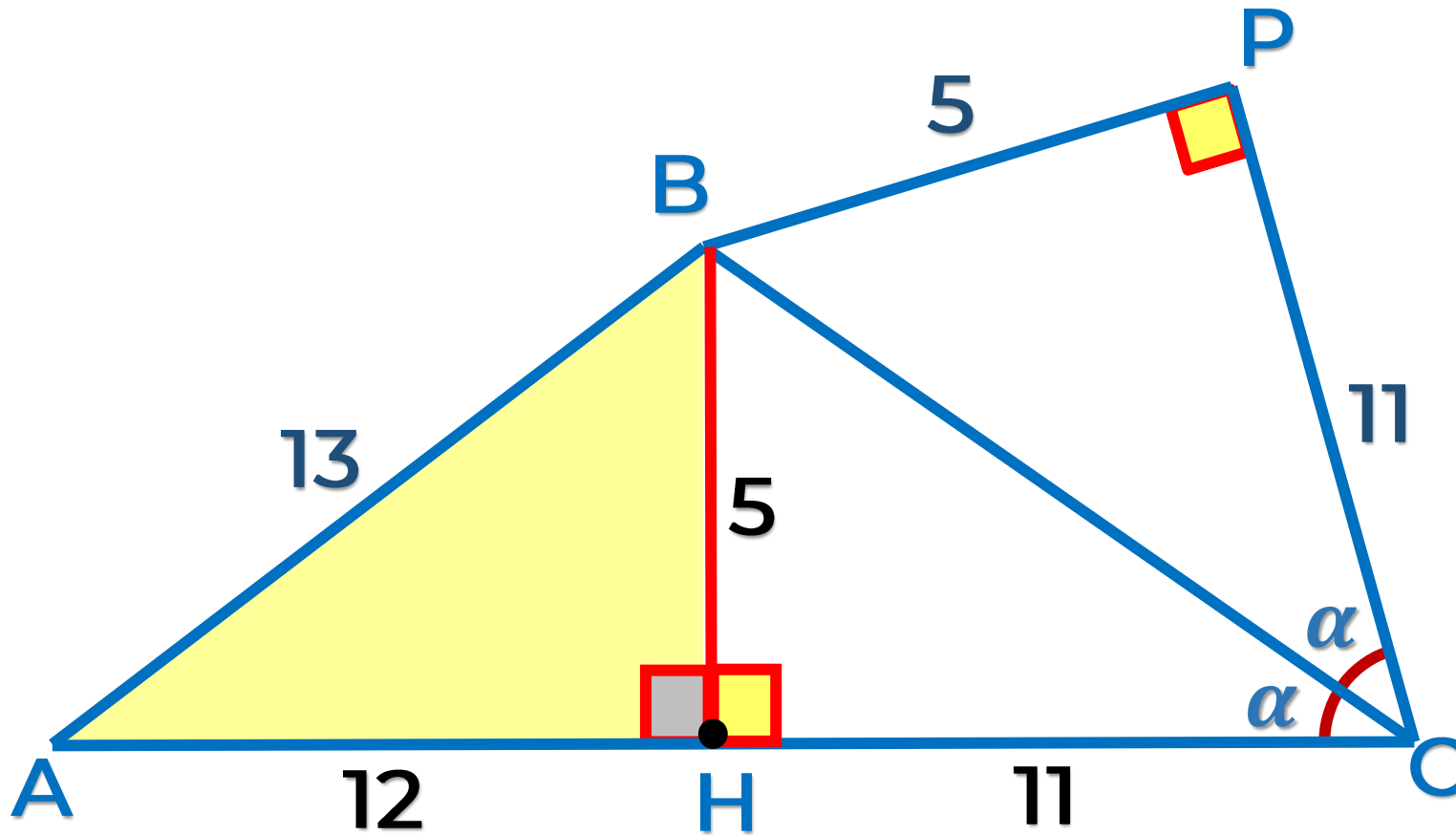
$$CD = 13$$





7. En el gráfico, calcule AC.

Resolución



- $BP = BH = 5$
- $PC = HC = 11$
- $\triangle ABH$: Pitágoras

$$13^2 = (AH)^2 + 5^2$$

$$12 = AH$$

- Del gráfico:

➔ $AC = 12 + 11$

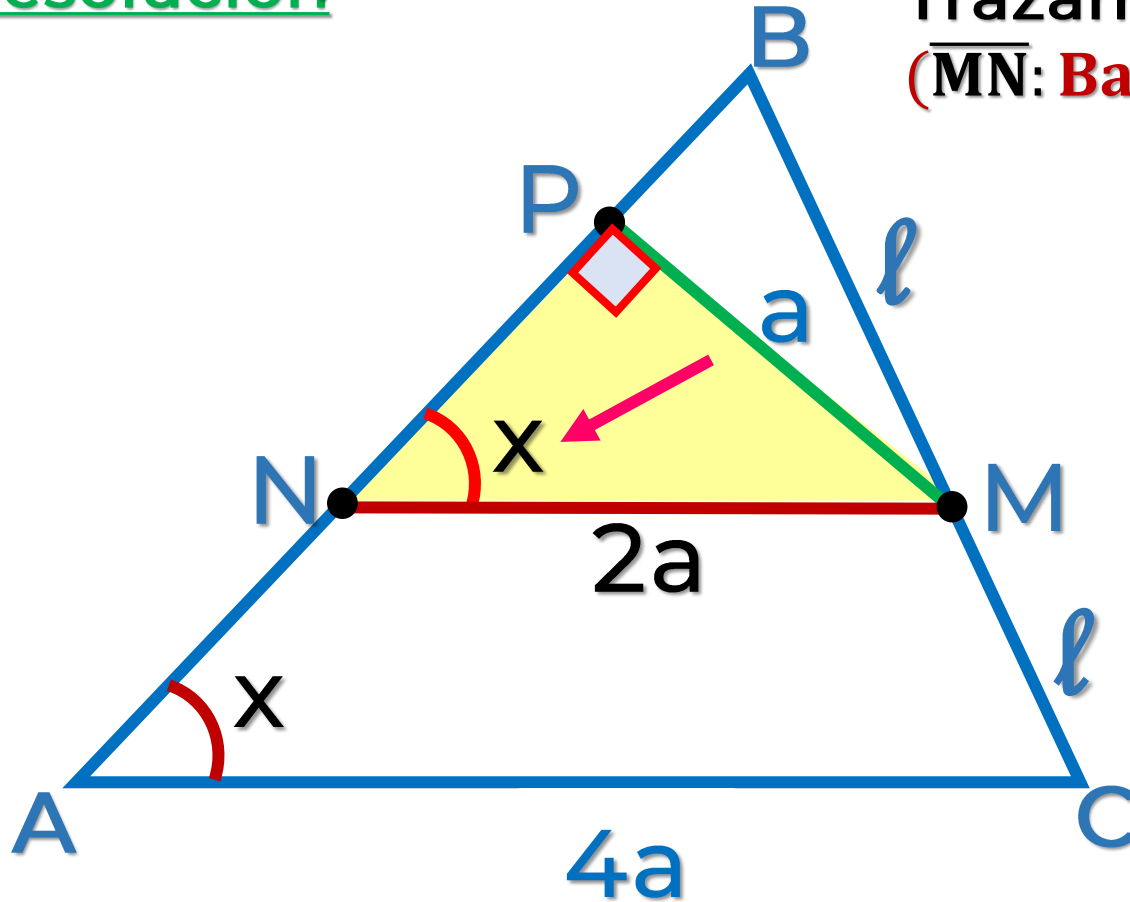
$AC = 23$



8 En un triángulo ABC, en \overline{AB} se ubica el punto P y en \overline{BC} se ubica el punto medio M, tal que $m\angle APM = 90^\circ$. Si $AC = 4(PM)$, calcule $m\angle B$.

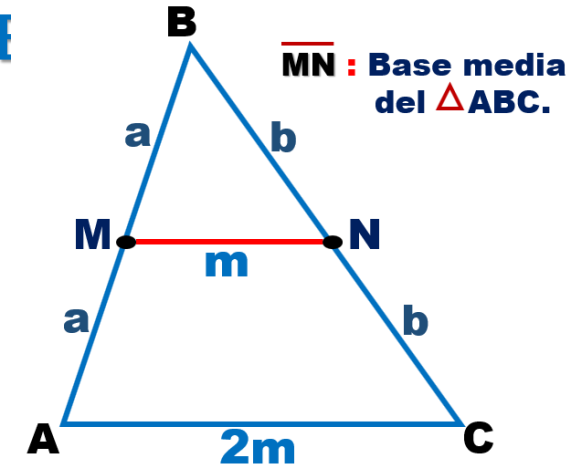
Resolución

Trazamos \overline{MN} paralela a \overline{AC}
(\overline{MN} : Base media)

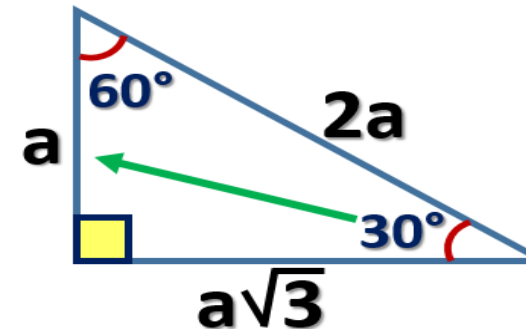


$$MN = \frac{AC}{2}$$

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



$\triangle MNP$: Notable de 30° y 60°

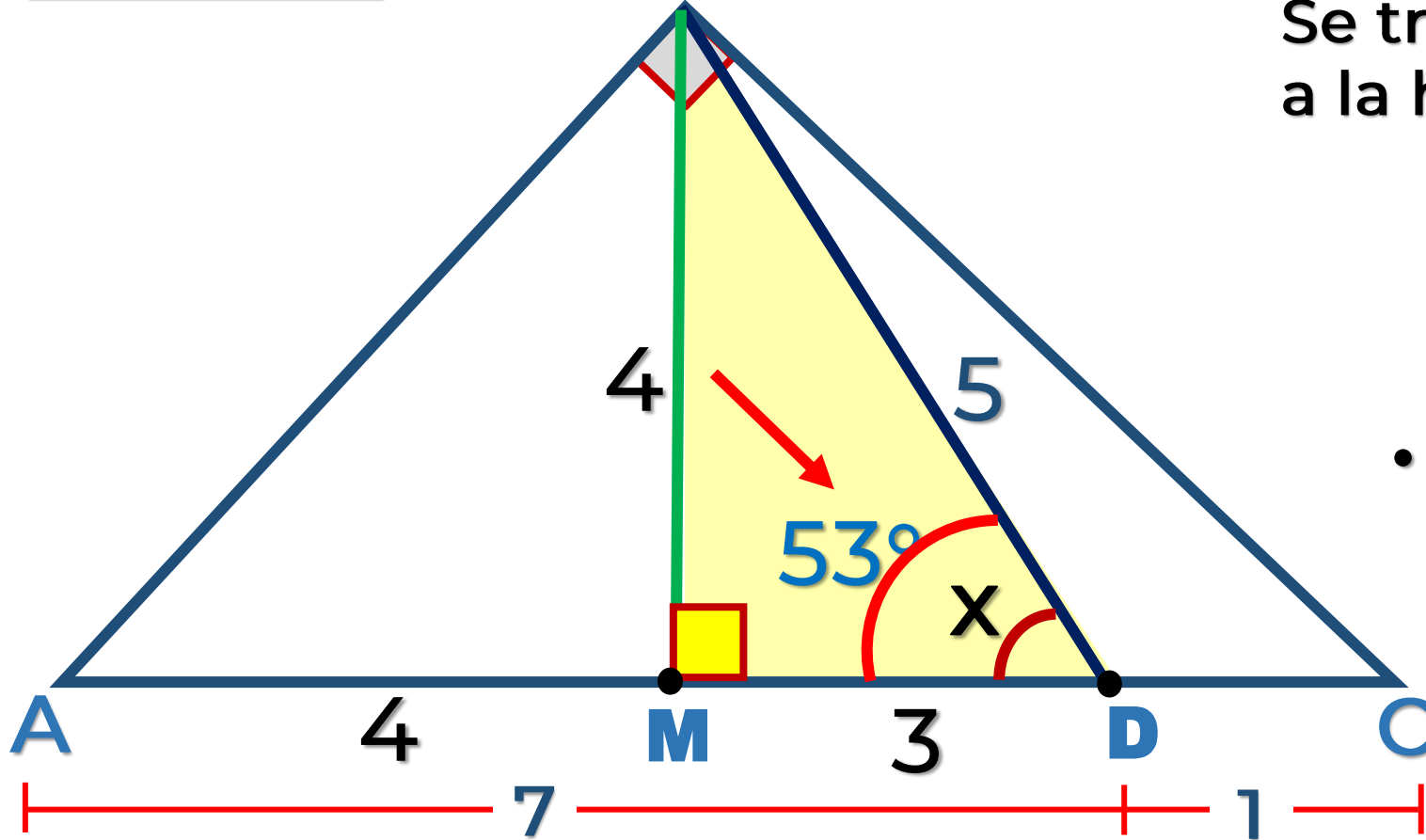


$$x = 30^\circ$$

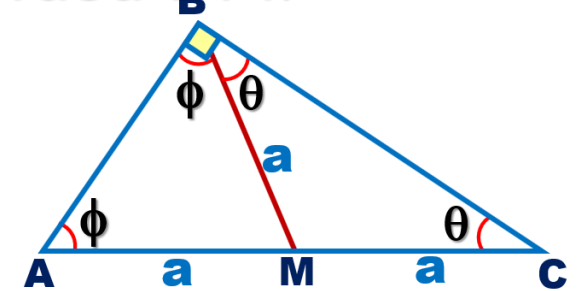


9. En un triángulo rectángulo ABC recto en B, en \overline{AC} se ubican el punto D, de modo que $AD = 7$, $DC = 1$ y $BD = 5$. Calcule $m\angle BDA$.

Resolución



Se traza la mediana relativa a la hipotenusa BM.



- $AM = MC = BM = 4$
- $\triangle BDM$ Notable de 37° y 53°



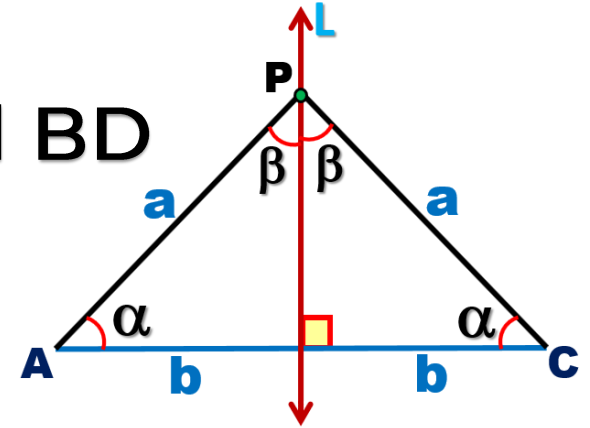
$$x = 53^\circ$$

10. En la figura, calcule la altura del edificio.

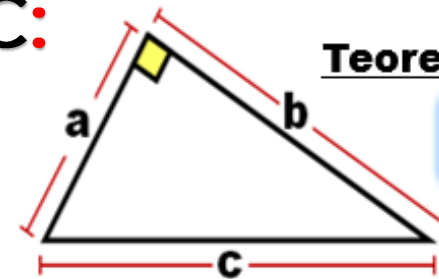
Resolución

\overline{L} : Mediatriz del \overline{BD}

- Teorema de la mediatriz.



- $\triangle ABC$:



Teorema de Pitágoras

$$c^2 = a^2 + b^2$$

$$170^2 = h^2 + 80^2$$

$$h = 150\text{m}$$

