



# GEOMETRÍA

**Tomo 3**

**3rd**  
SECONDARY

**Helico asesoría**

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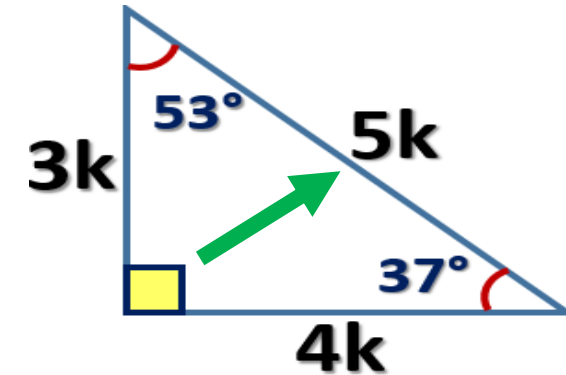
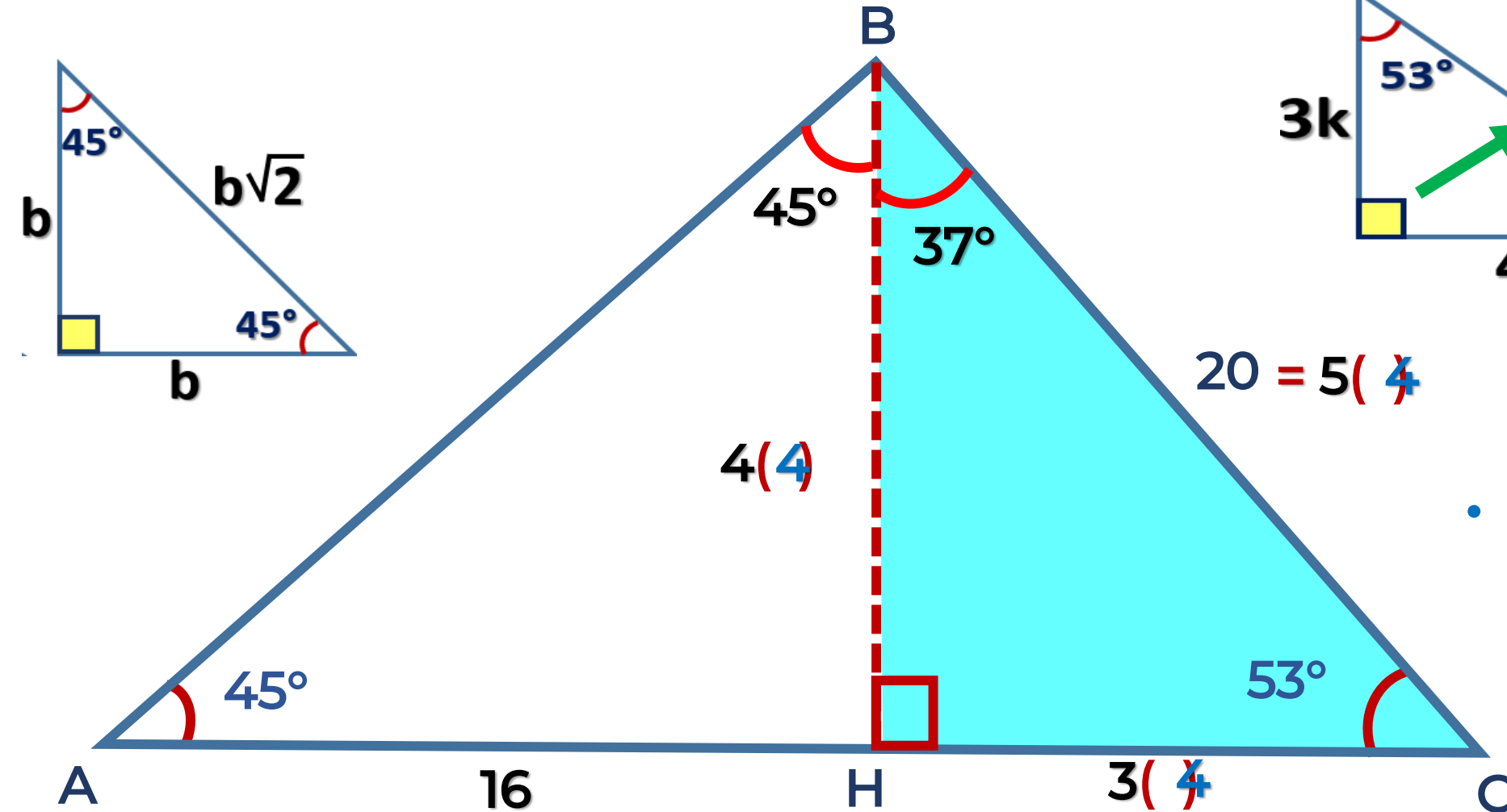


 **SACO OLIVEROS**



1. En la figura, calcule AC.

### Resolución



$$20 = 5(4)$$

• Nos piden

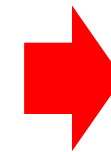
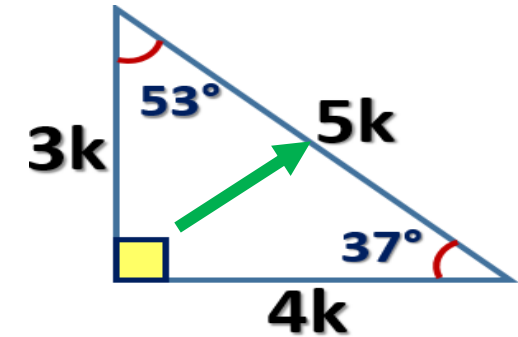
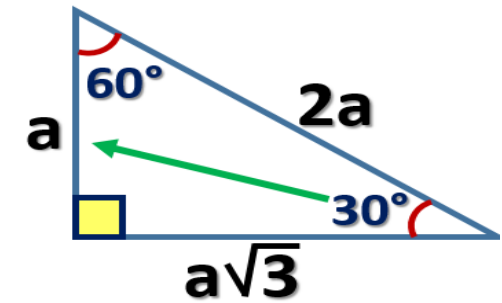
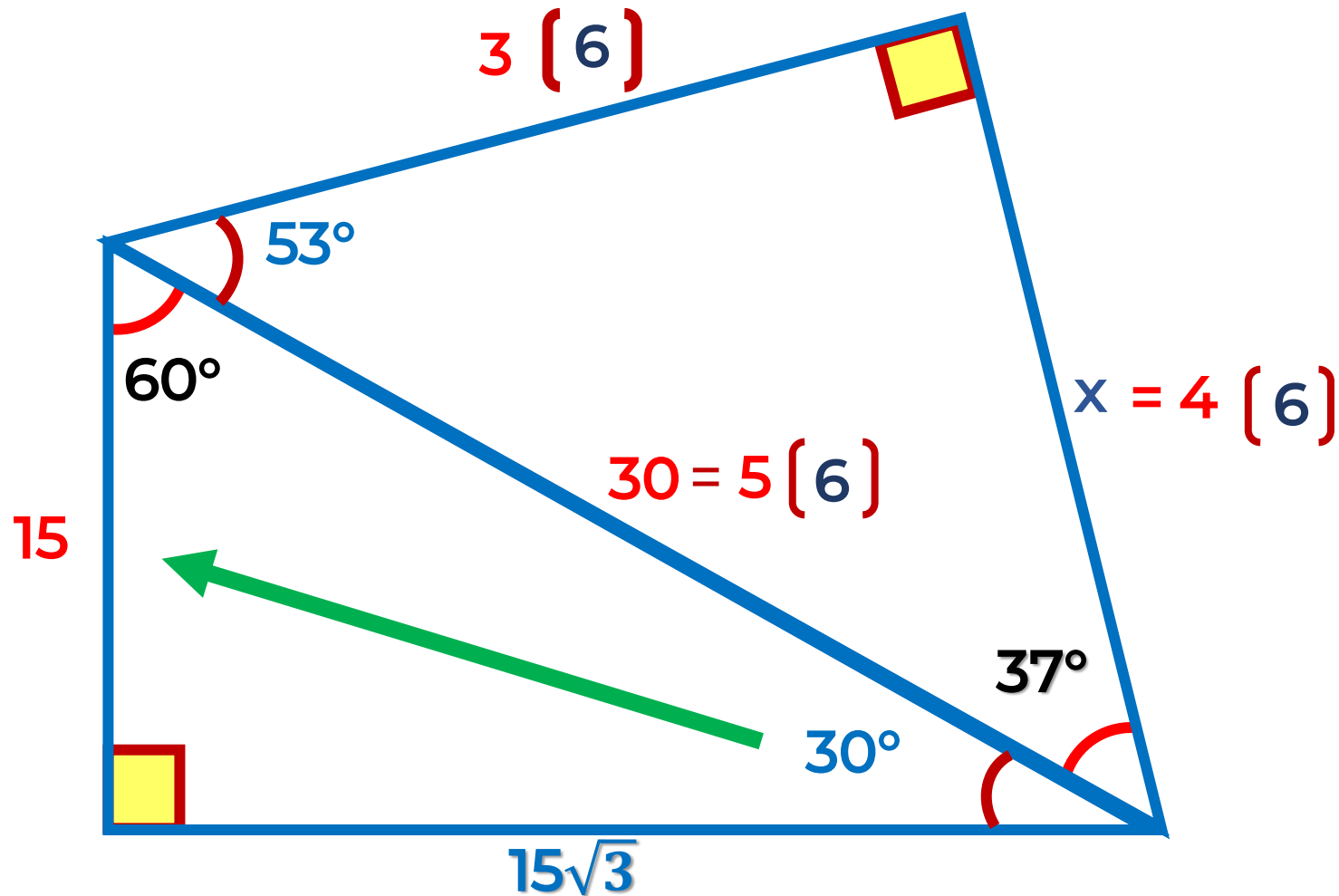
$$AC = 16 + 12$$

$$AC = 28$$



## Resolución

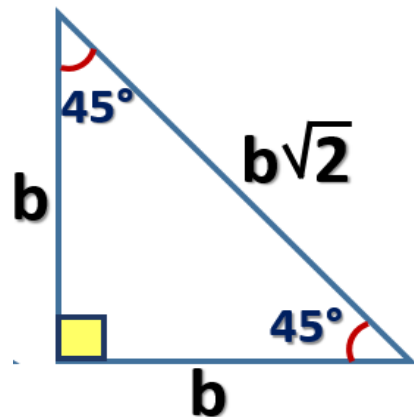
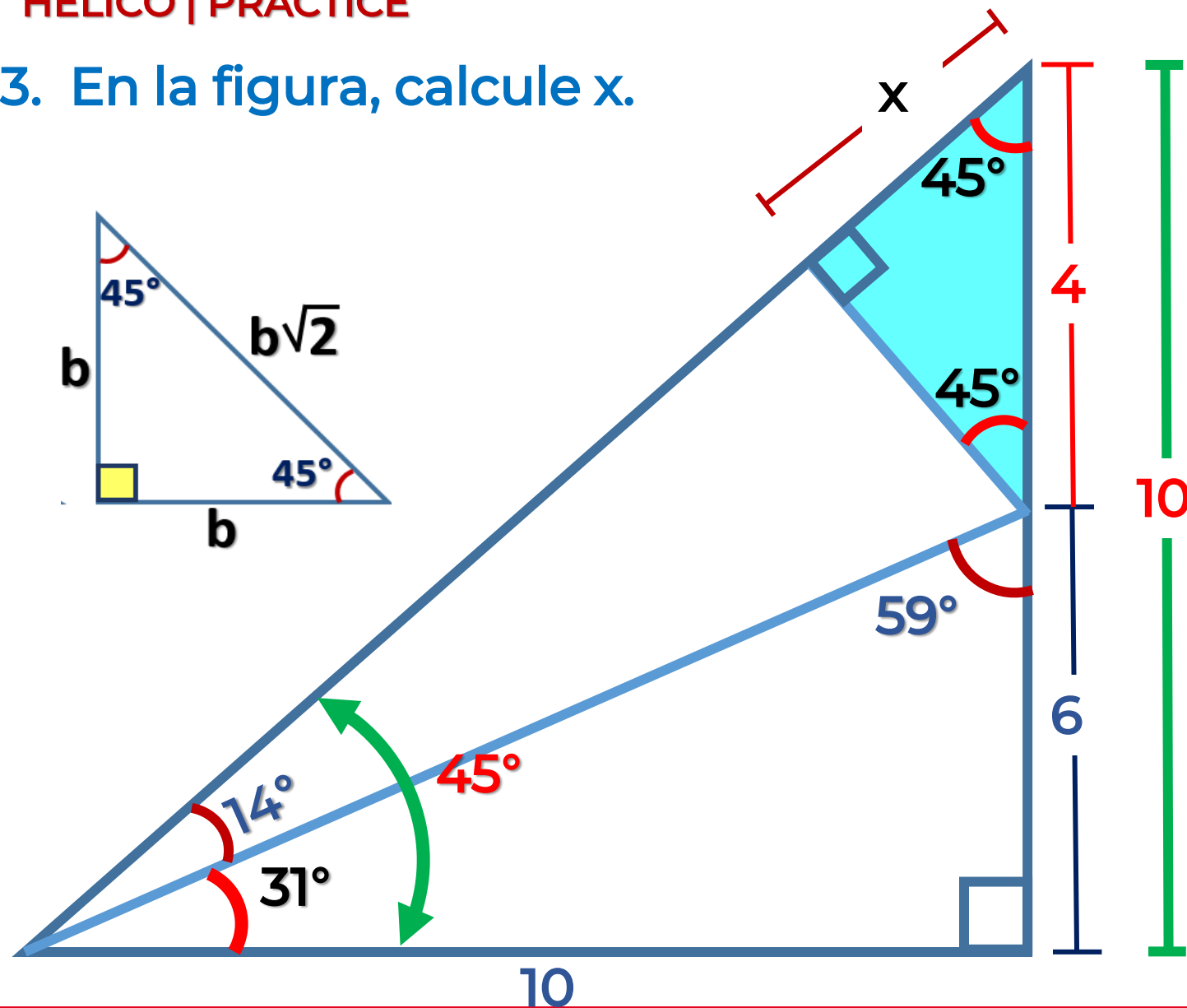
2. En la figura, calcule  $x$ .



$$x = 4(6)$$

$$x = 24$$

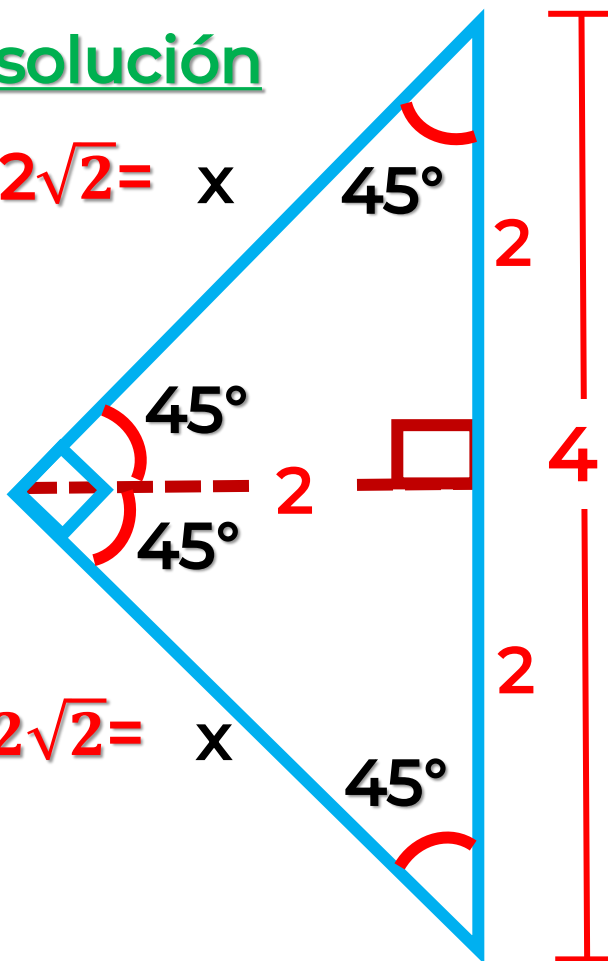
3. En la figura, calcule x.



### Resolución

$$2\sqrt{2} = x$$

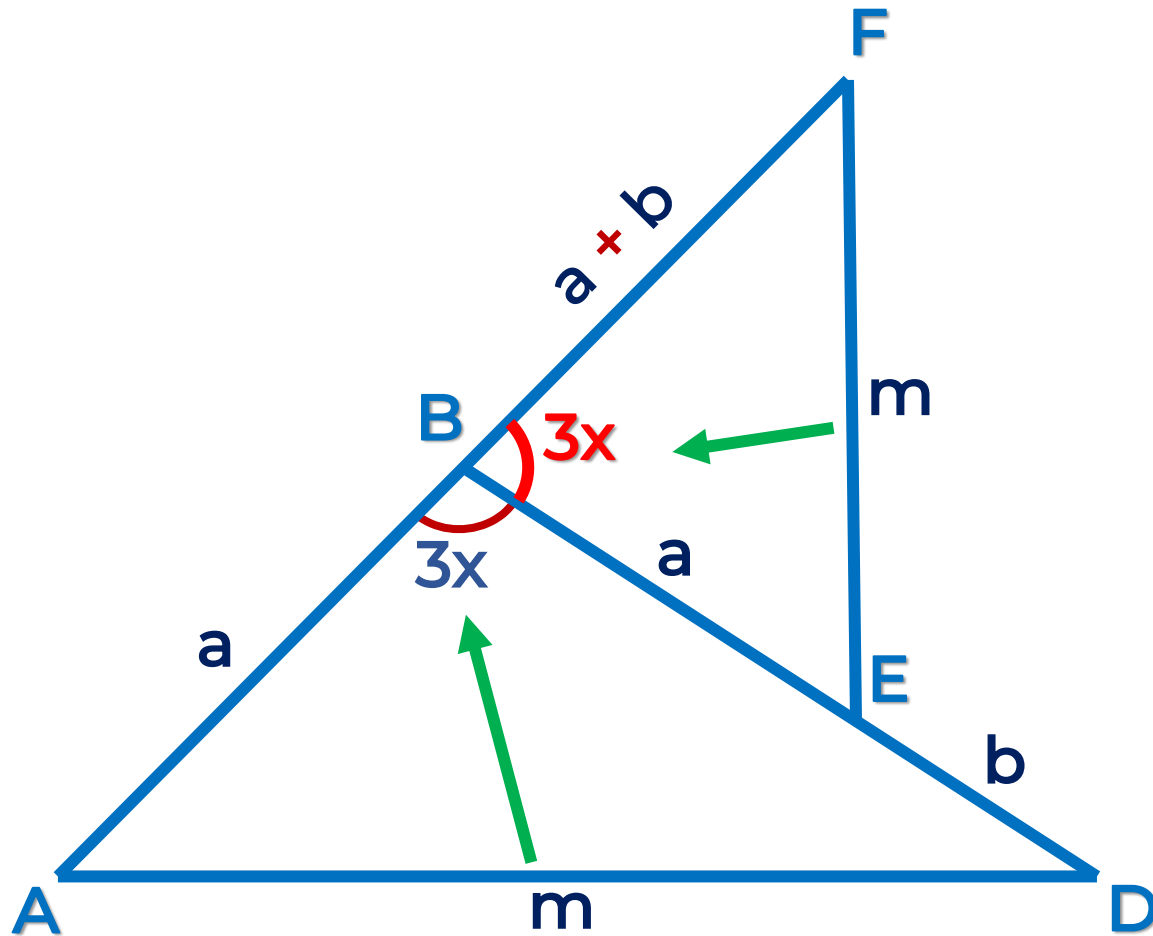
$$2\sqrt{2} = x$$



$$x = 2\sqrt{2}$$



4. En la figura, calcular x.



## Resolución

Del gráfico, tenemos:

$\triangle ABD \cong \triangle EBF$

L-L-L

Se observa en B:

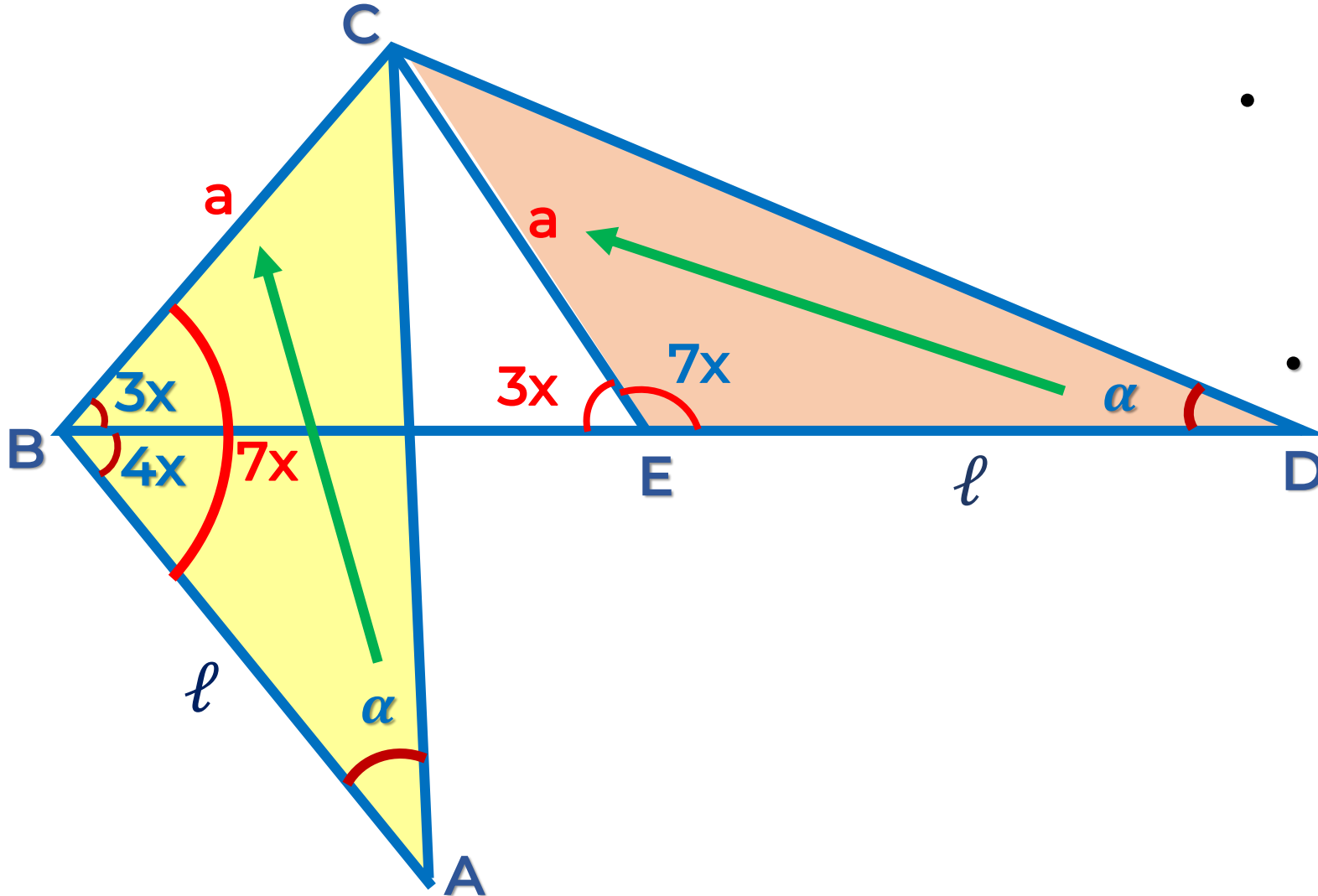
$$3x + 3x = 180^\circ$$

$$6x = 180^\circ$$

$$x = 30^\circ$$



5. En la figura,  $AB = ED$ . Calcule  $x$ .



### Resolución

- $\triangle ABC \cong \triangle DEC$

A-L-A

- El  $\triangle CDE$ : Isósceles

Del gráfico, en E:

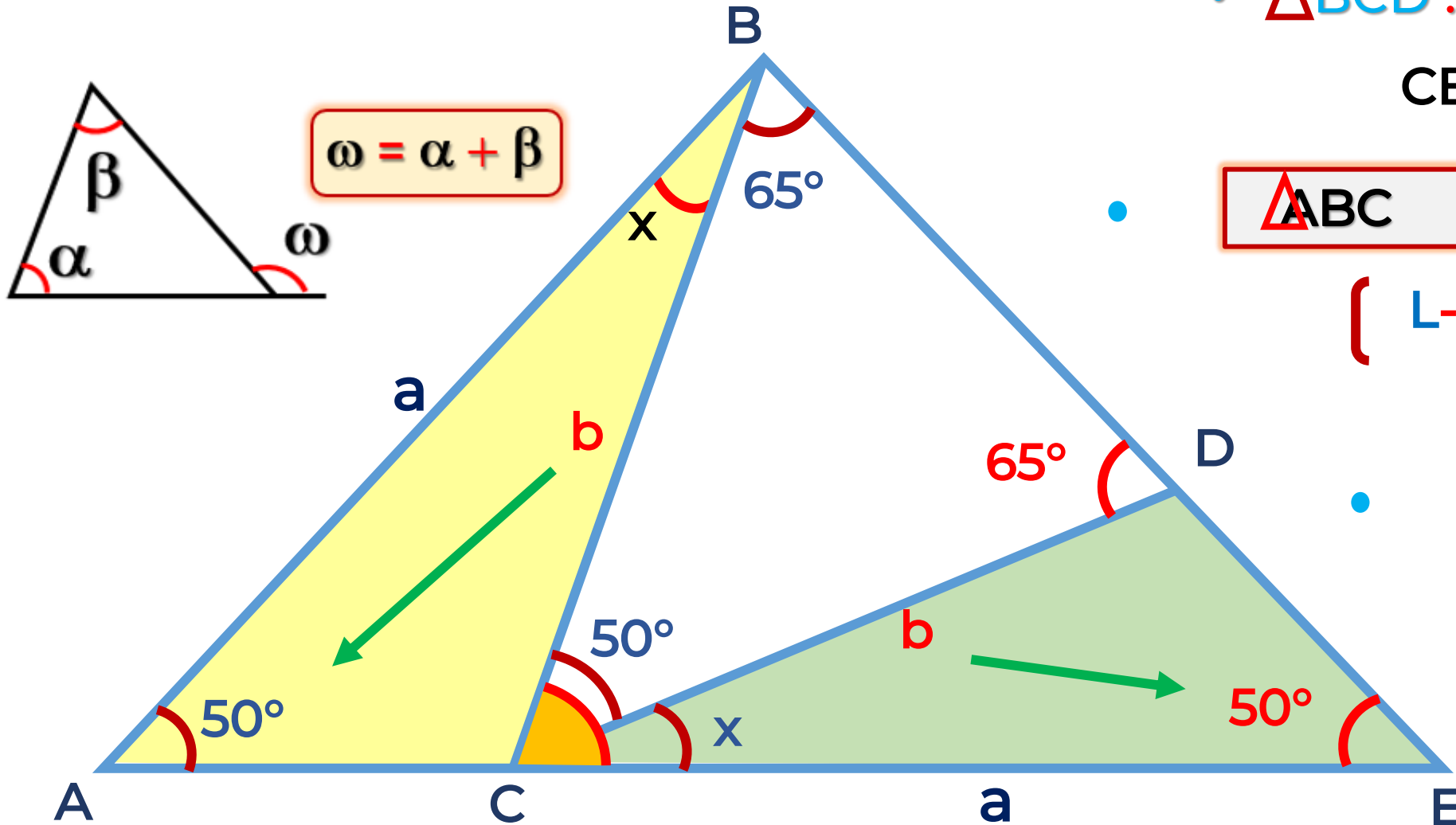
$$3x + 7x = 180^\circ$$

$$10x = 180^\circ$$

$$x = 18^\circ$$



6. En la figura,  $AB = CE$ . Calcule  $x$



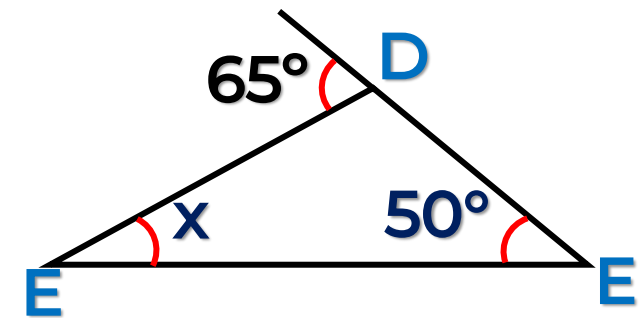
## Resolución

•  $\triangle BCD$ : ISÓSCELES

$$CB = CD = b$$

•  $\triangle ABC \cong \triangle ECD$

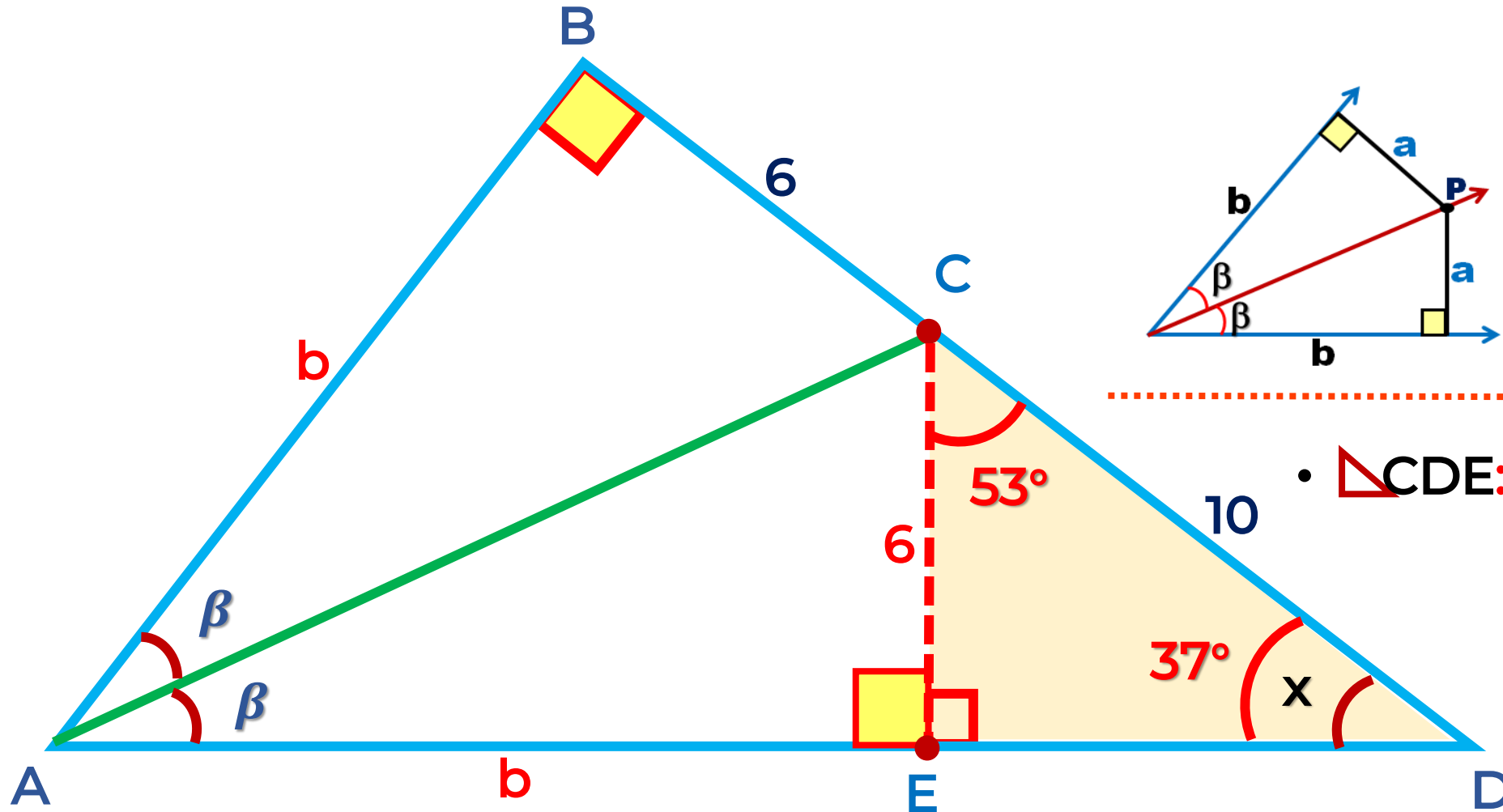
( L-A-L )



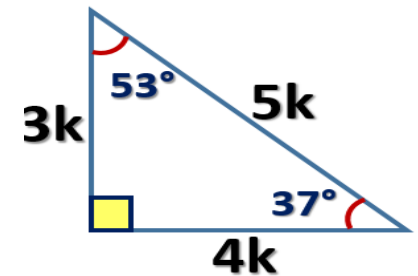
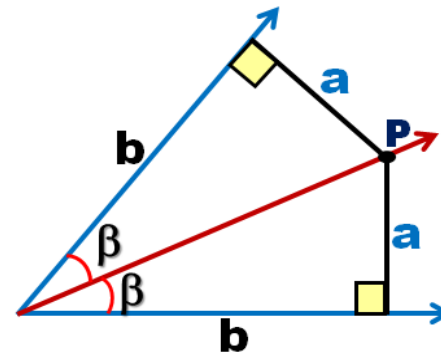
$$65^\circ = 50^\circ + x$$

$$x = 15^\circ$$

7. En un triángulo rectángulo ABD, recto en B, se traza la bisectriz interior  $\overline{AC}$ . Si  $BC = 6$  y  $CD = 10$ , halle  $m\angle ADC$ .



### Resolución



•  $\triangle CDE$ :

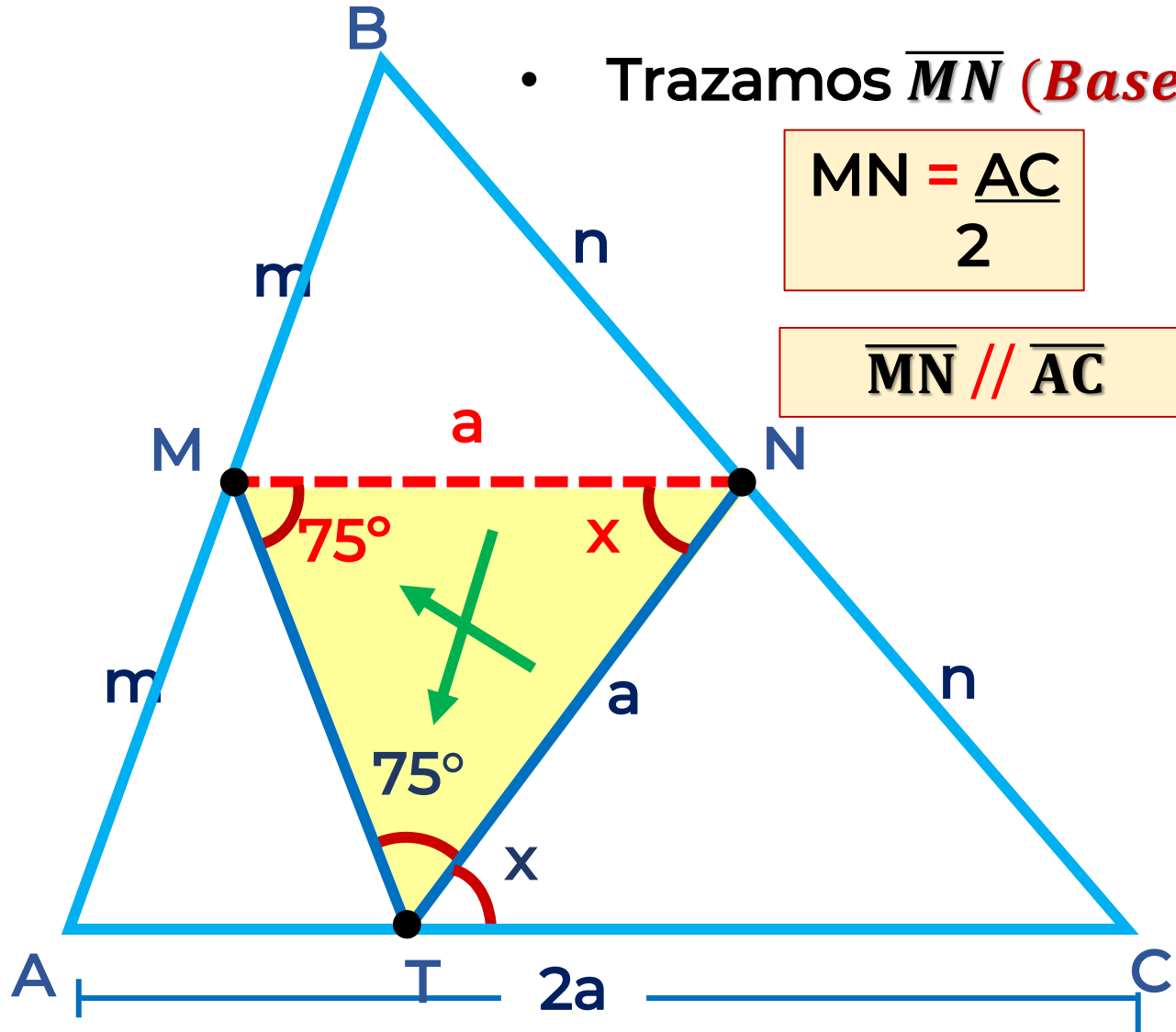
Notable de  $37^\circ$  y  $53^\circ$

$x = 37^\circ$





8. En la figura, calcule x.

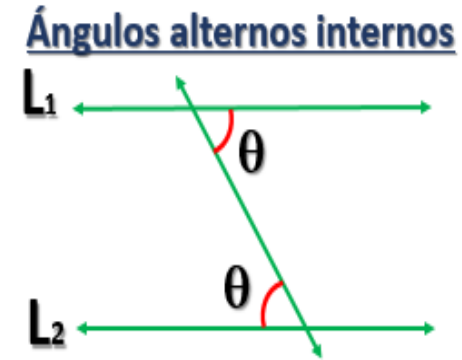
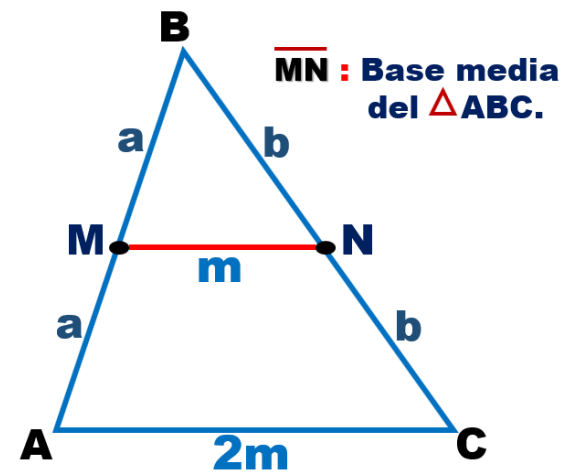


• Trazamos  $\overline{MN}$  (*Base media*)

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

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

### Resolución



•  $\triangle MNT$ : Isósceles

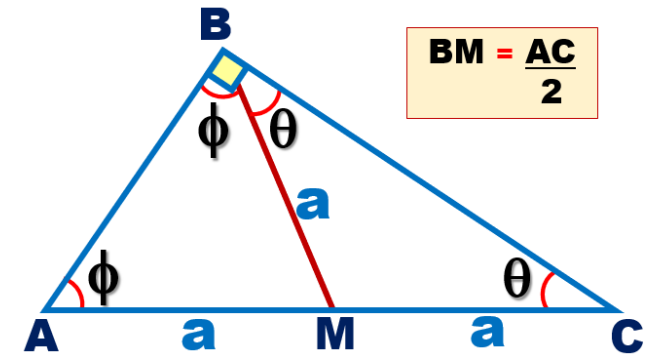
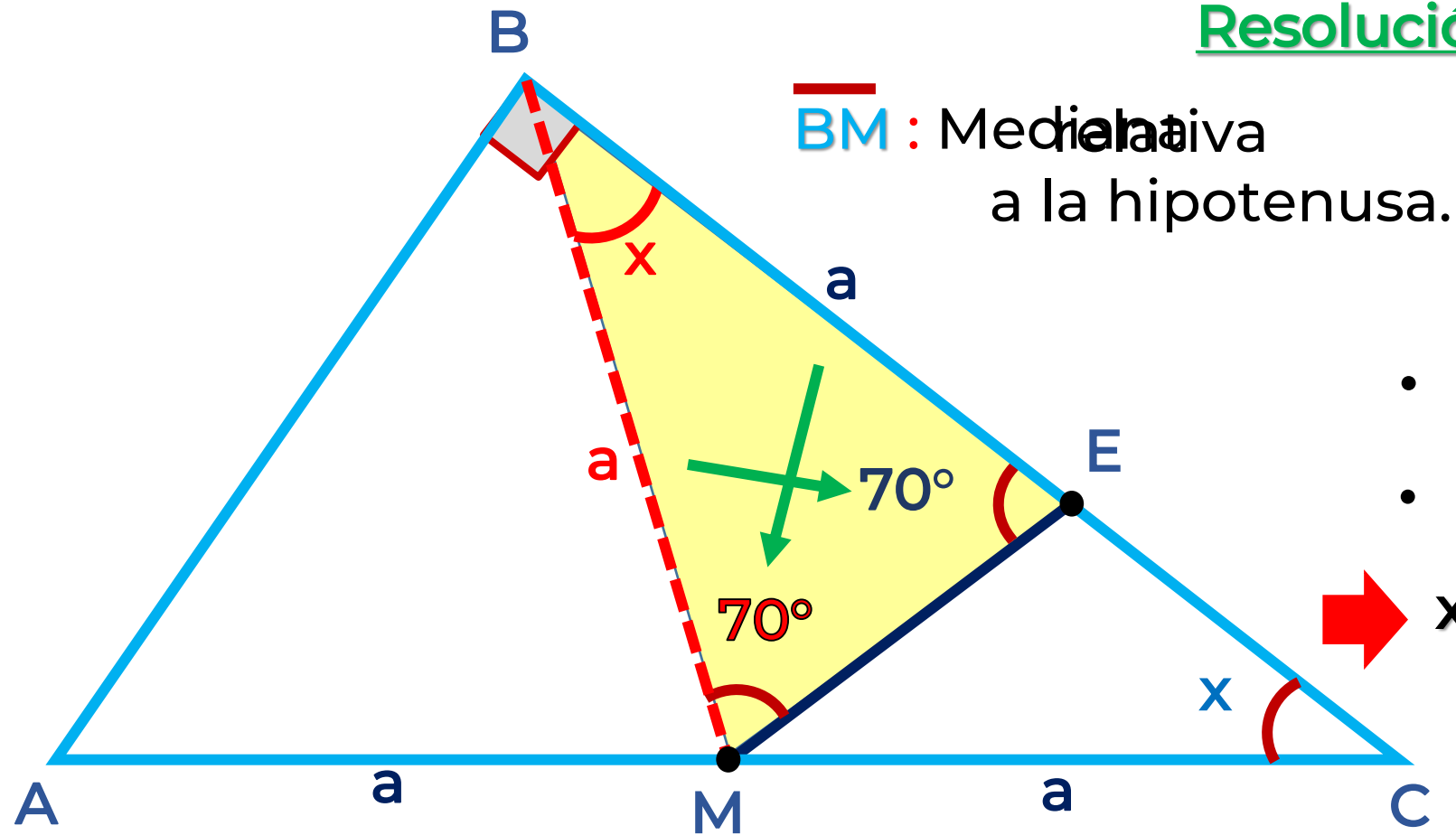
➔  $x + 75^\circ + 75^\circ = 180^\circ$

$$x + 150^\circ = 180^\circ$$

$$x = 30^\circ$$

9. En un triángulo rectángulo ABC recto en B, se ubican los puntos M en  $\overline{AC}$  y E en  $\overline{BC}$ , tal que:  $AM = MC = BE$  y  $m\angle BEM = 70^\circ$ . Calcule la  $m\angle BCA$ .

### Resolución



- $\triangle BCM$ : Isósceles
- $\triangle BEM$ : Isósceles

$$\Rightarrow x + 70^\circ + 70^\circ = 180^\circ$$

$$x + 140^\circ = 180^\circ$$

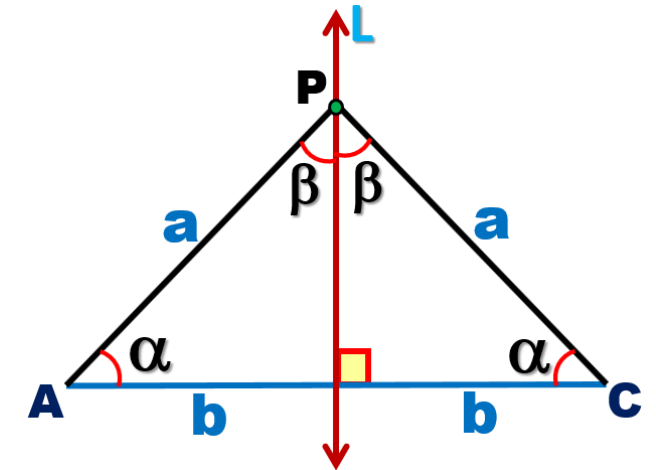
$$x = 40^\circ$$

10. En la figura, calcule  $x$ .

## Resolución

$\longleftrightarrow$   $L$ : Mediatriz del AB

- Teorema de la mediatriz.



$\triangle ACP$ : Isósceles

$$5x = 50^\circ$$

$$x = 10^\circ$$

