



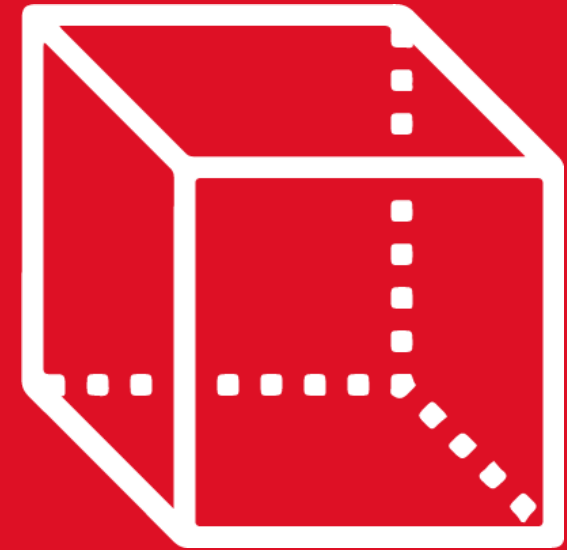
# GEOMETRÍA

2 bimestre

**5th**

SECONDARY

**Repaso**

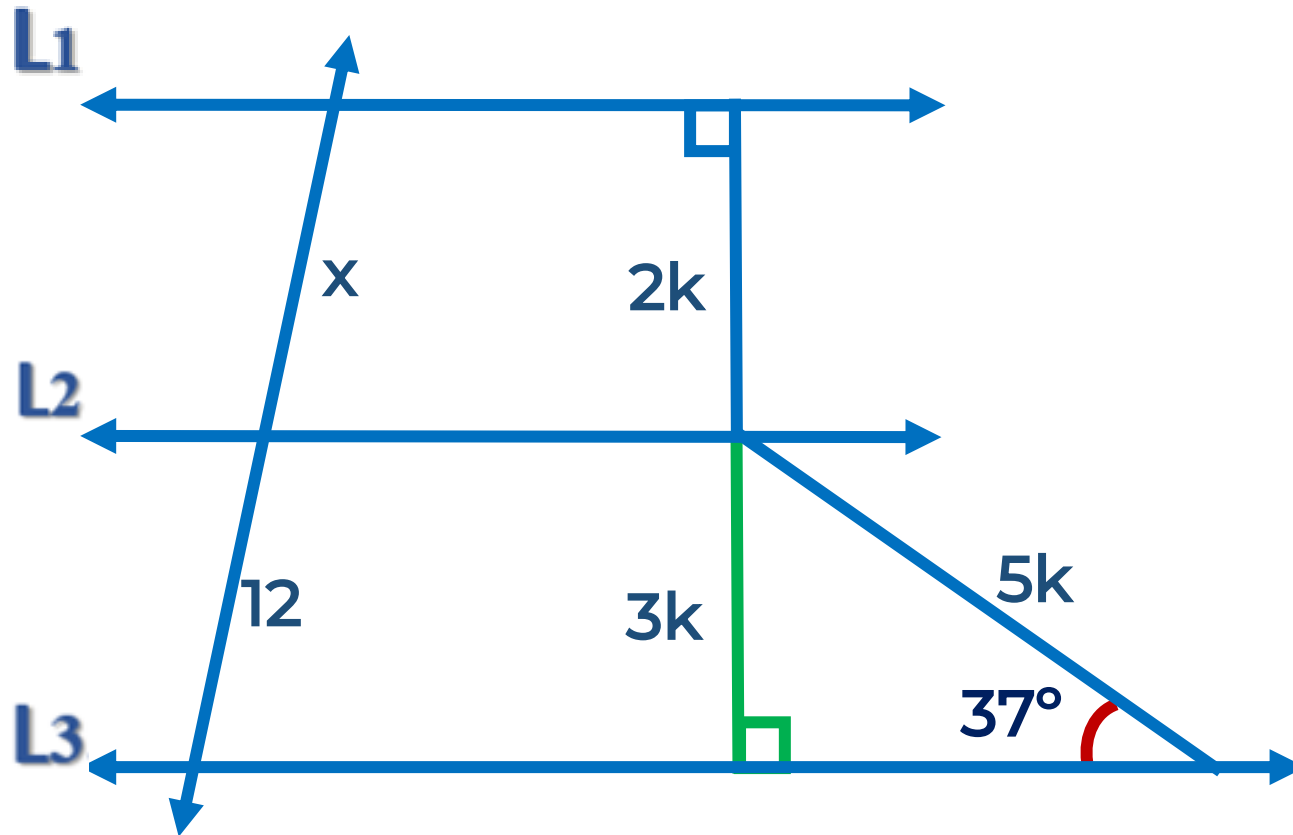


 **SACO OLIVEROS**

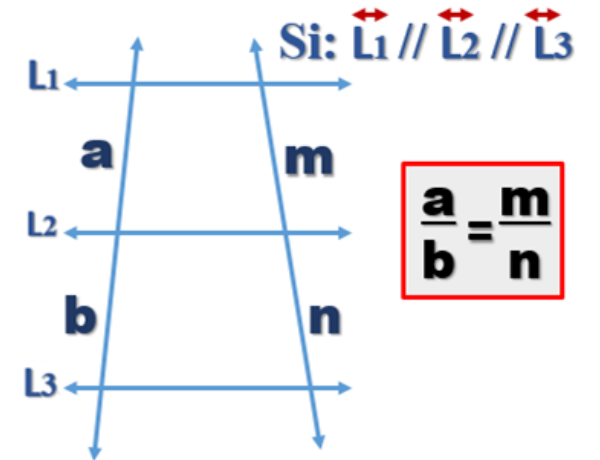


1. En la figura, calcule  $x$ , si  $\vec{L_1} // \vec{L_2} // \vec{L_3}$ .

-  notables de  $37^\circ$  y  $53^\circ$ .



### Teorema de Tales



- Por teorema de Tales

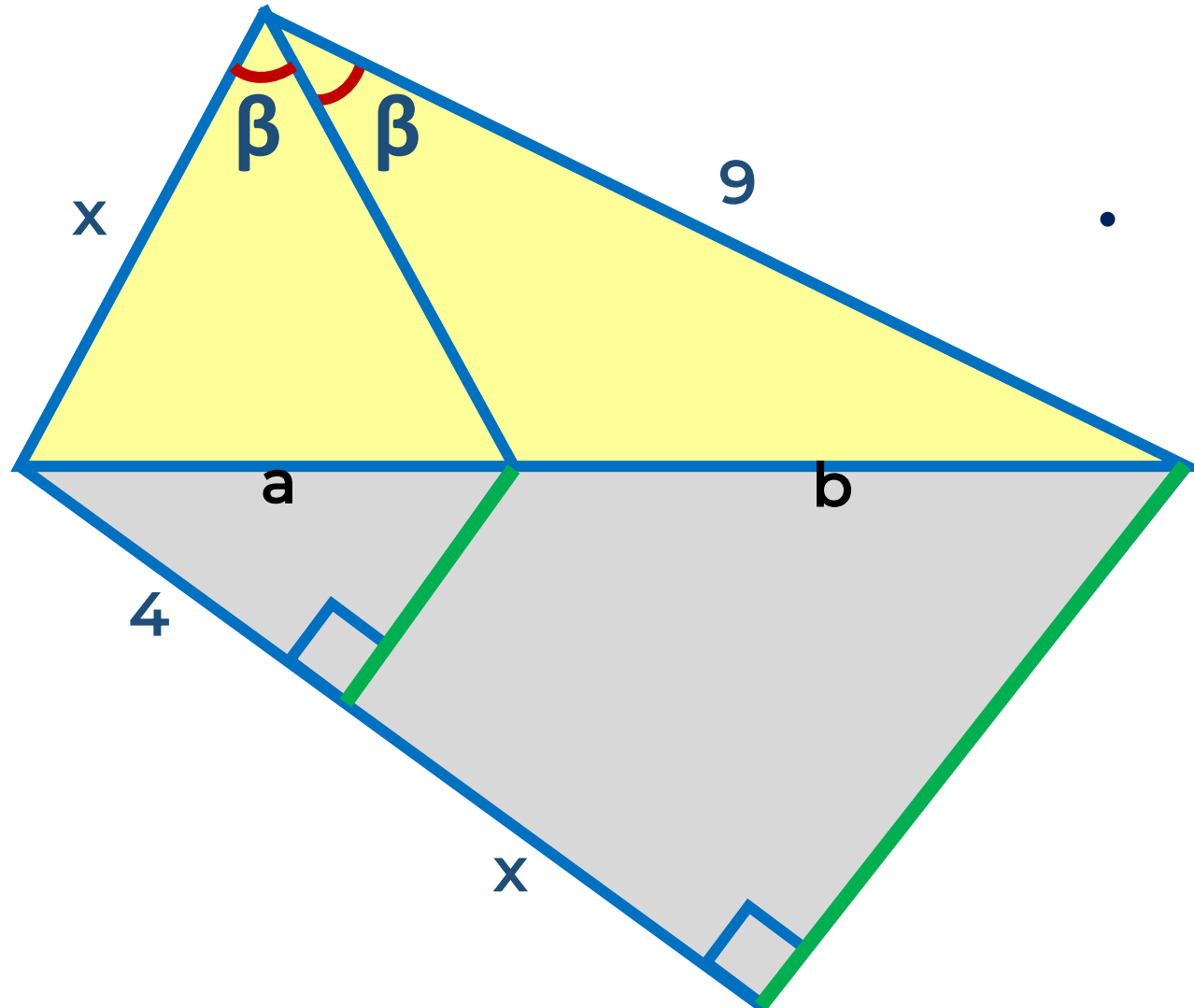
$$\frac{x}{12} = \frac{2k}{3k}$$

$$3x = 2(12)$$

$$x = 8$$



2. En la figura, calcule x.



- Teorema de la bisectriz interior

$$\rightarrow \frac{x}{9} = \frac{a}{b} \dots\dots (1)$$

- Corolario de Tales

$$\rightarrow \frac{4}{x} = \frac{a}{b} \dots\dots (2)$$

- Igualando 1 y 2

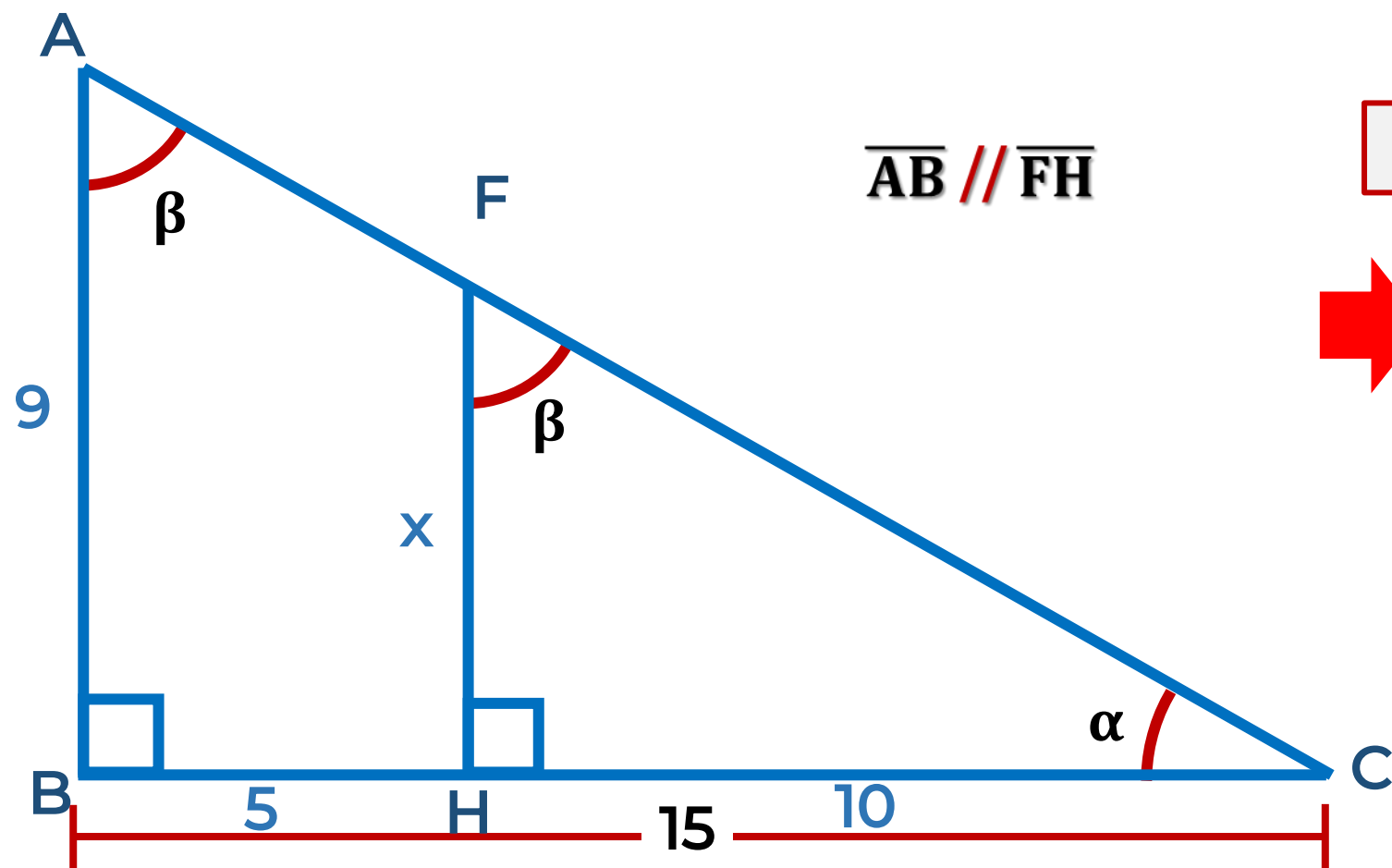
$$\frac{x}{9} = \frac{4}{x}$$

$$x^2 = 36$$

$$x = 6$$



3. En la figura, calcule x.



$\overline{AB} \parallel \overline{FH}$

$$\triangle FHC \sim \triangle ABC$$

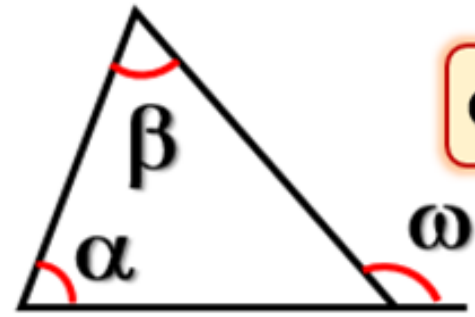
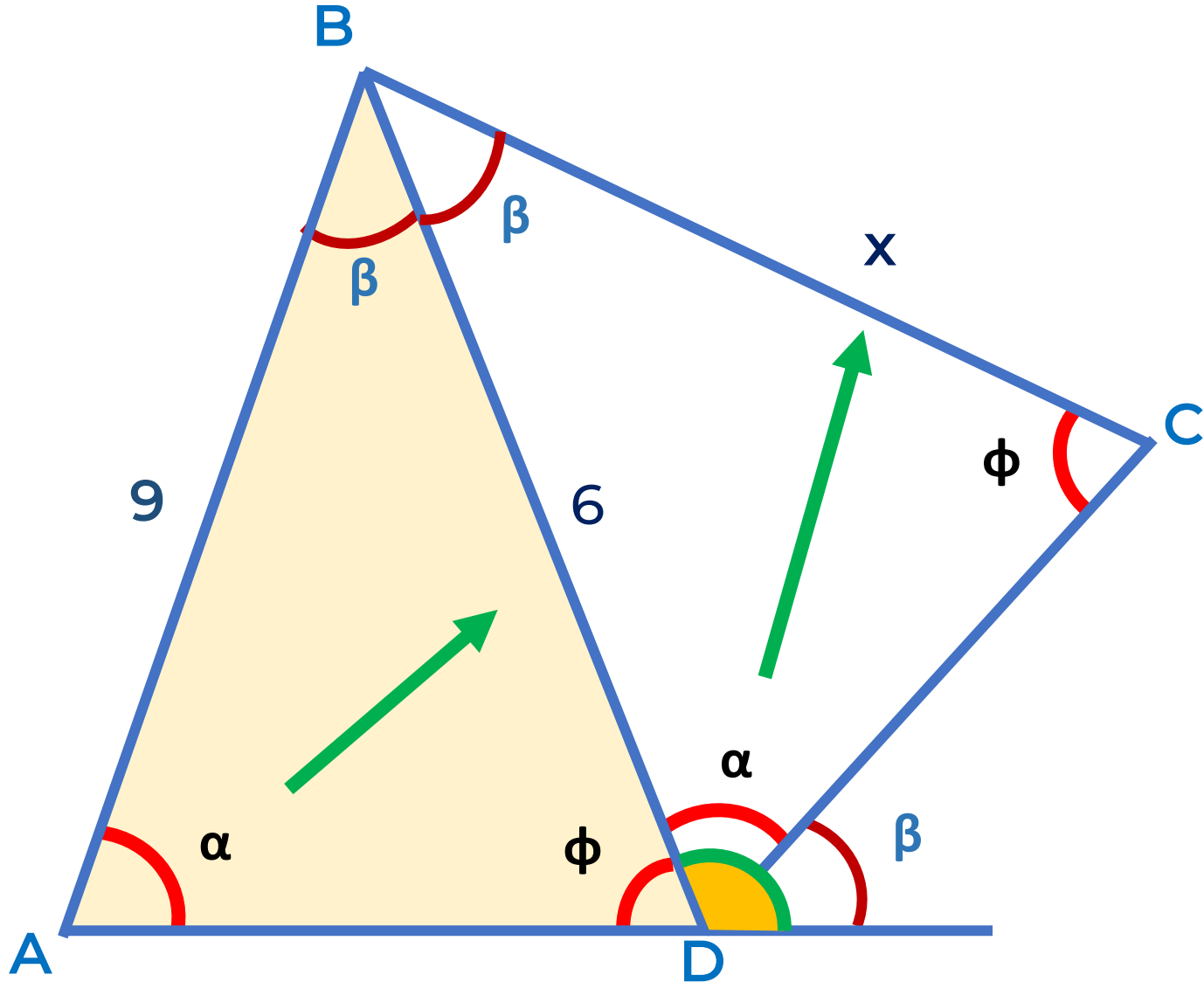


$$\frac{x}{9} = \frac{10}{15}$$

$$3x = 18$$

$$x = 6$$

4. En la figura, calcule x.



$$\omega = \alpha + \beta$$

$$\triangle ABD \sim \triangle BDC$$

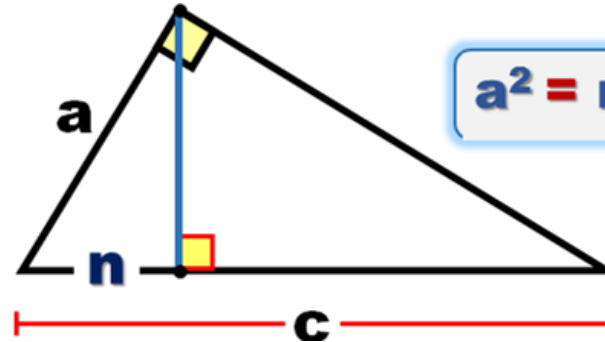
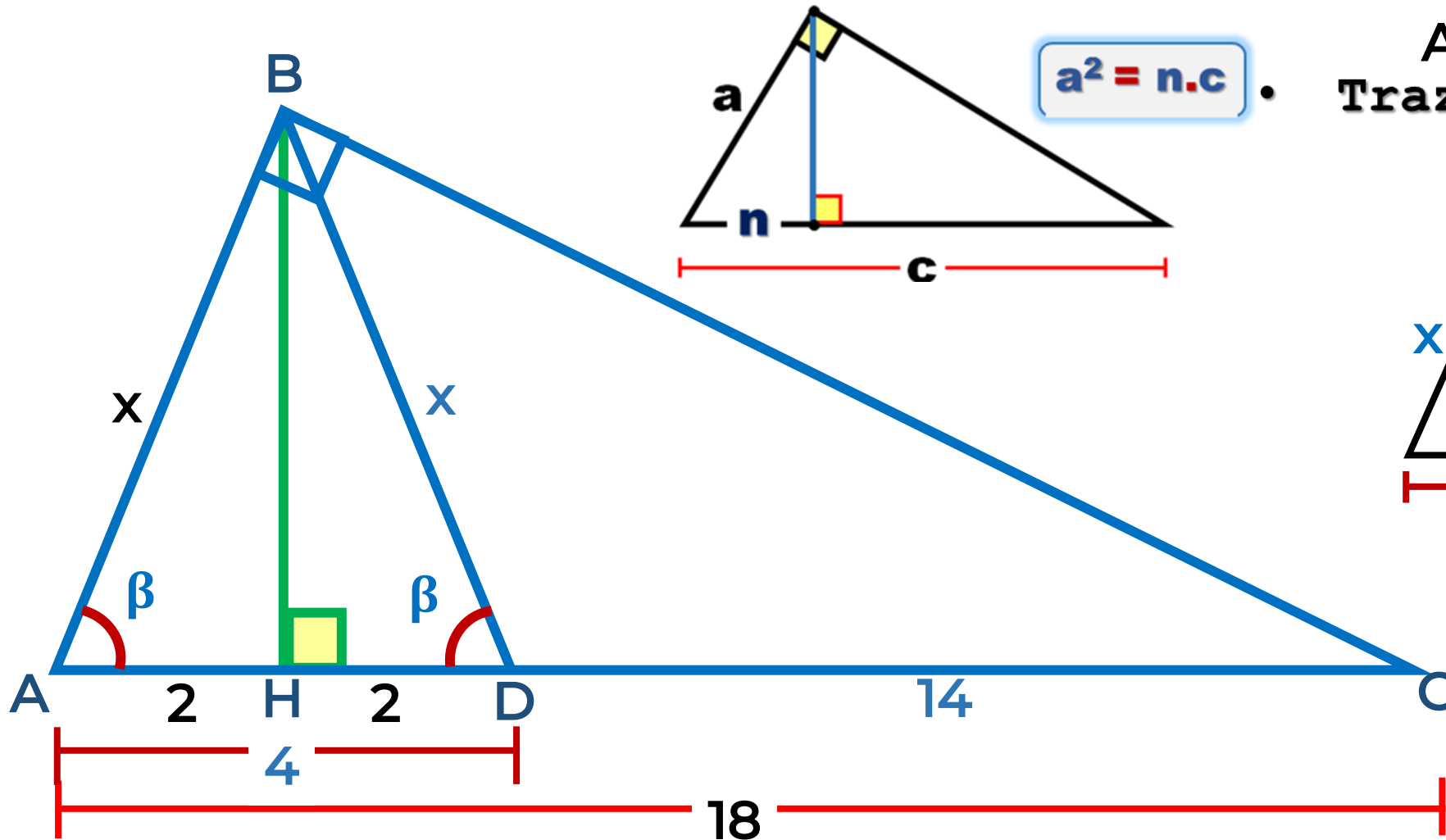
$$\frac{x}{6} = \frac{6}{9}$$

$$3x = 12$$

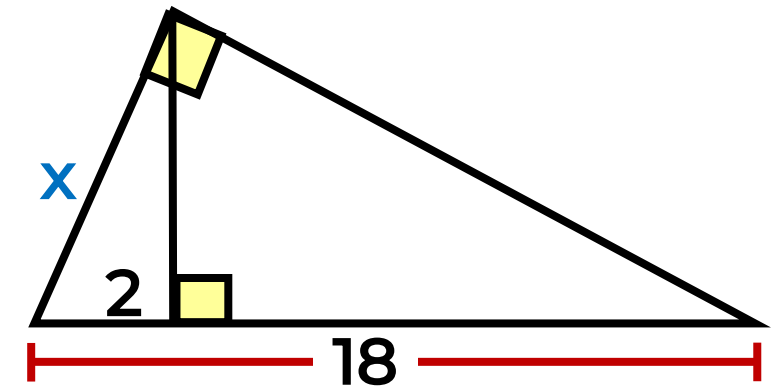
$$x = 4$$



5. En la figura, calcular x.



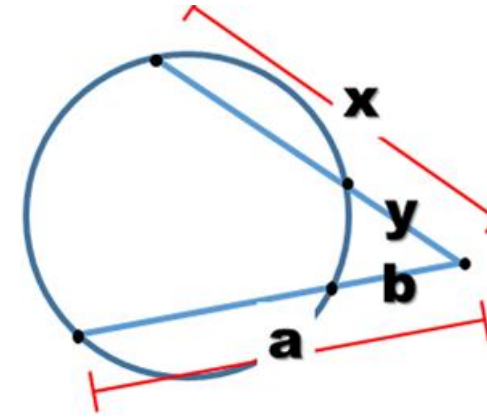
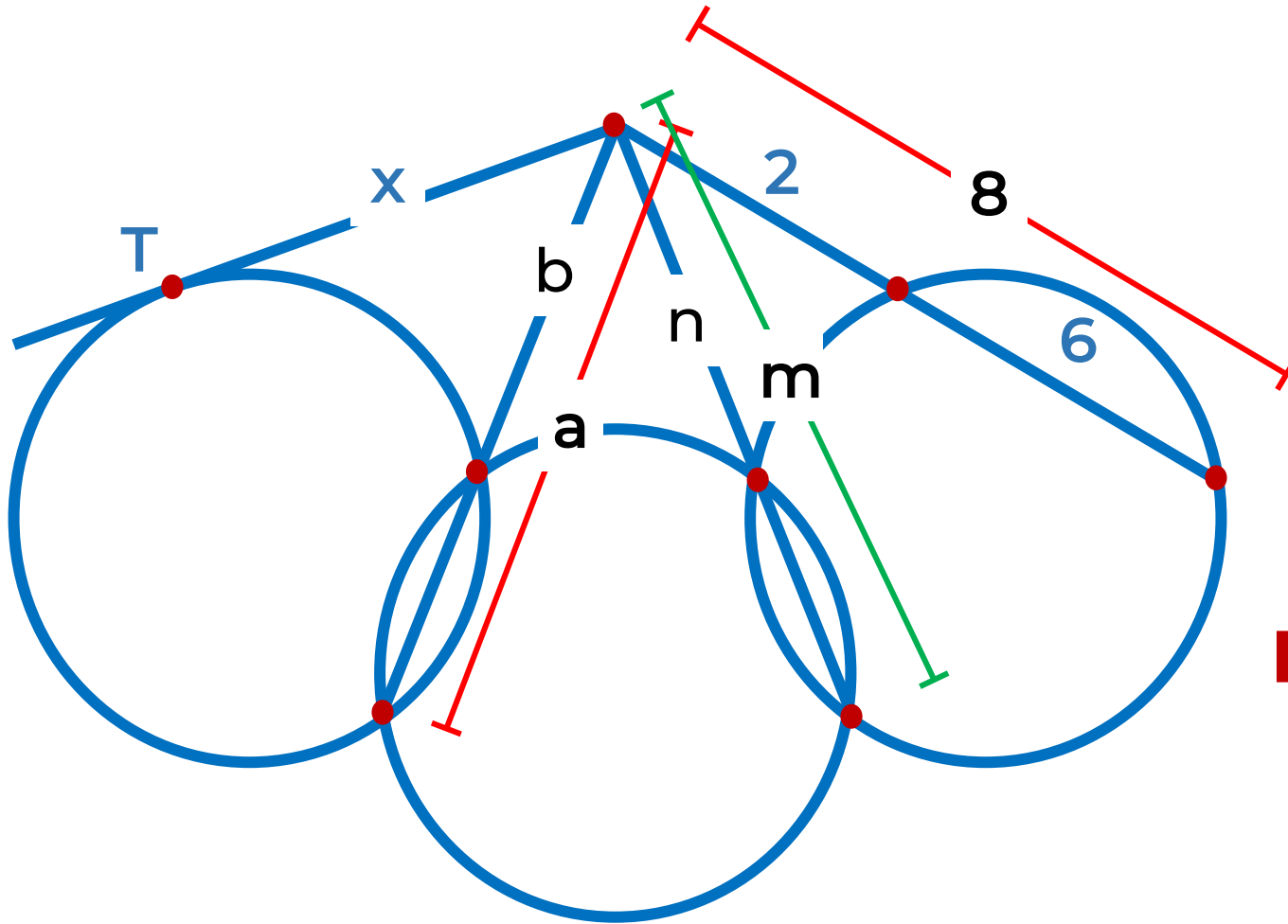
- $\triangle ABD$ : ISÓSCELES  
 $AB = BD = x$
- Trazamos la altura  $\overline{BH}$   
 $AH = HD = 2$



$\Rightarrow x^2 = 2(18)$   
 $x^2 = 36$

$x = 6$

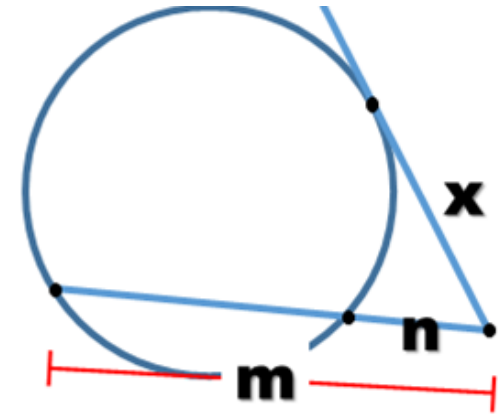
## 6. Calcule x si T es punto de tangencia.



**T. de las Secantes**

$$x \cdot y = a \cdot b$$

- $m \cdot n = 8 \cdot 2$   
 $m \cdot n = 16$
- $a \cdot b = m \cdot n$   
 $a \cdot b = 16$

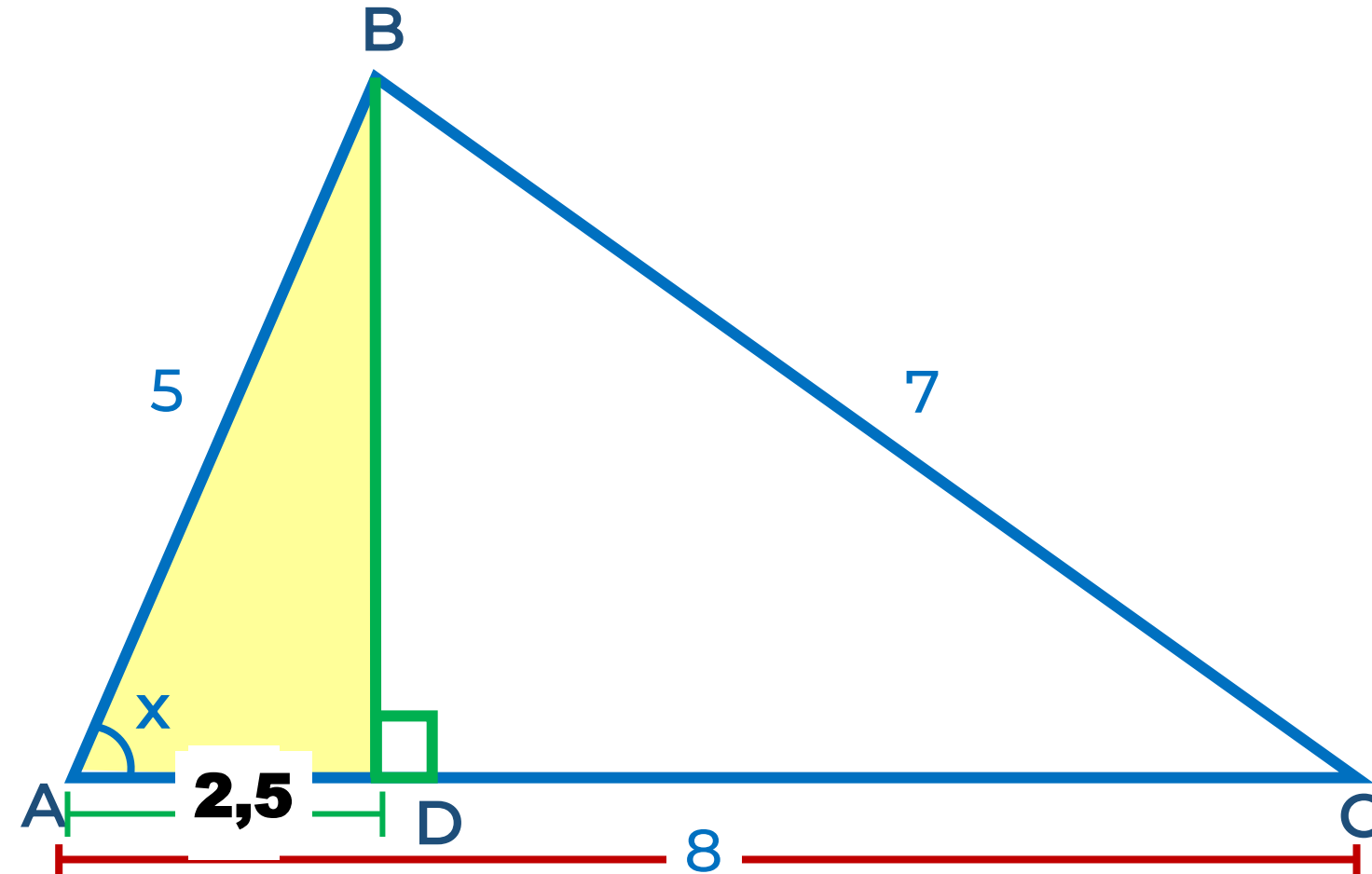


**T. de la Tangente**

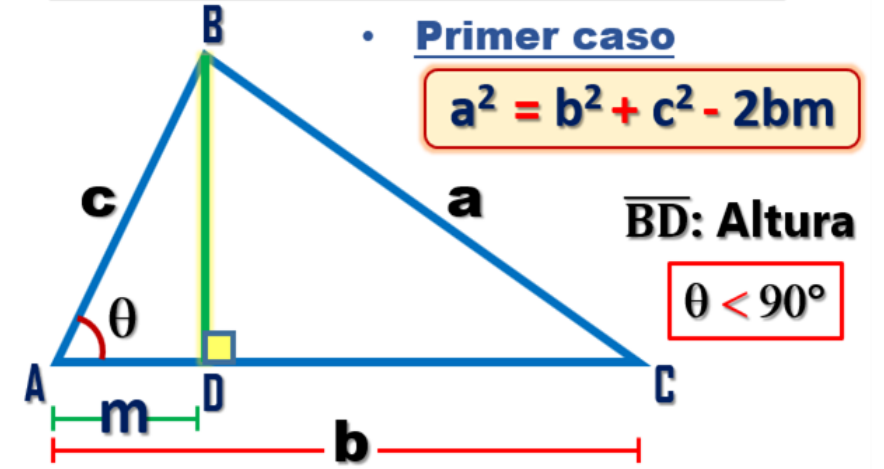
$$x^2 = m \cdot n$$

- $x^2 = a \cdot b$   
 $x^2 = 16$   
 $x = 4$

7. En la figura, calcule x.



- Trazamos la altura  $\overline{BD}$
- TEOREMA DE EUCLIDES



$$\begin{aligned} 7^2 &= 8^2 + 5^2 - 2(8)(m) \\ 49 &= 64 + 25 - 16m \\ 16m &= 40 \\ m &= 2,5 \end{aligned}$$

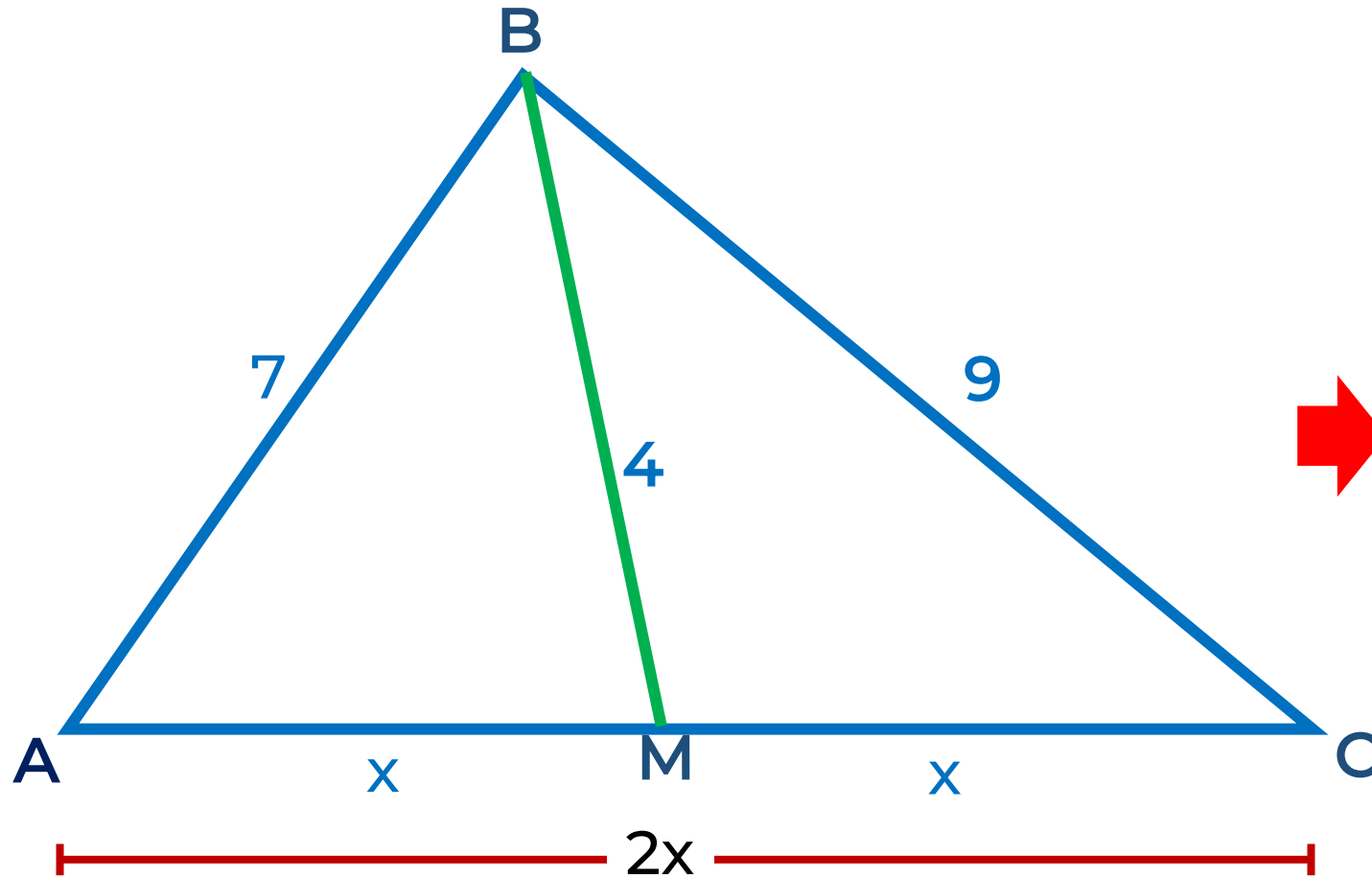
- $\triangle ABD$ : Notable de  $30^\circ$  y  $60^\circ$

$$x = 60^\circ$$

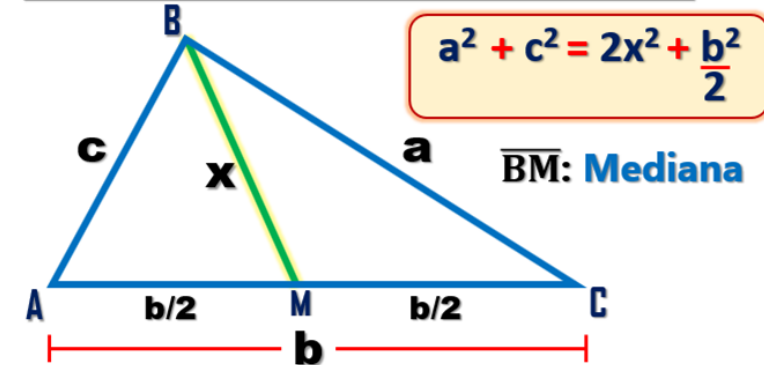




8. En un triángulo ABC se traza la mediana  $\overline{BM}$ ,  $AB = 7$ ,  $BC = 9$  y  $BM = 4$ . Calcule AM.



#### TEOREMA DE LA MEDIANA



$$9^2 + 7^2 = 2(4)^2 + \frac{(2x)^2}{2}$$

$$81 + 49 = 32 + 2x^2$$

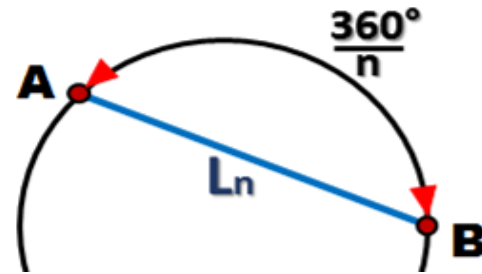
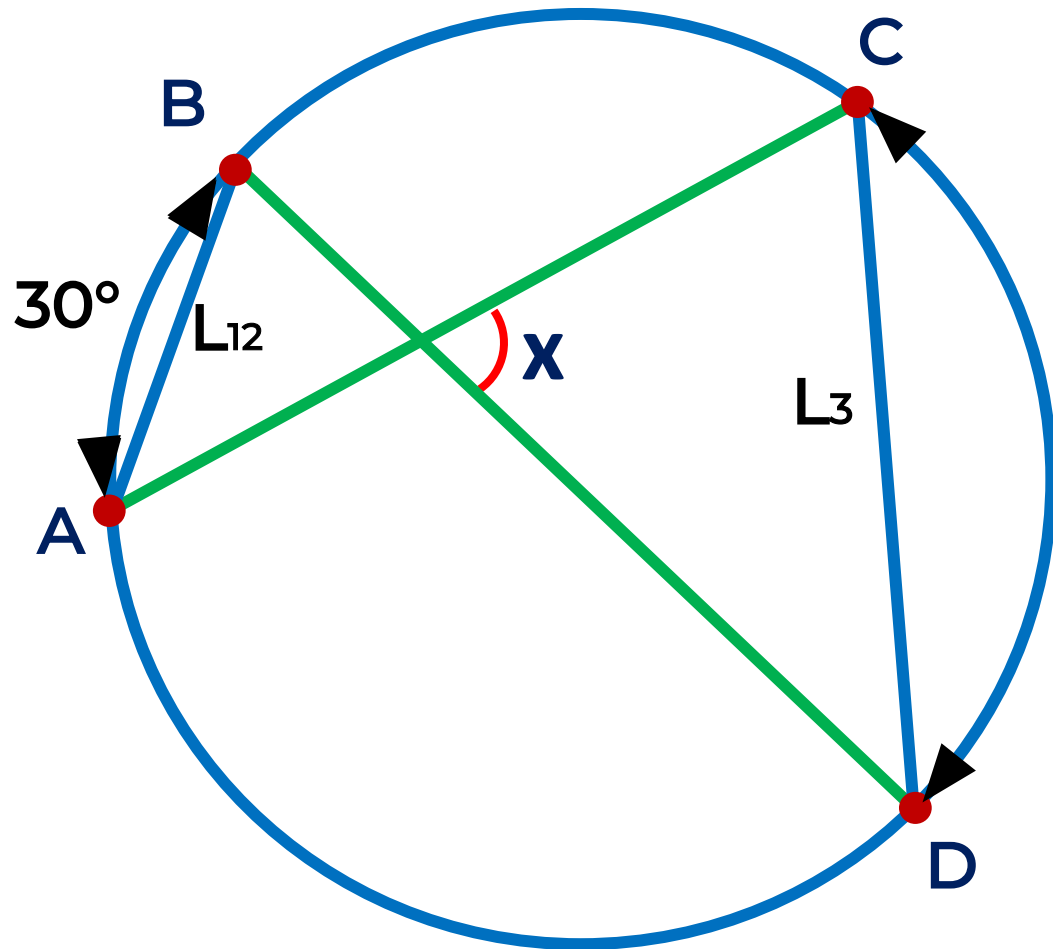
$$98 = 2x^2$$

$$49 = x^2$$

$$7 = x$$



9. Si  $AB = L_{12}$  y  $CD = L_3$ , calcule la medida del ángulo que forman  $\overline{BD}$  y  $\overline{AC}$ .



$$n = 12$$

$$m\widehat{AB} = \frac{360^\circ}{12}$$

$$m\widehat{AB} = 30^\circ$$

$$n = 3$$

$$m\widehat{CD} = \frac{360^\circ}{3}$$

$$m\widehat{CD} = 120^\circ$$

$$120^\circ$$

Ángulo interior

$$x = \frac{30^\circ + 120^\circ}{2}$$

$$x = 75^\circ$$

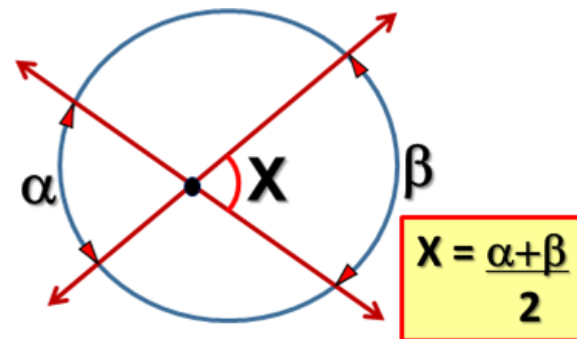


Diagram for problem 10. It shows a large triangle ABE with base AE and vertex B. A line segment CH is drawn from vertex C (on BE) perpendicular to AE at H, with CH = 6. A line segment CD is drawn from C perpendicular to AB at D. A line segment CP is drawn from C perpendicular to AB at P. The area of triangle BCP is 6. The length of AB is 13. The angle ABE is  $37^\circ$ . The angle BCP is  $53^\circ$ . The angle BAC is  $\beta$ . The angle CAE is  $\beta$ . The length of CE is 10. The diagram is labeled with vertices A, B, C, D, E, H, P and various measurements and angles.

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- **Nos piden.**

$$S_{\text{BCD}} = 39u^2$$