



GEOMETRÍA

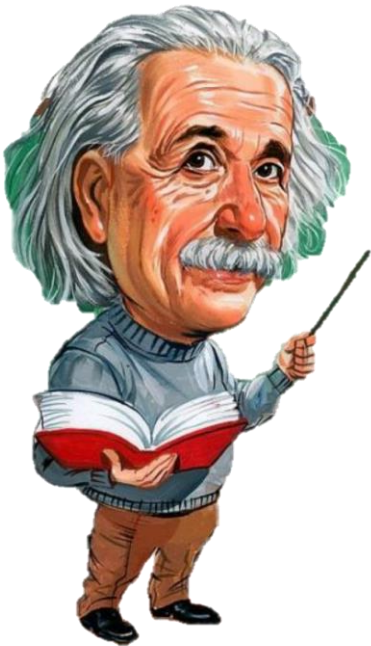
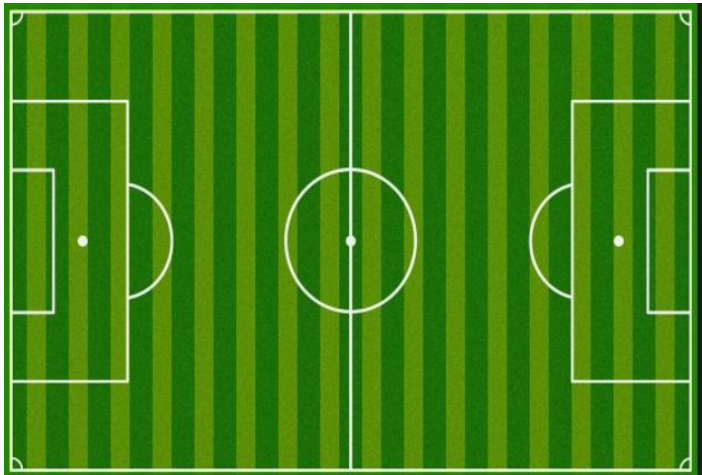
Capítulo 12

3st
SECONDARY

Paralelogramos



 **SACO OLIVEROS**

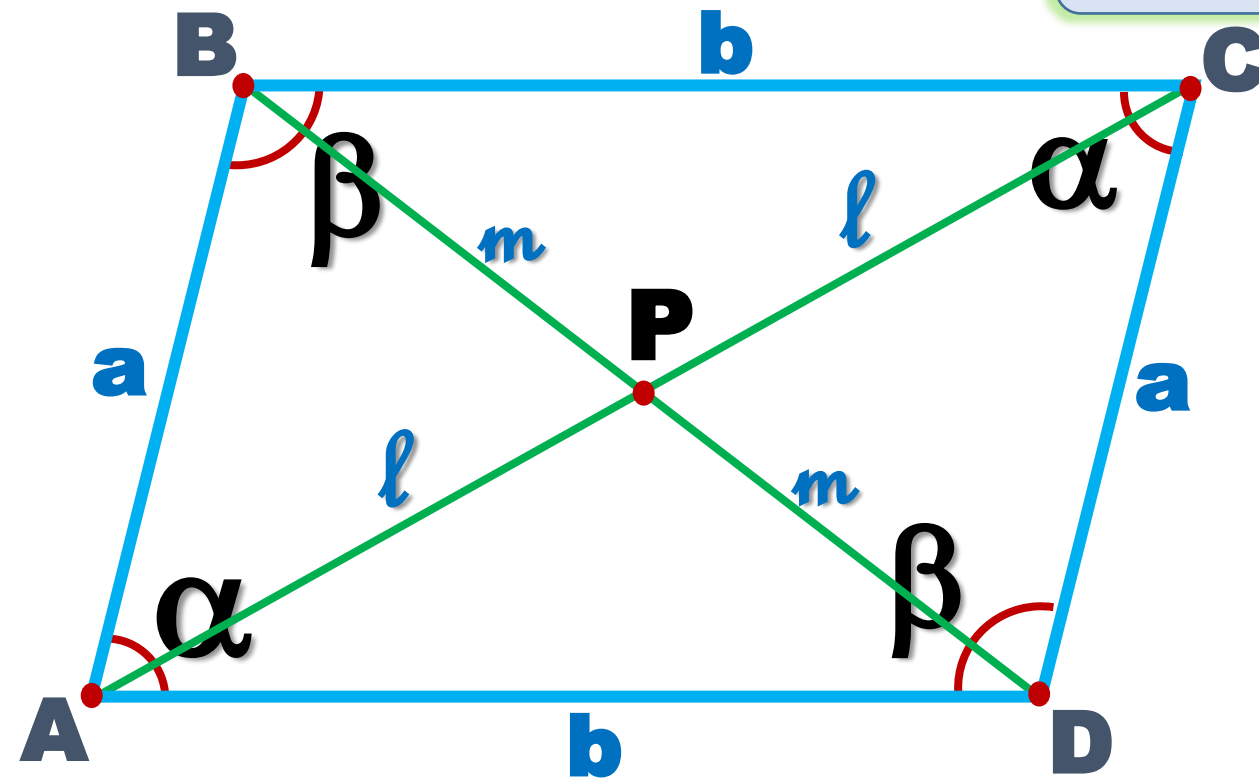




Definición: Es aquel cuadrilátero que tiene sus lados opuestos paralelos y congruentes.



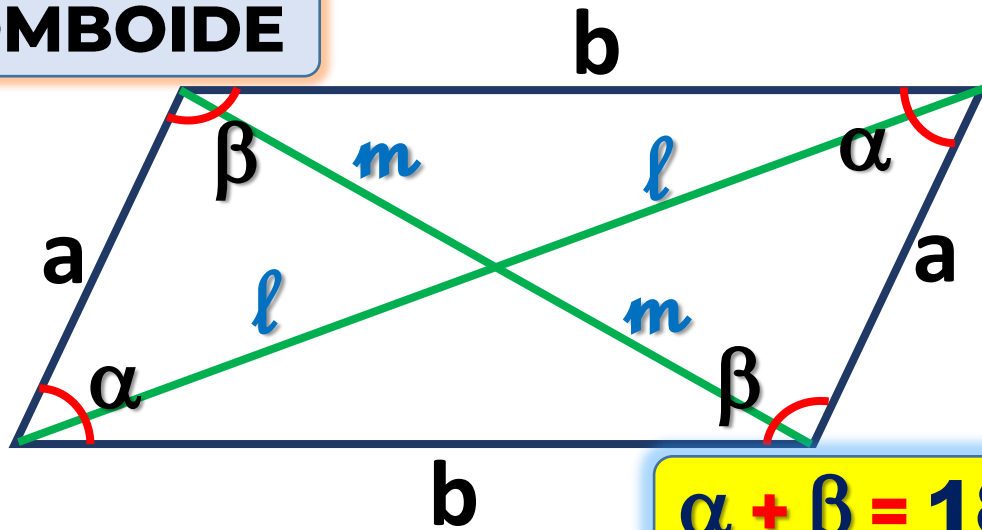
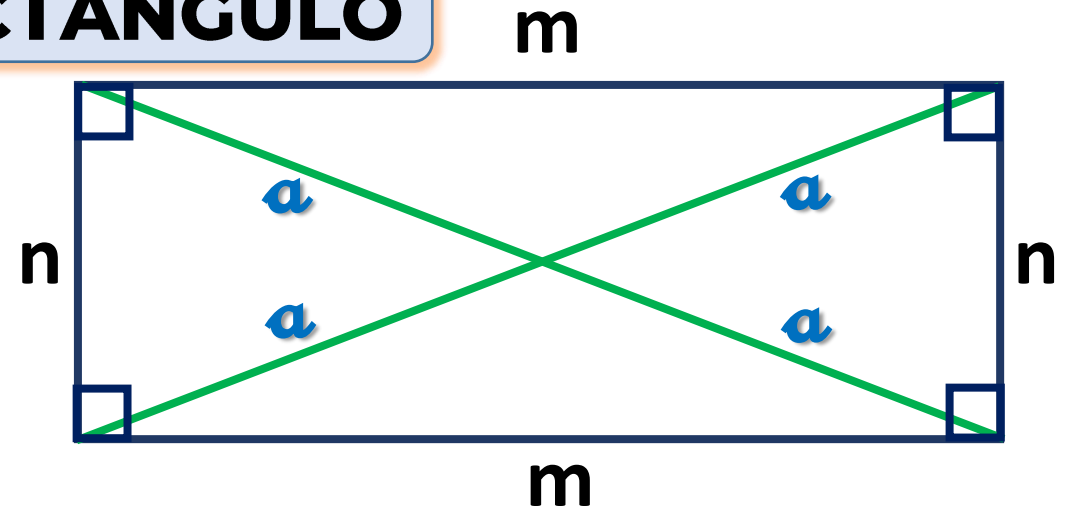
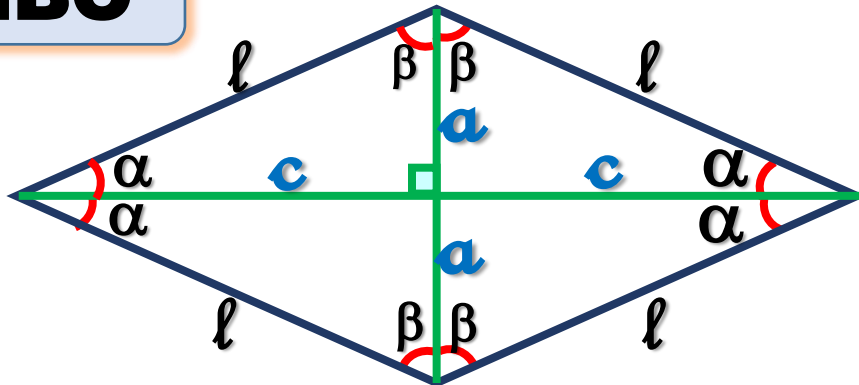
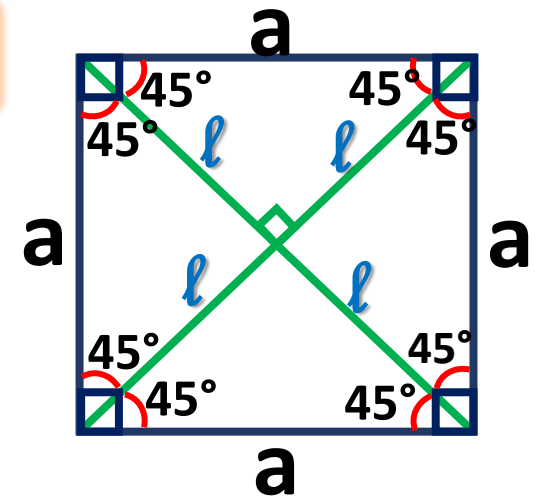
ABCD:
PARALELOGRAMO



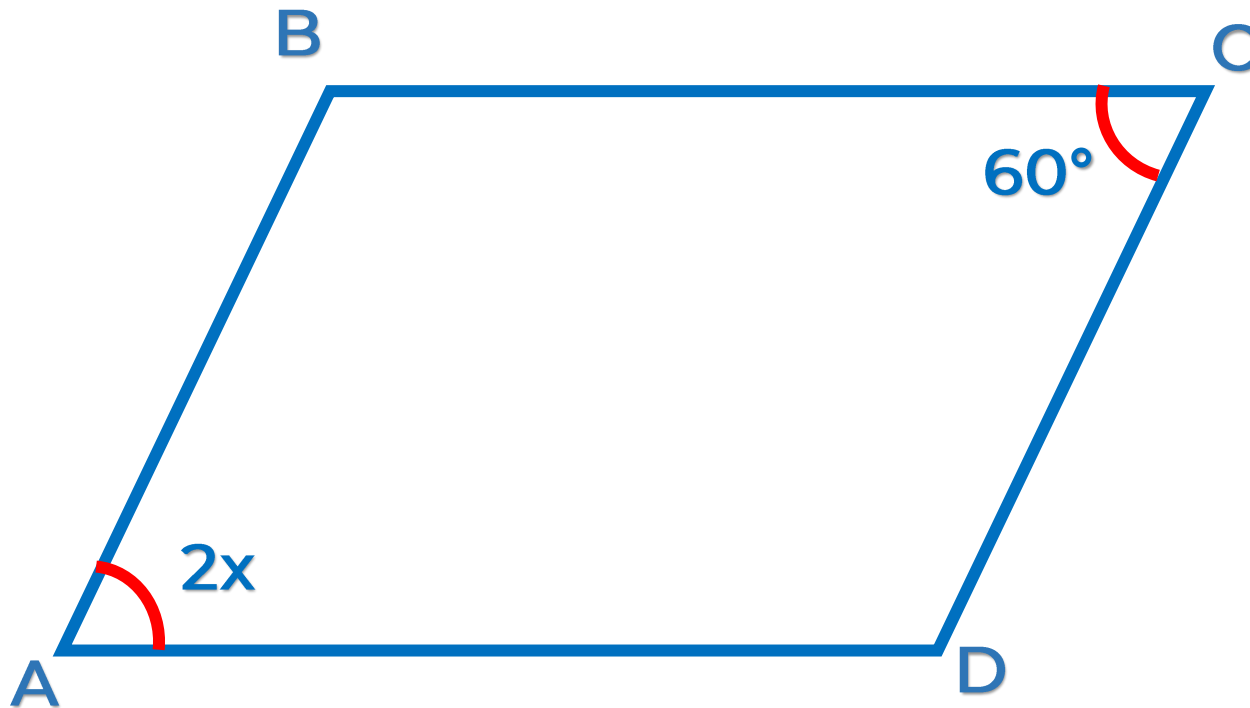
- $\overline{AB} \parallel \overline{CD} \wedge \overline{BC} \parallel \overline{AD}$
- $AB = CD \wedge BC = AD$

$$a + \beta = 180^\circ$$

- $AP = PC \wedge BP = PD$

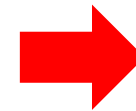
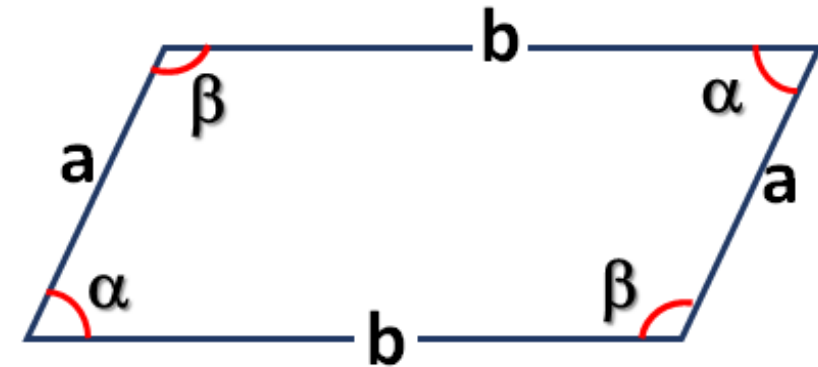
**ROMBOIDE****RECTÁNGULO****ROMBO****CUADRADO**

1. En un romboide ABCD, $m\angle A = 2x$ y $m\angle C = 60^\circ$, halle el valor de x .



Romboide

$$\alpha + \beta = 180^\circ$$

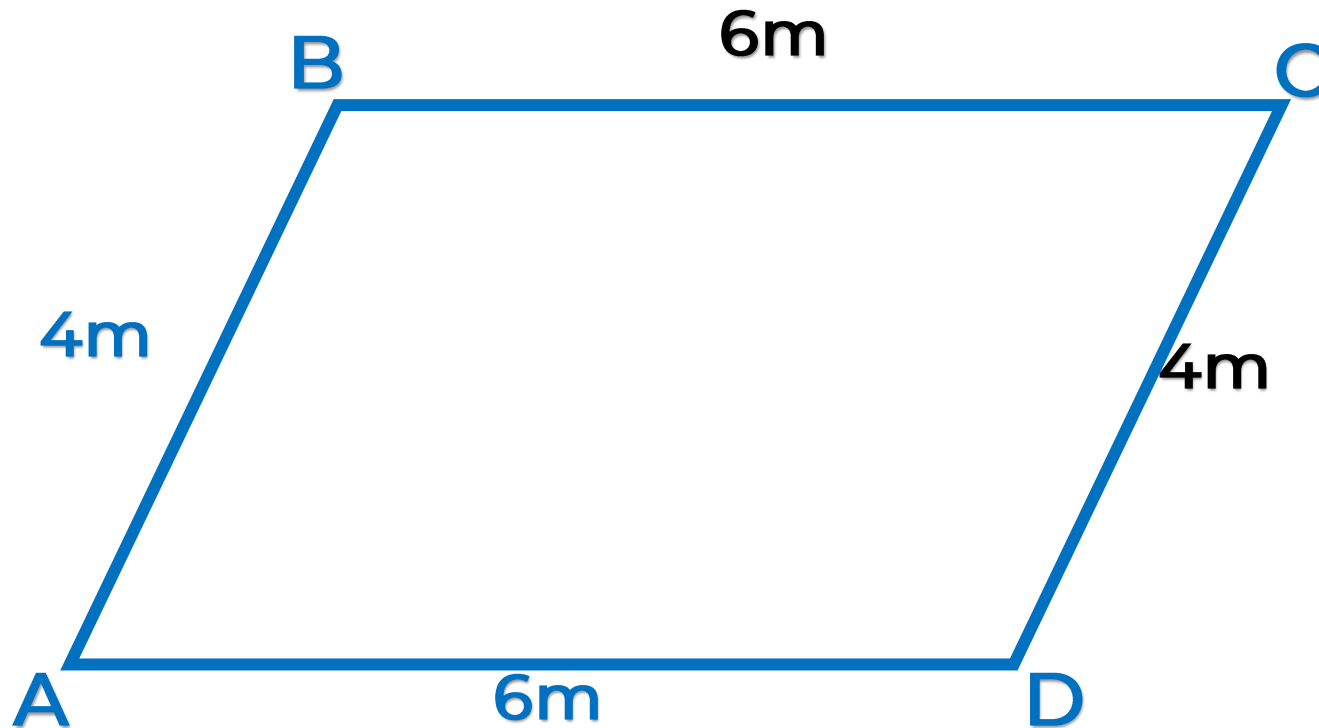


$$2x = 60^\circ$$

$$x = 30^\circ$$

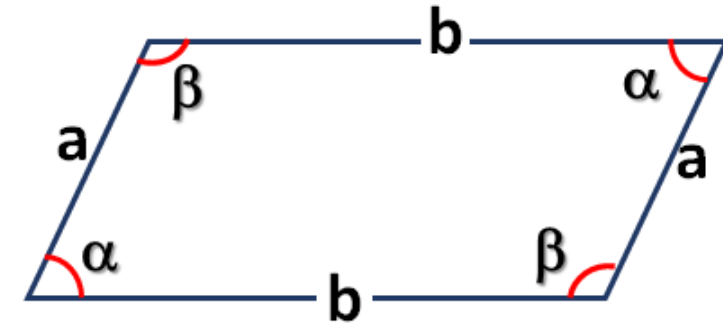


2. Las longitudes de dos lados consecutivos de un romboide son 4m y 6m. Calcule el perímetro del romboide.



Romboide

$$\alpha + \beta = 180^\circ$$

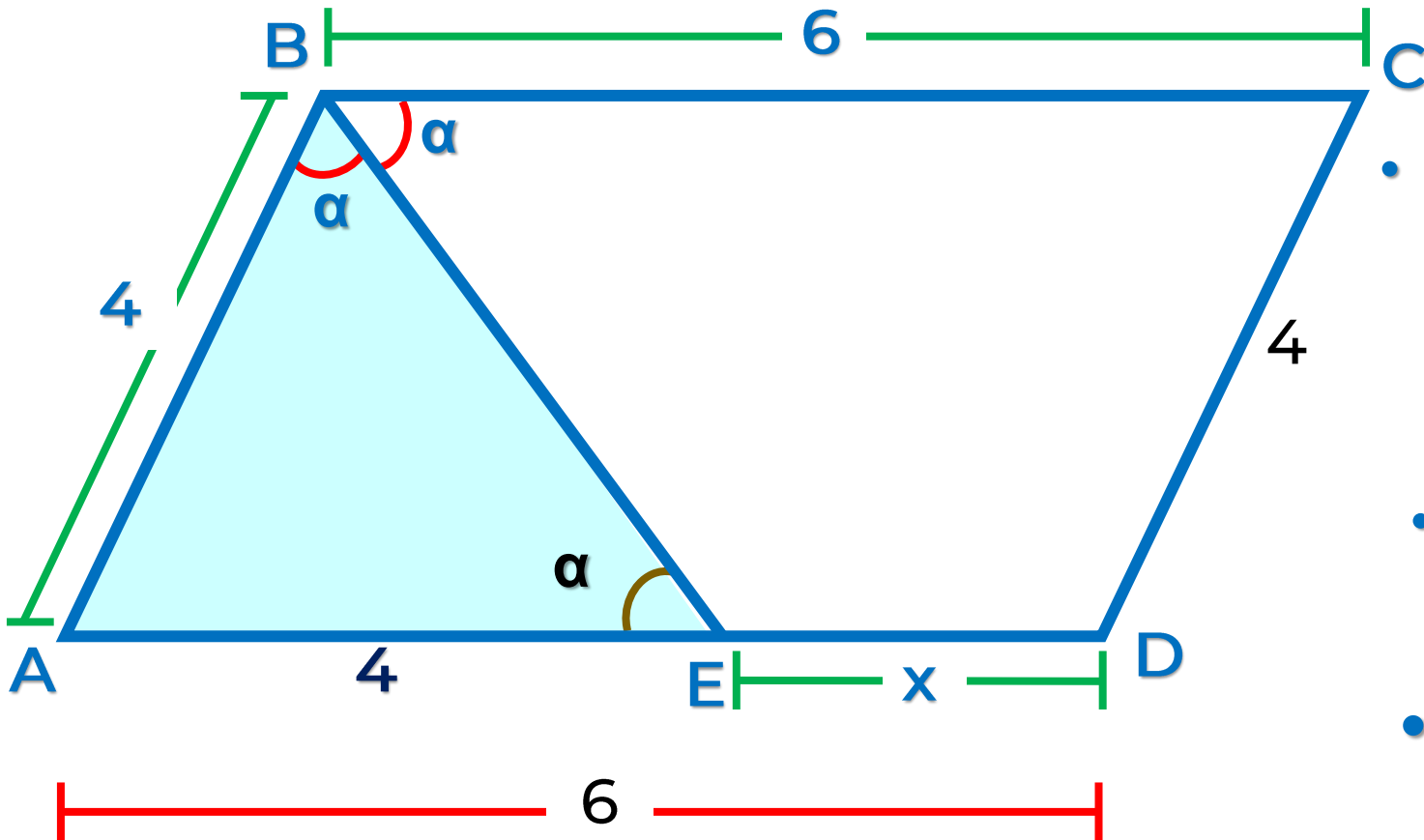


•  ABCD : Romboide

➔ $2p_{\square} = 6 + 4 + 6 + 4$

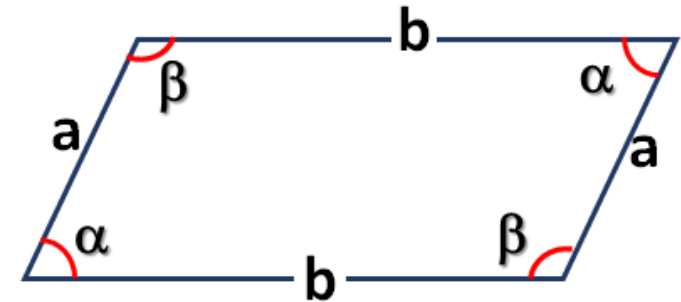
$$2p_{\square} = 20$$

3. Halle QS. En el romboide, halle el valor de x



Romboide

$$\alpha + \beta = 180^\circ$$



• $\square ABCD$: Romboide

$$AB = CD = 4$$

$$BC = AD = 6$$

$$\overline{AD} \parallel \overline{BC}$$

• $\triangle ABE$: Isósceles

$$AB = AE = 4$$

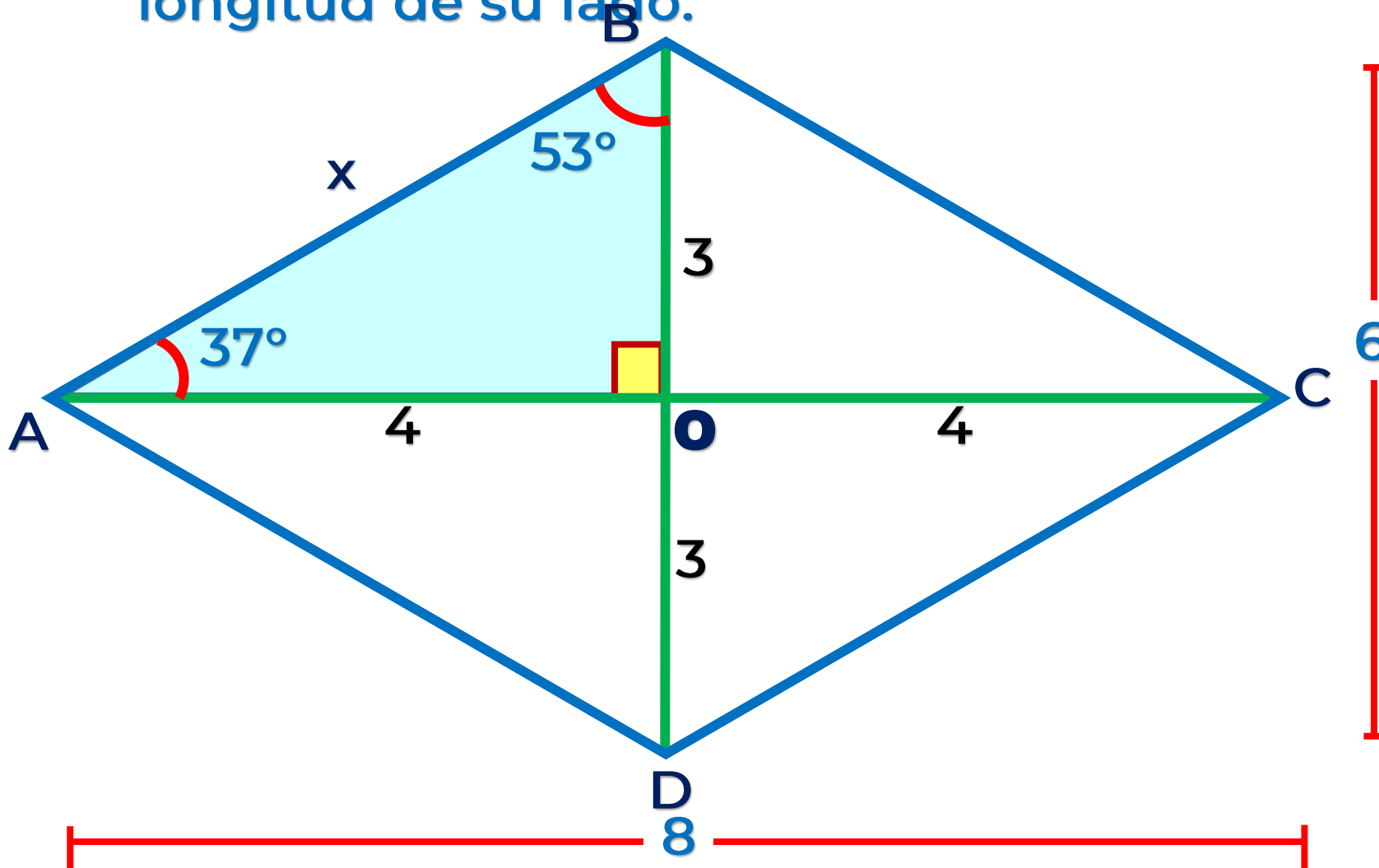
• En el \overline{AD} .

➔ $4 + x = 6$

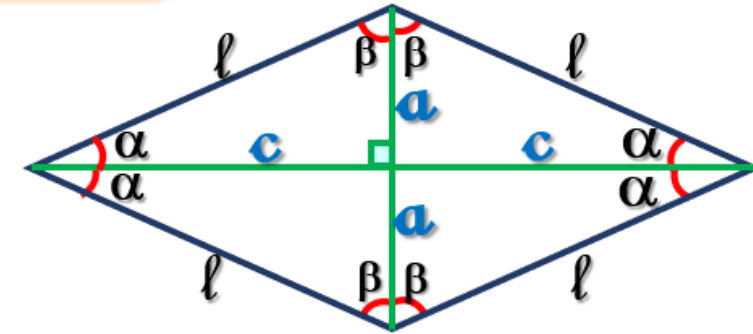
$$x = 2$$



4. Las diagonales de un rombo miden 6 y 8. Halle la longitud de su lado.



ROMBO



• $\square ABCD$: Rombo

$$AO = OC = 4$$

$$BO = OD = 3$$

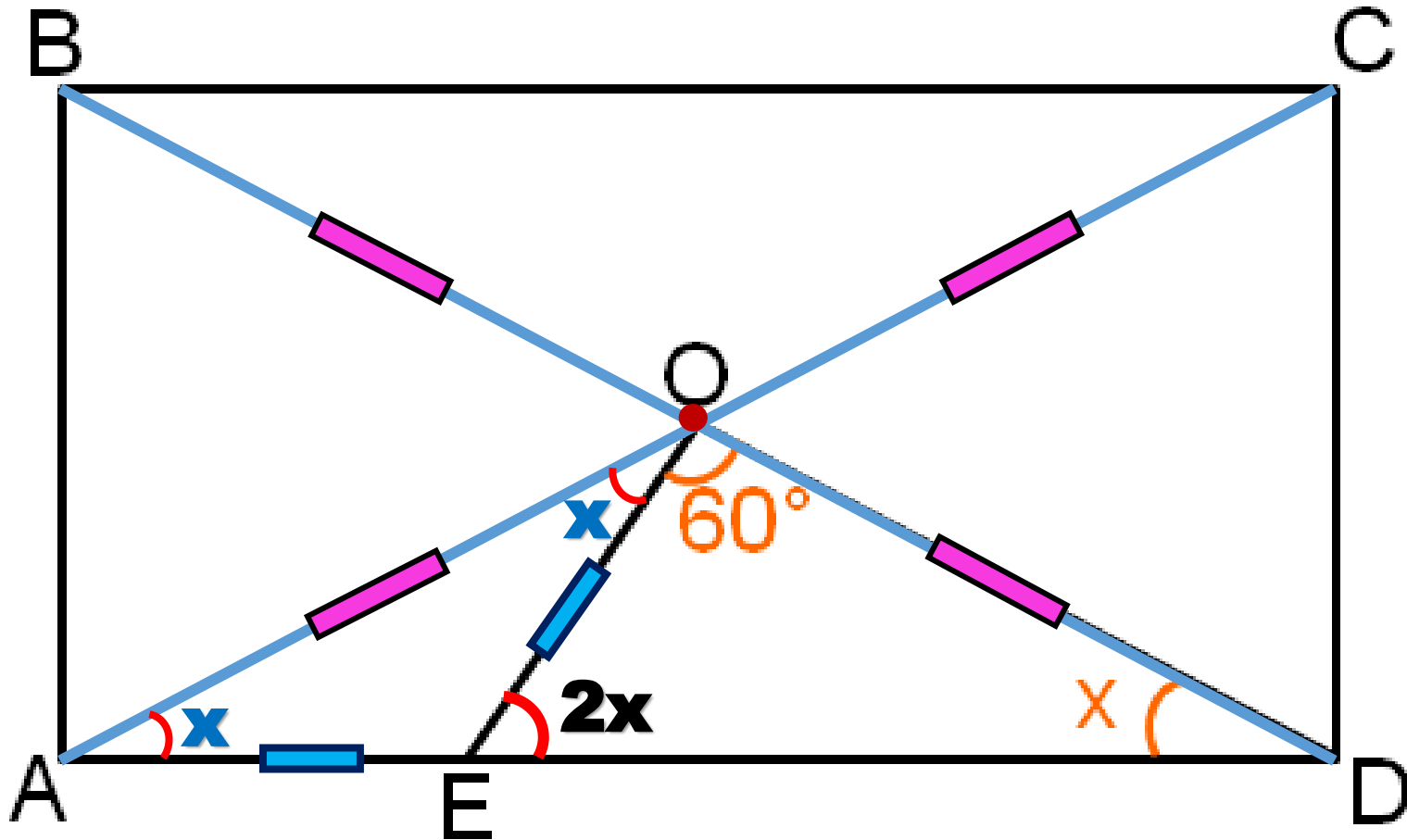
• $\triangle ABO$: Notable de 37° y 53°



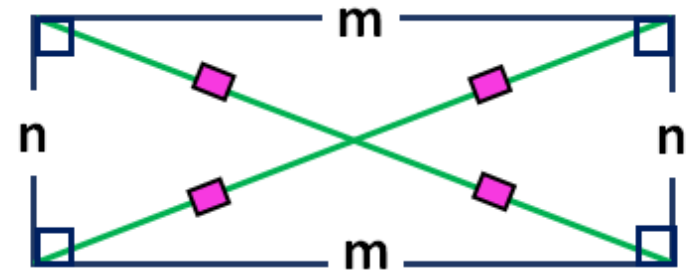
$$x = 5$$



5. ABCD es un rectángulo de centro O. Si $AE = EO$, calcule x .



Rectángulo



- $\triangle AOD$: ISÓSCELES
- $\triangle AOE$: ISÓSCELES
- $\triangle EOD$

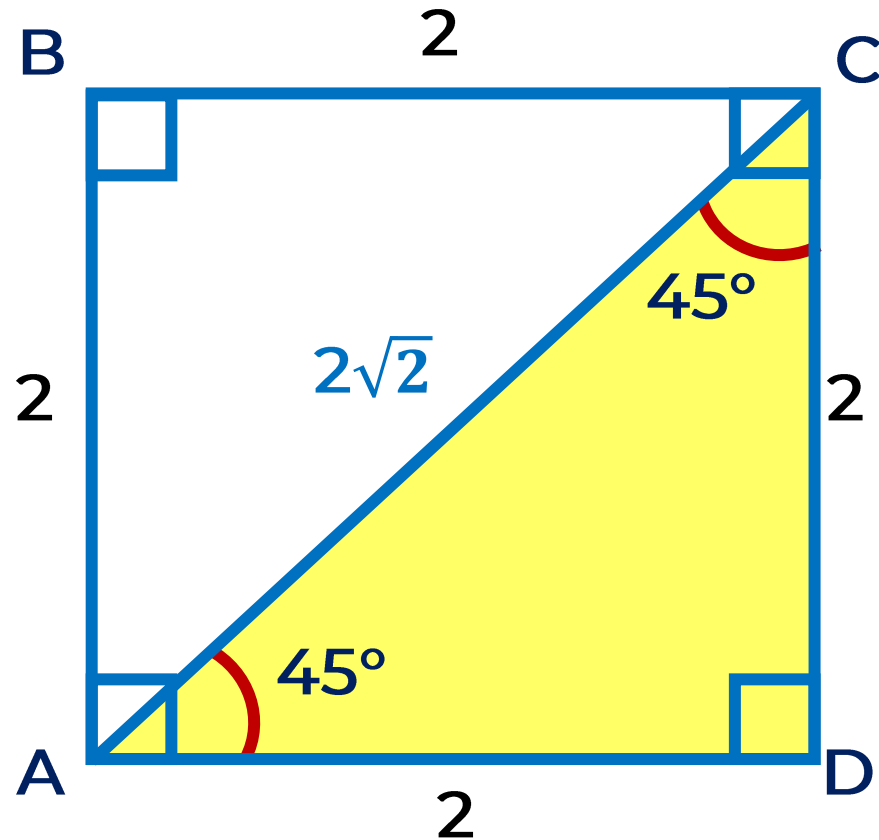
$$\rightarrow 2x + 60^\circ + x = 180^\circ$$

$$3x = 120^\circ$$

$$x = 40^\circ$$

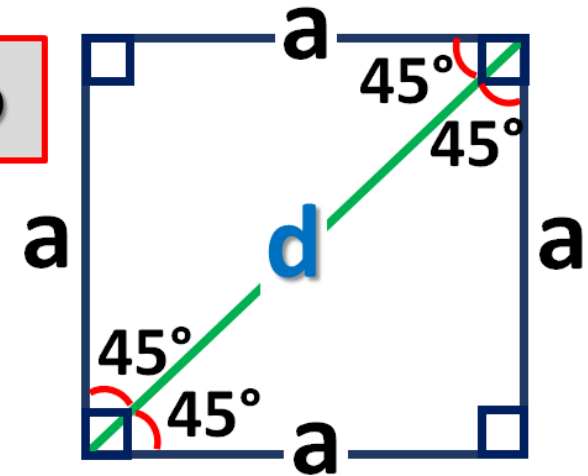


6. La diagonal de un cuadrado mide $2\sqrt{2}$. Calcule su perímetro.



Cuadrado

$$d = a\sqrt{2}$$



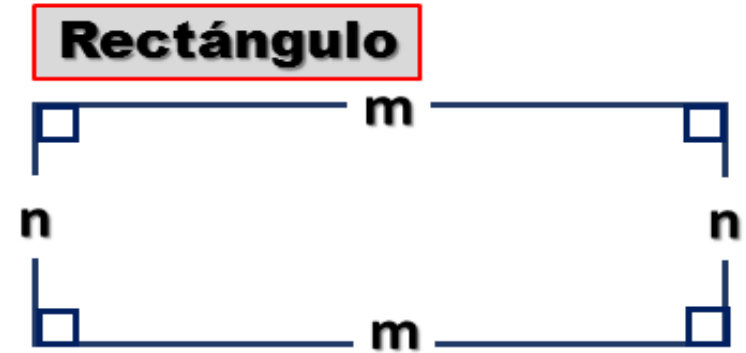
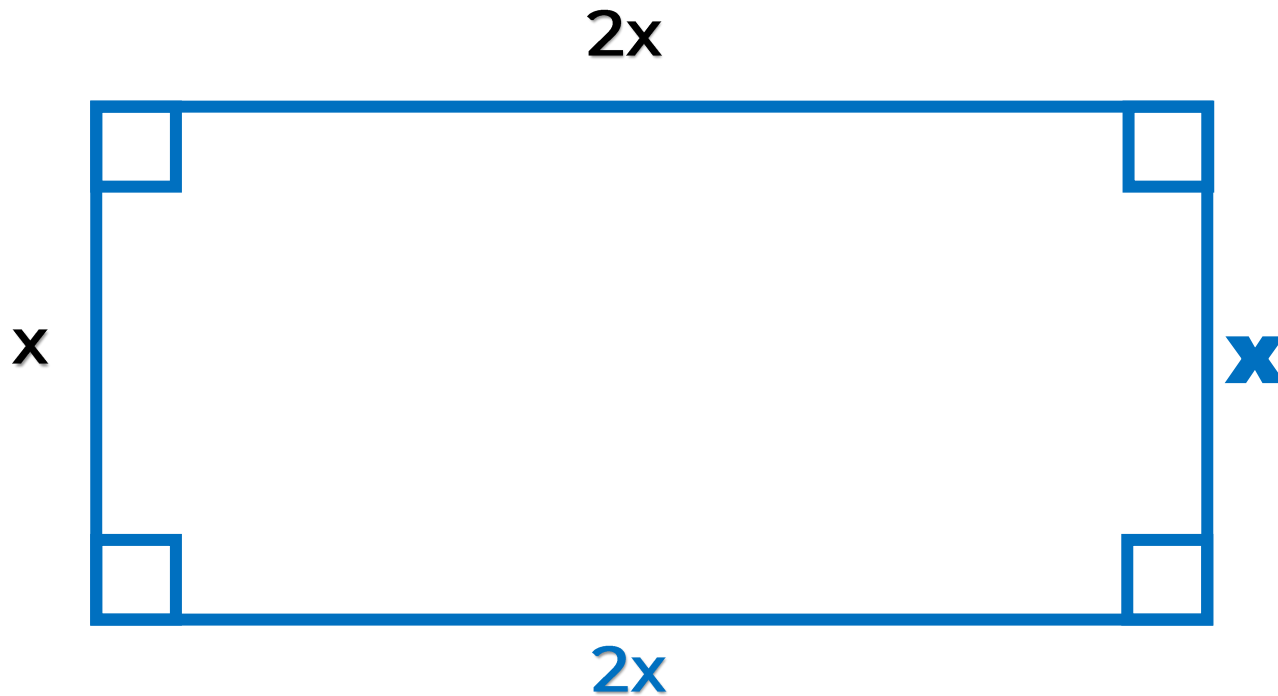
➔ $2p_{\square} = 2 + 2 + 2 + 2$

$$2p_{\square} = 4(2)$$

$$2p_{\square} = 8$$



7. Se tiene un rectángulo de perímetro 18. Halle el valor de x .



Por dato

$$2p_{\square} = 18$$



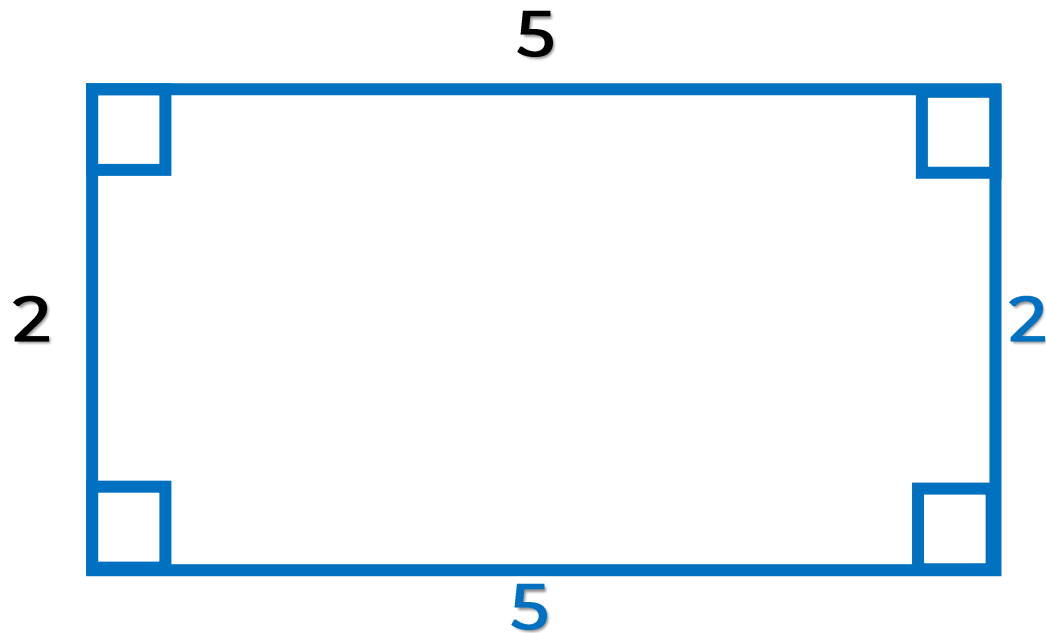
$$x + 2x + x + 2x = 18$$

$$6x = 18$$

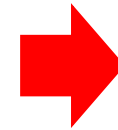
$$x = 3$$



8. Pedro corre todos los días 6 vueltas alrededor de una losa deportiva rectangular de dimensiones 5m y 2m cercana a su casa. ¿Cuántos metros recorre Pedro diariamente?.



En el rectángulo ABCD:



$$\begin{aligned} 2p \square &= 2 + 5 + 2 + \\ 2p \square &= 14m \end{aligned}$$

1 vuelta	_____	14m
6 vueltas	_____	x

$$x = 6(14)$$

$$x = 84m$$