



GEOMETRÍA

1st

SECONDARY

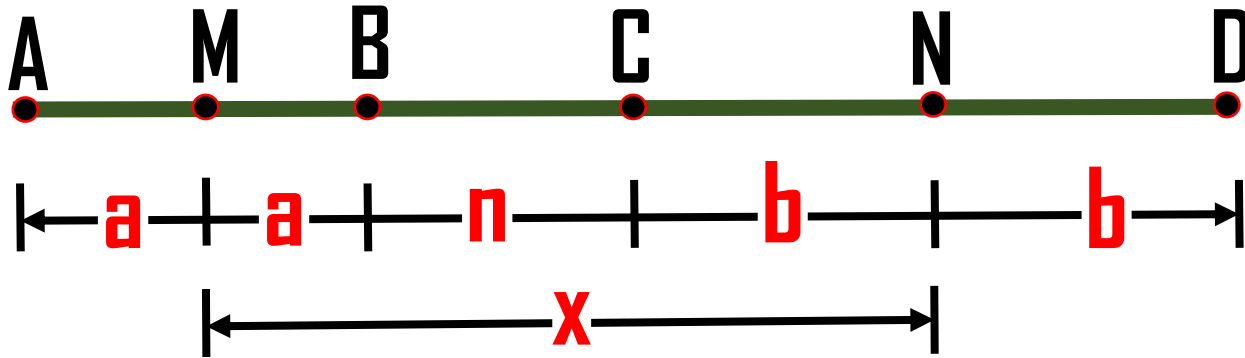
Asesoría



 **SACO OLIVEROS**



1. En el grafico mostrado, $AC + BD = 24\text{cm}$. Halle el valor de x .



Dato: $\underbrace{AC}_{2a+n} + \underbrace{BD}_{n+2b} = 24$

$$2a + n + 2b = 24$$

$$2a + n + 2b = 24$$

$$a + n + b = 12$$

Nos piden : x

$$x = a + \underbrace{n + b}_{12}$$

$$x = 12$$

2. En la figura halle el valor de x , si \overrightarrow{OP} es bisectriz del $\angle BOC$

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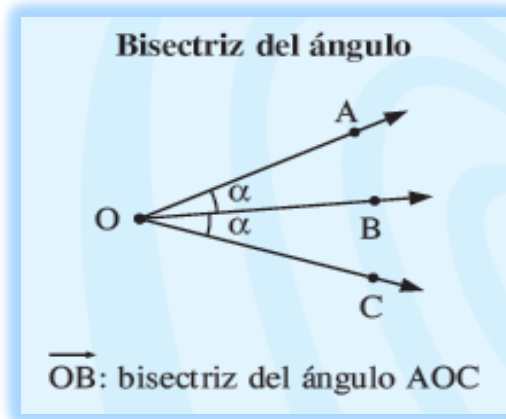
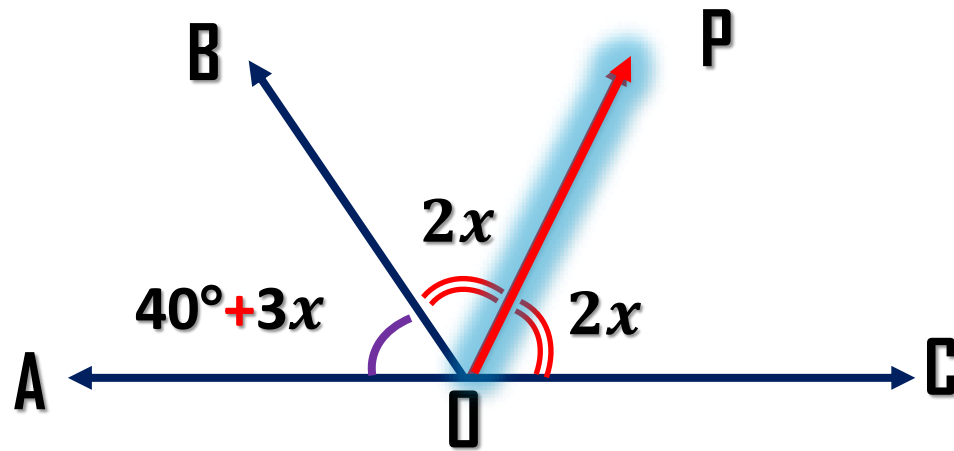
$\Rightarrow m \angle COP = m \angle BOP = 2x$

En la \overleftrightarrow{AC} .

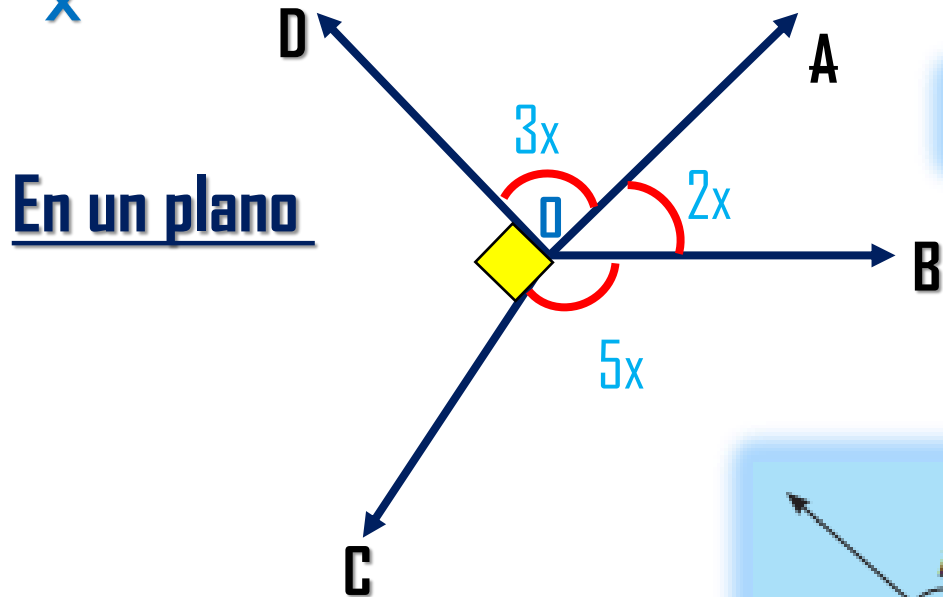
$$40^\circ + 3x + 2x + 2x = 180^\circ$$

$$7x = 140^\circ$$

$$x = 20^\circ$$



3. En un plano se trazan los rayos \vec{OA} , \vec{OB} , \vec{OC} y \vec{OD} , tal que $m\angle AOB = 2x$, $m\angle BOC = 5x$, $m\angle COD = 90^\circ$ y $m\angle DOA = 3x$. Halla el valor de x

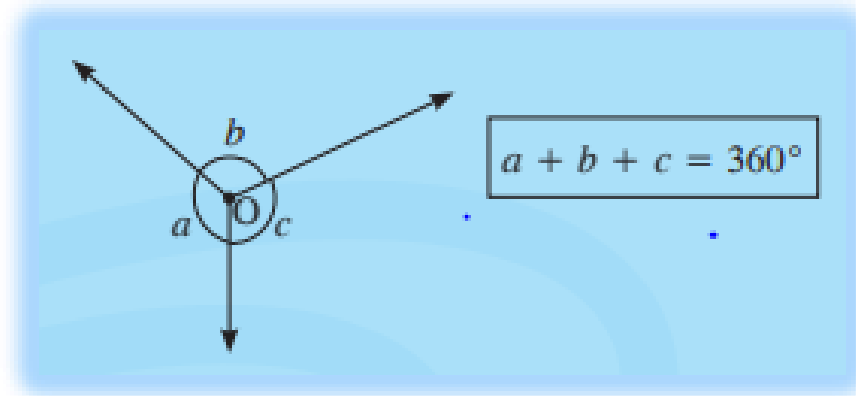


$$3x + 2x + 5x + 90^\circ = 360^\circ$$

$$3x + 2x + 5x = 360^\circ - 90^\circ$$

$$10x = 270^\circ$$

$$x = 27^\circ$$





4. Si el suplemento de $2x$ es igual al cuádruple del complemento de $3x$

$$\underbrace{S_{2x}} = 4 \cdot \underbrace{C_{3x}}$$

$$180^\circ - 2x = 4 \cdot (90 - 3x)$$

$$12x - 2x = 360 - 180^\circ$$

$$180^\circ - 2x = 360 - 12x$$

$$10x = 180^\circ$$

$$x = 18^\circ$$



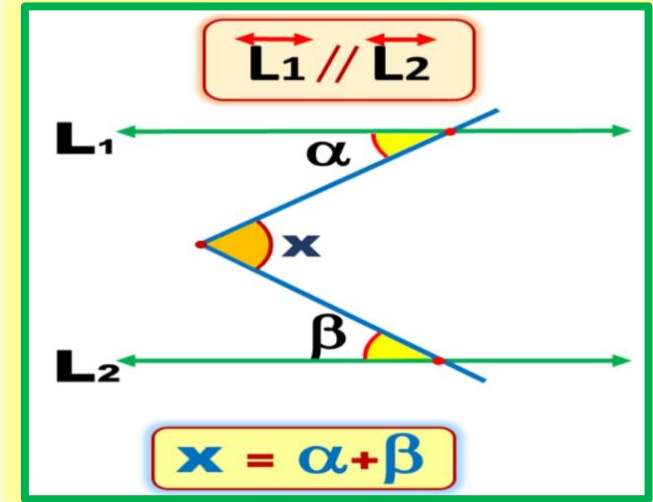
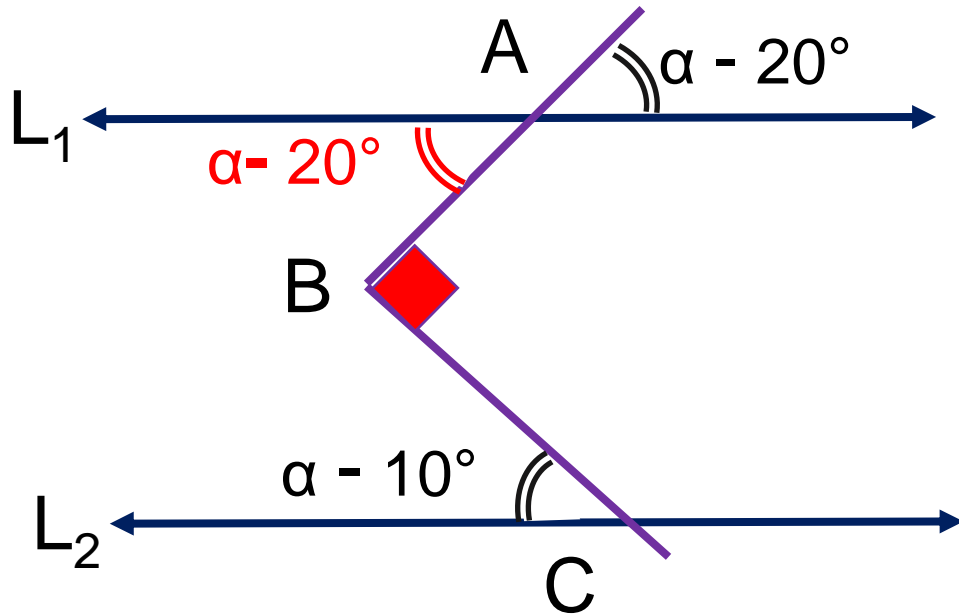
Suplemento (S)

$$S_\alpha = 180^\circ - \alpha$$

Complemento (C)

$$C_\alpha = 90^\circ - \alpha$$

5. En el gráfico $L_1 \parallel L_2$, halle el valor de α , si $m\angle B = 90^\circ$.



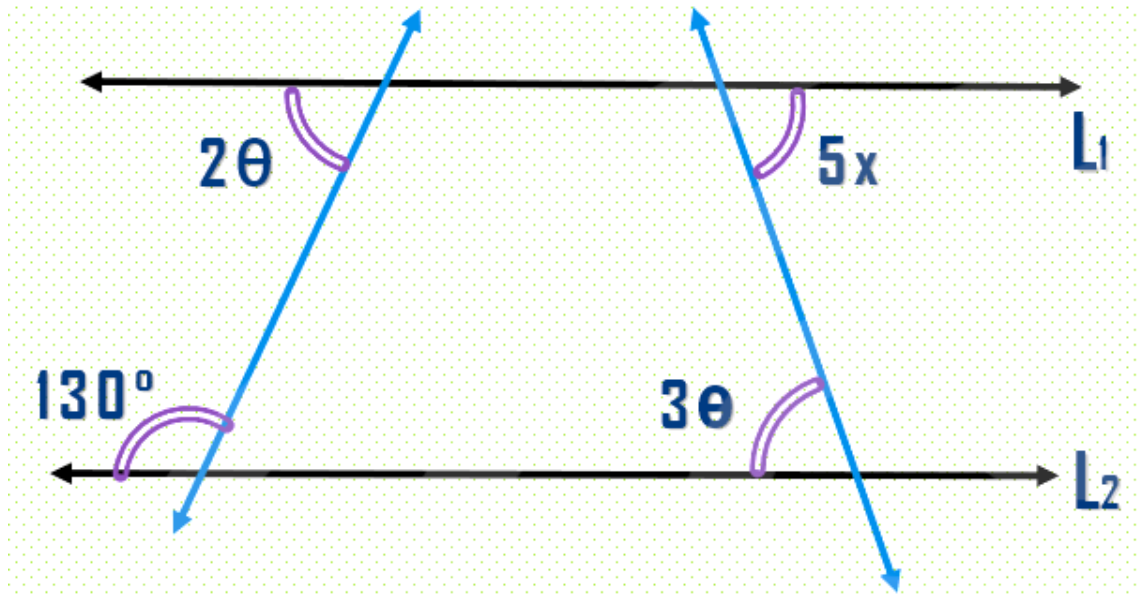
$$\alpha - 20^\circ + \alpha - 10^\circ = 90^\circ$$

$$2\alpha - 30^\circ = 90^\circ$$

$$2\alpha =$$

$$120^\circ$$

6. Si $L_1 \parallel L_2$, halle el valor de x .



Áng. conjugados

Diagram showing two parallel lines L_1 and L_2 intersected by a transversal. The top-left angle is 2θ and the bottom-left angle is 130° . They are marked as conjugate angles.

$$130^\circ + 2\theta = 180^\circ$$

$$2\theta = 50^\circ$$

$$\theta = 25^\circ$$

Áng. Alternos internos

Diagram showing two parallel lines L_1 and L_2 intersected by a transversal. The top-right angle is $5x$ and the bottom-left angle is 3θ . They are marked as alternate interior angles.

$$3\theta = 5x$$

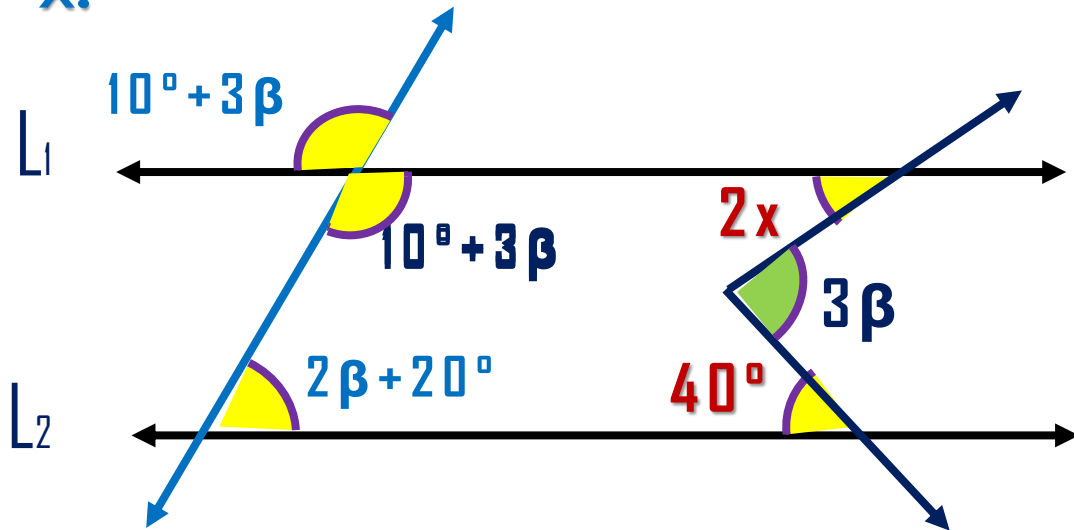
$$3 \cdot (25^\circ) = 5x$$

$$75^\circ = 5x$$

$$15^\circ = x$$



7. Si $L_1 \parallel L_2$, halle el valor de x .

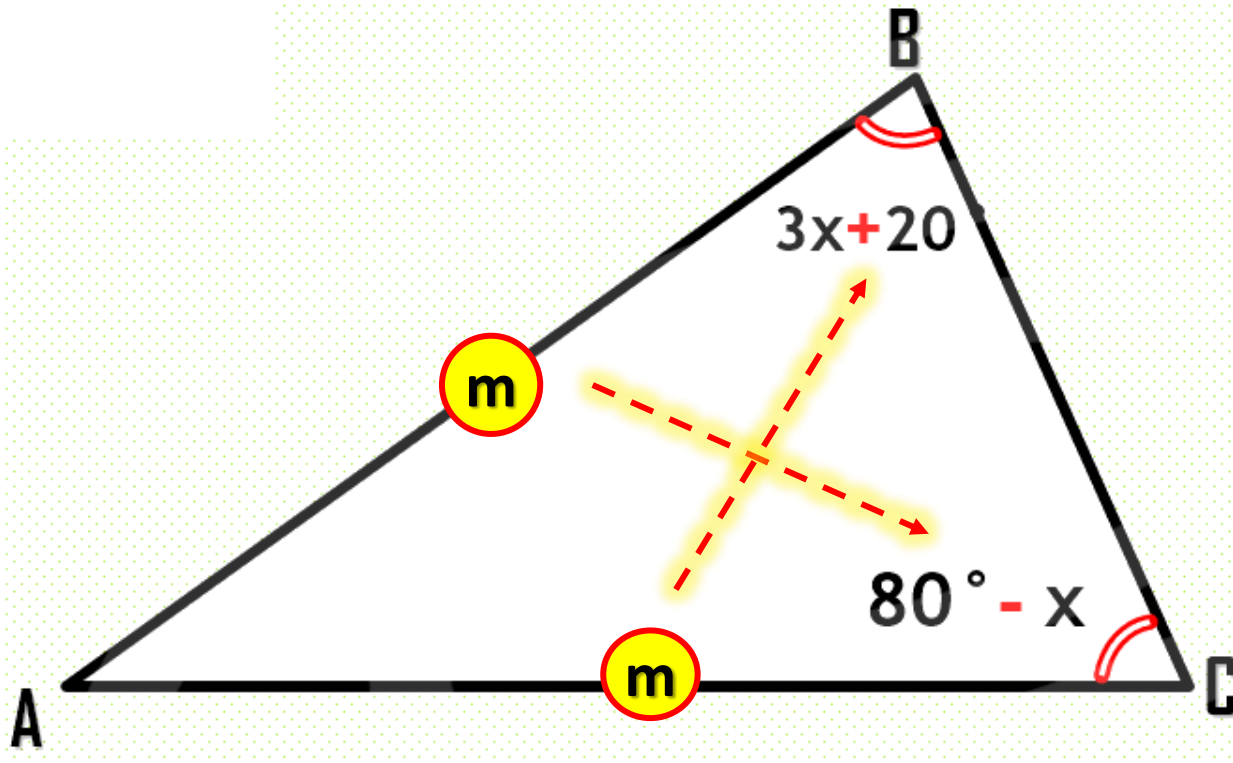
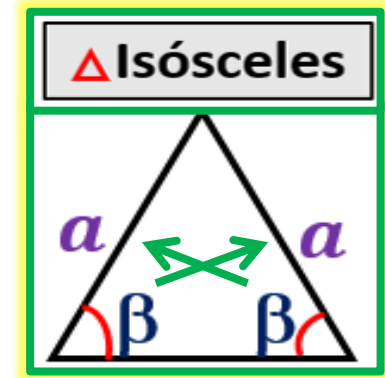


$$\begin{aligned}
 3\beta + 10 + 2\beta + 20 &= 180^\circ \\
 5\beta + 30 &= 180^\circ \\
 5\beta &= 150^\circ \\
 \beta &= 30^\circ
 \end{aligned}$$

$$\begin{aligned}
 3\beta &= 2x + 40 \\
 3(30) &= 2x + 40 \\
 90 &= 2x + 40 \\
 50 &=
 \end{aligned}$$

$$25^\circ = x$$

8. En el gráfico $AB=AC$, halle el valor de x .



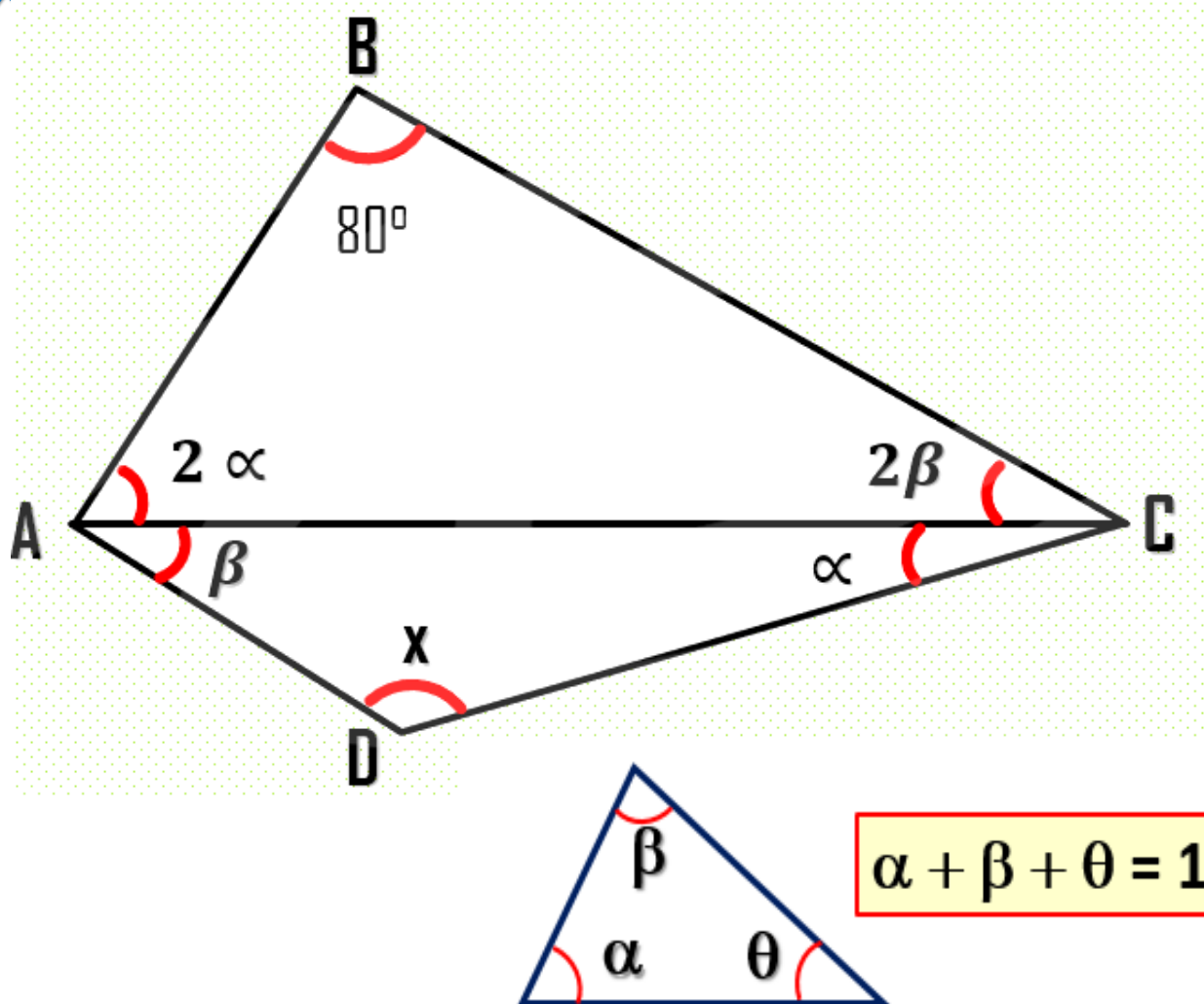
$$m \angle ABC = m \angle ACB$$

$$3x + 20^\circ = 80^\circ - x$$

$$4x = 60^\circ$$

$$x = 15^\circ$$

9. En el gráfico , halle el valor de x



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

En el Δ
ABC

$$2\alpha + 2\beta + 80^\circ = 180^\circ$$

$$2\alpha + 2\beta = 100^\circ$$

$$\alpha + \beta = 50^\circ$$

En el Δ
ADC

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

$$50^\circ + x = 180^\circ$$

$$x = 130^\circ$$

10. En el gráfico, halle el valor de

x.

En $\triangle ABC$

$$80^\circ + 60^\circ + m \angle C = 180^\circ$$

$$140^\circ + m \angle C = 180^\circ$$

$$m \angle C = 40^\circ$$

En $\triangle FPC$

$$60^\circ + 40^\circ + x = 180^\circ$$

$$100^\circ + x = 180^\circ$$

$$x = 80^\circ$$

En $\triangle EFD$

$$50^\circ + 70^\circ + m \angle F = 180^\circ$$

$$120^\circ + m \angle F = 180^\circ$$

$$m \angle F = 60^\circ$$

