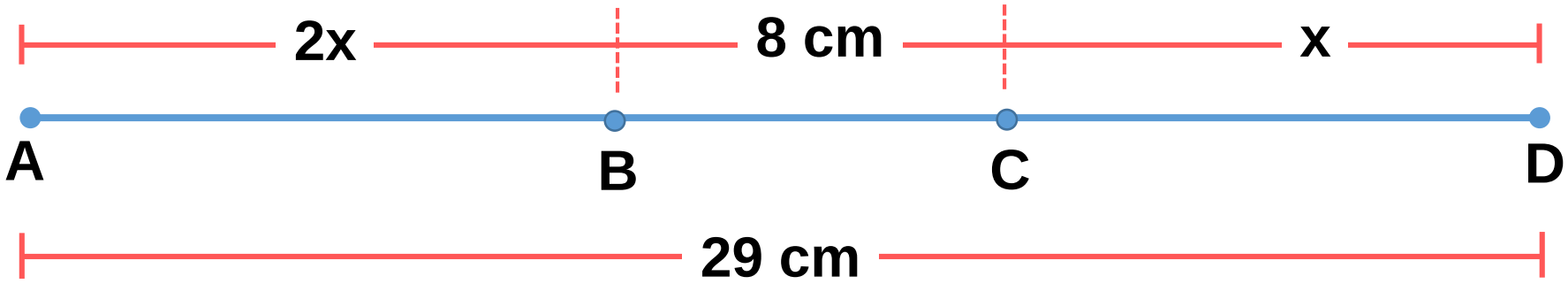
GEOMETRY

2nd
SECONDARY

Práctica exploratoria

SACO OLIVEROS

1 En la siguiente figura, halle el valor de x.



Resolución

Piden: x

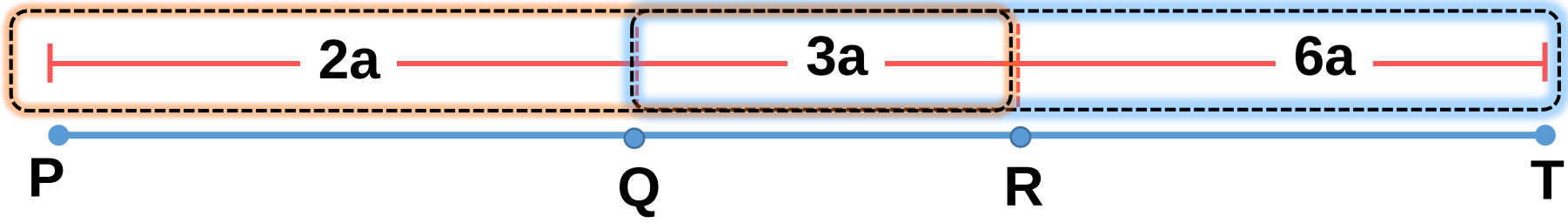
$$29 = 2x + 8 + x$$

$$21 = 2x + x$$

$$21 = 3x$$

$$x = 7$$

2 En la figura, QT – PR = 48 u. Calcule PQ.



Resolución

Piden: PQ

Dato : $QT - PR = 48$

$9a - 5a = 48$

$4a = 48$

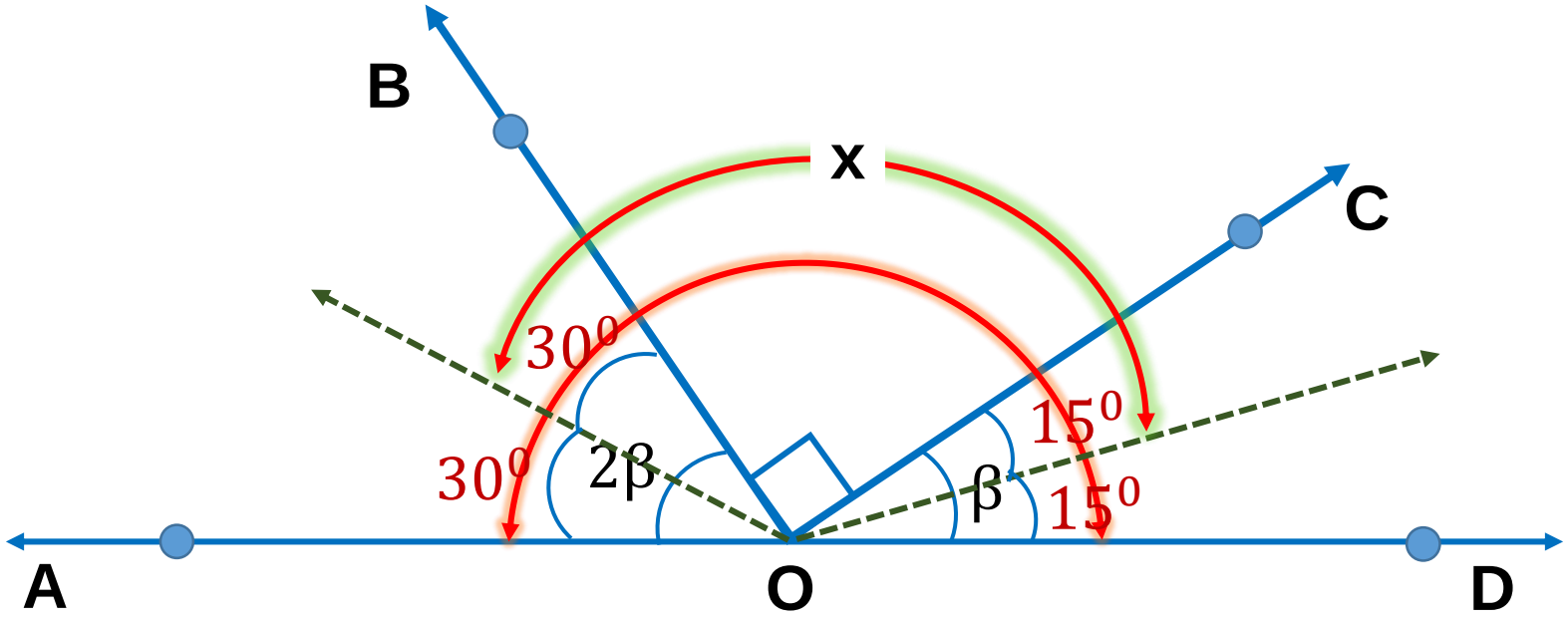
$a = 12$

Luego:

$PQ = 2a$

$PQ = 24$

3 En la figura, calcule la medida del ángulo formado por las bisectrices de los ángulos AOB y COD.



Resolución

$$2\beta + 90^0 + \beta = 180^0$$

$$3\beta = 180^0 - 90^0$$

$$3\beta = 90^0$$

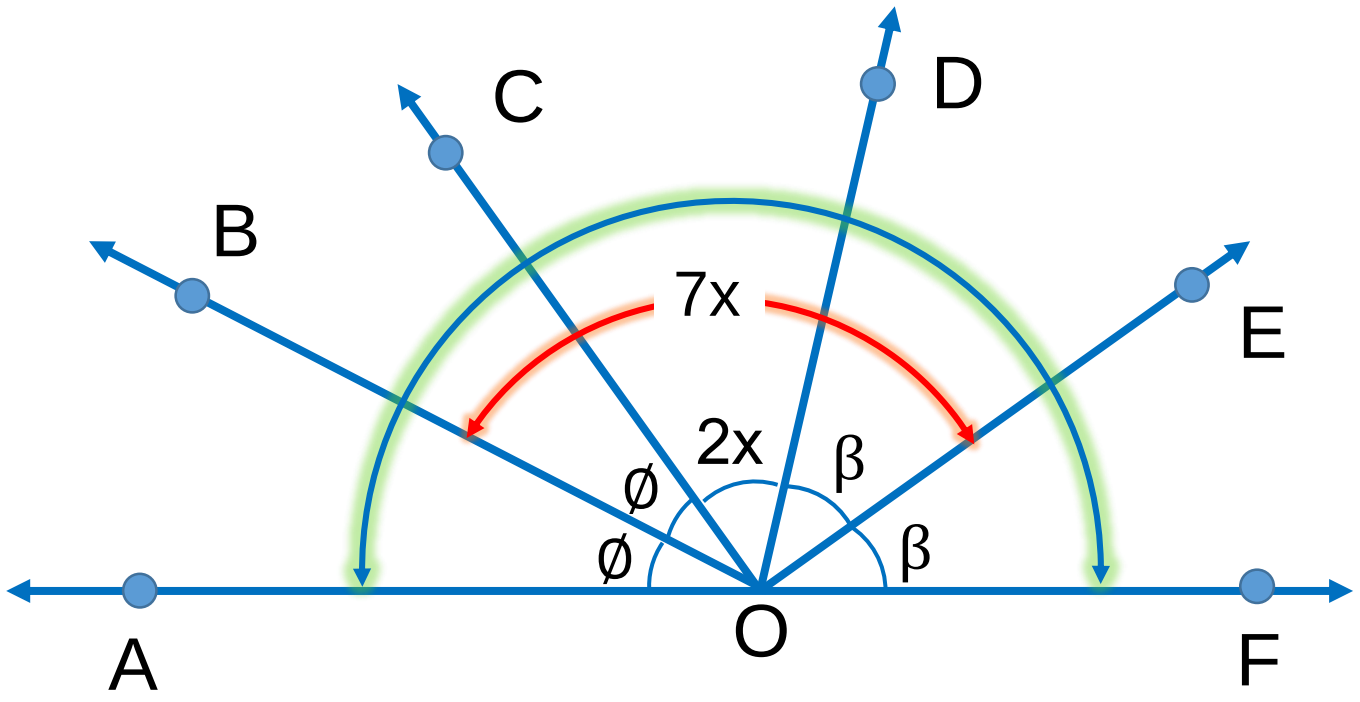
$$\beta = 30^0$$

Luego:

$$30^0 + 90^0 + 15^0 = x$$

$$x = 135^0$$

4 En la figura, halle el valor de *x*.



Resolución

Piden: x

$$ø + 2x + β = 7x$$

$$ø + β = 5x$$

$$2ø + 2β + 2x = 180^o$$

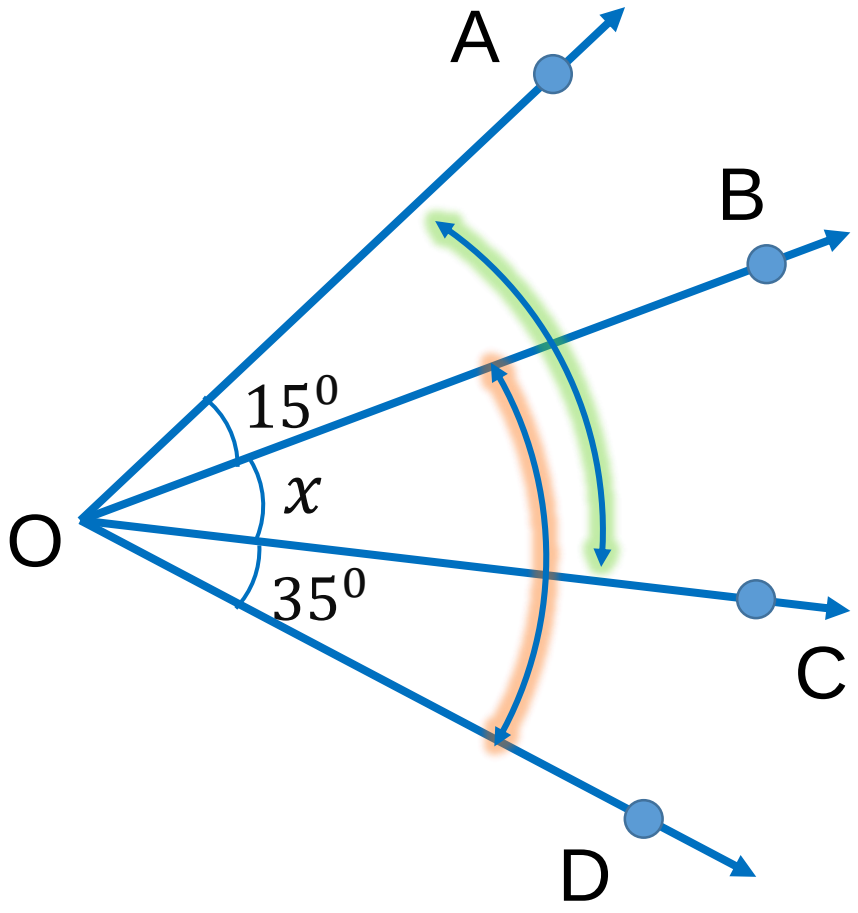
$$2(ø + β) + 2x = 180^o$$

$$2(5x) + 2x = 180^o$$

$$12x = 180^o$$

$$x = 15^o$$

5 En la figura, los ángulos AOC y BOD son complementarios. Halle el valor de *x*.



Resolución

Piden: x

Dato: $m\measuredangle AOC + m\measuredangle BOD = 90^0$

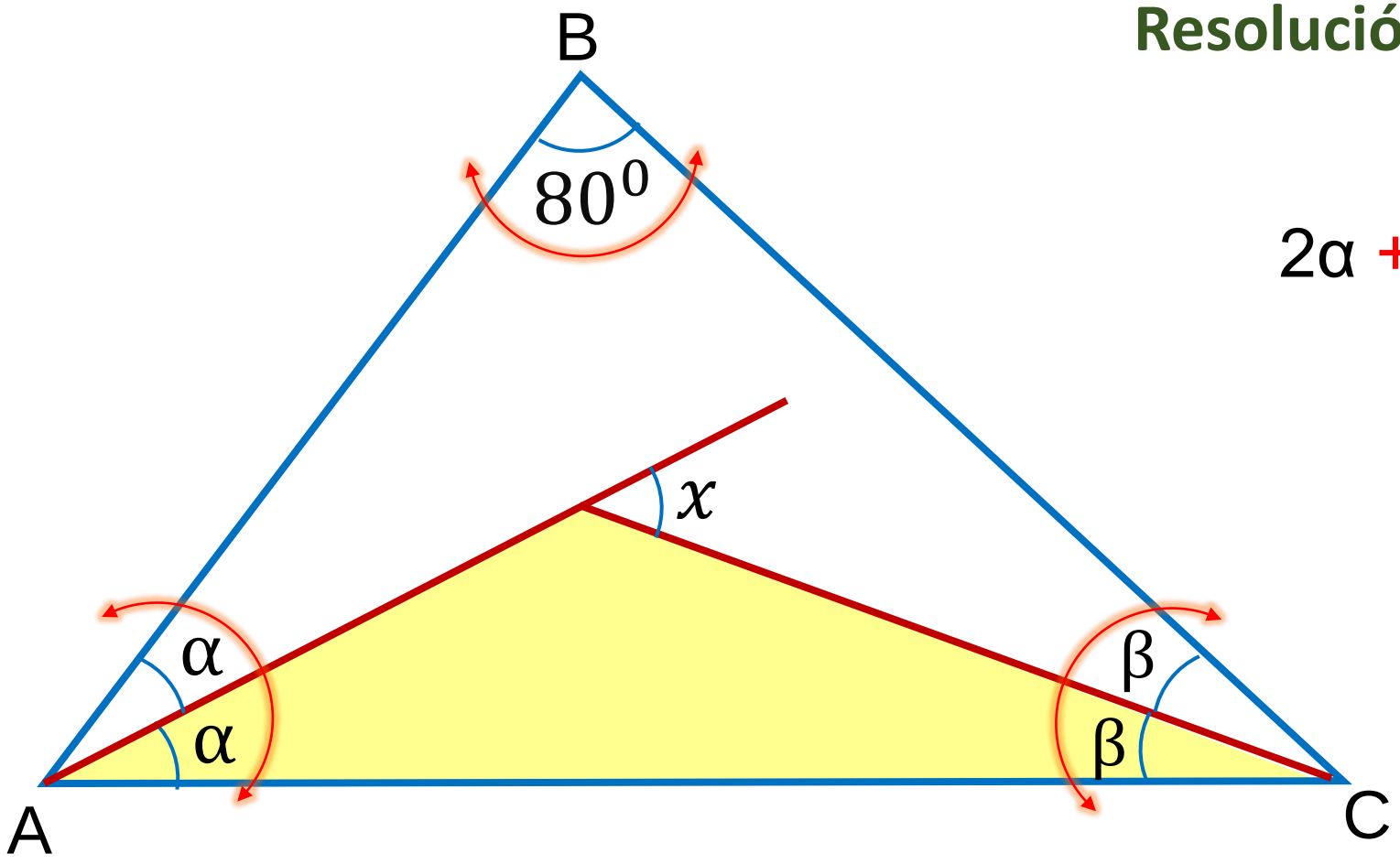
$$15^o + x + 35^o + x = 90^o$$

$$50^o + 2x = 90^o$$

$$2x = 40^o$$

$$x = 20^0$$

6 Del gráfico, halle el valor de *x*.



Resolución

Piden: x

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

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

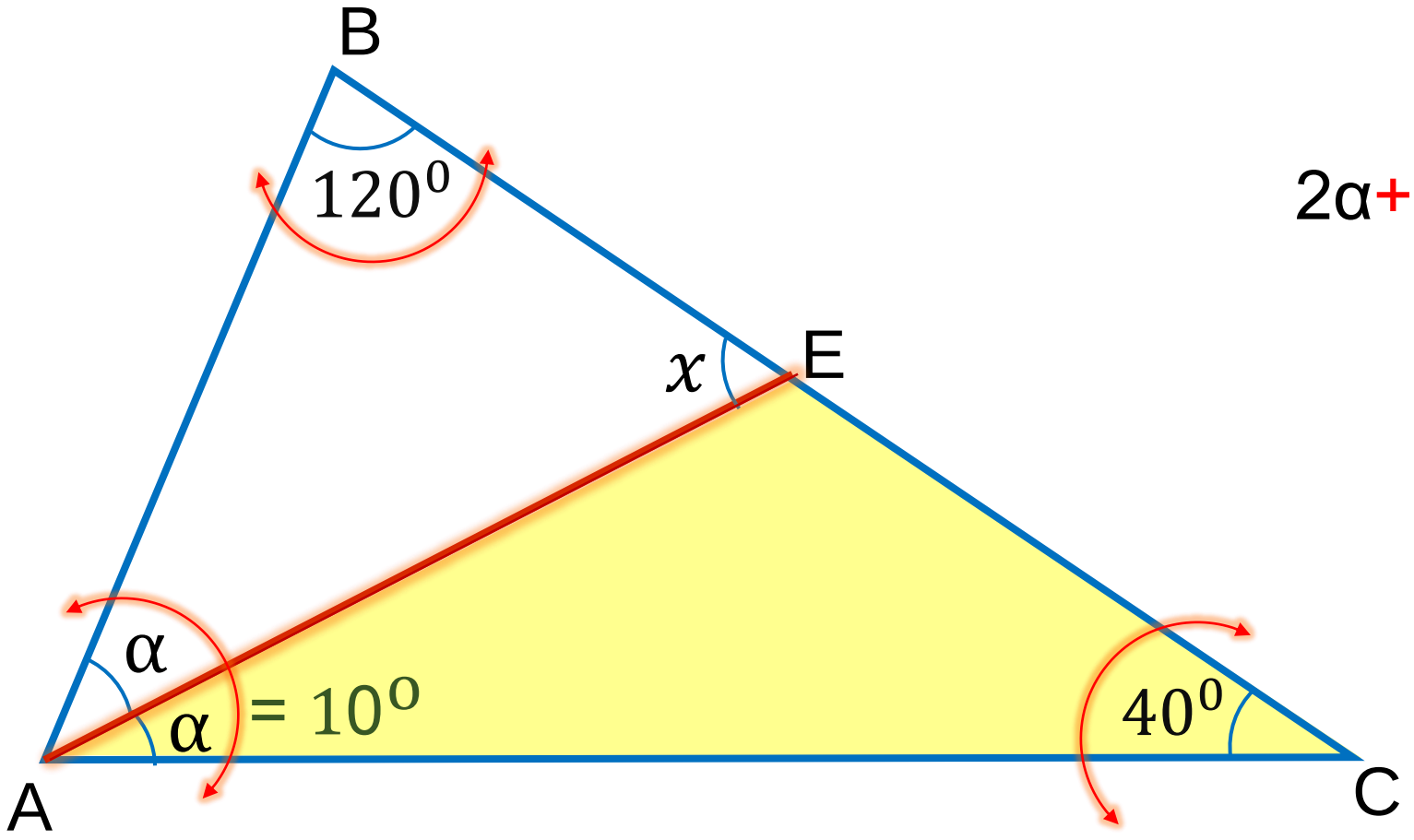
$$\alpha + \beta = 50^o$$

Teorema

$$\alpha + \beta = x$$

$$x = 50^o$$

7 En el gráfico $\overline{AE}$ es una bisectriz, calcular: x



Resolución

Piden: x

$$2\alpha + 40^0 + 120^o = 180^o$$

$$2\alpha + 160^o = 180^o$$

$$2\alpha = 20^o$$

$$\alpha = 10^o$$

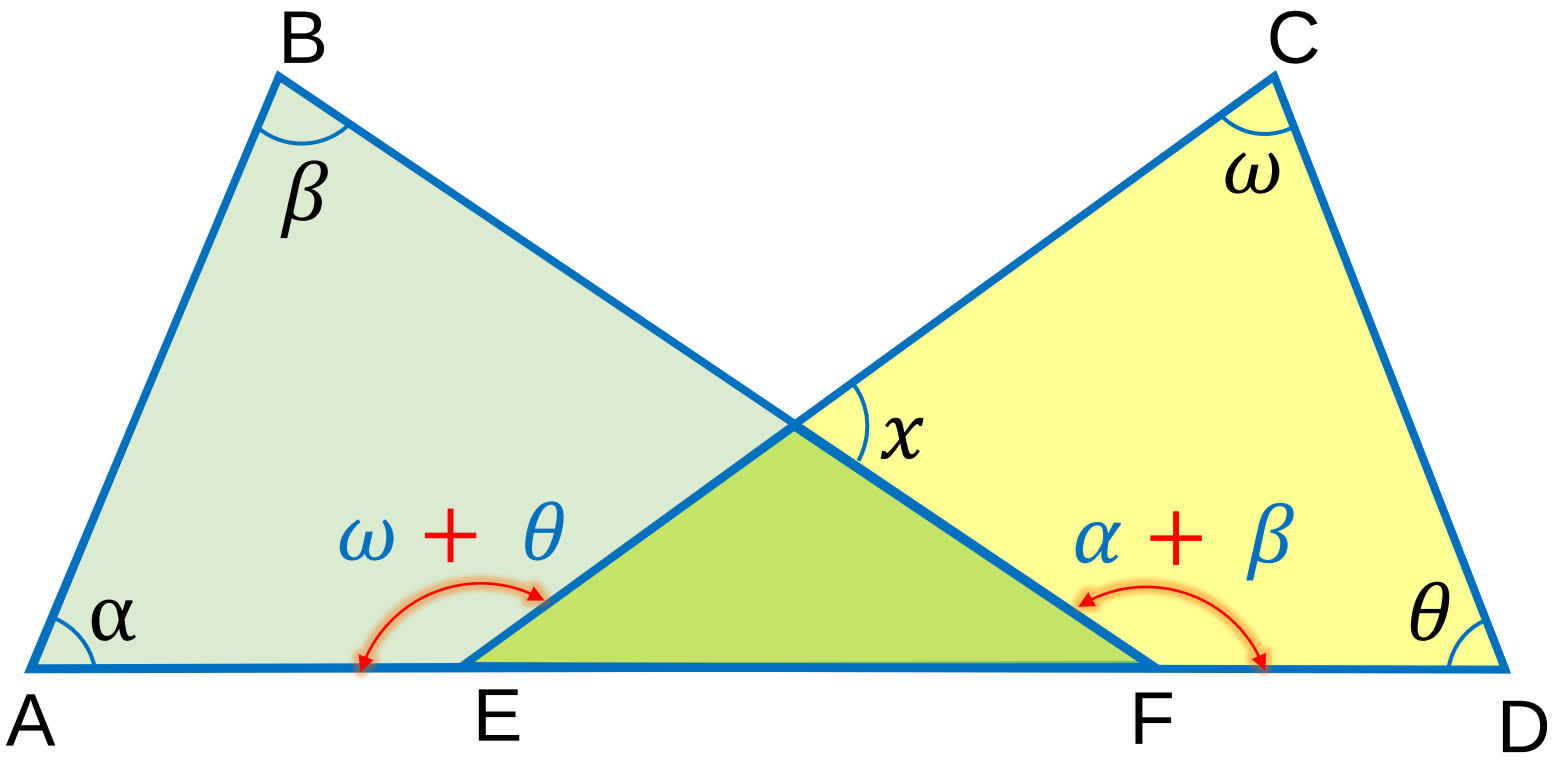
Teorema

$$10^0 + 40^0 = x$$

$$x = 50^o$$

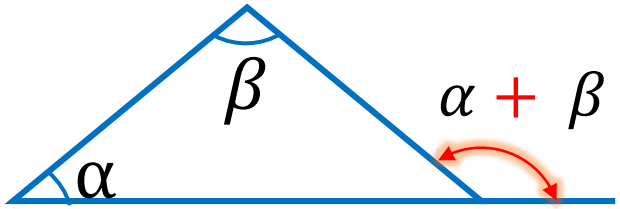
8 si $\alpha + \beta + \theta + \omega = 300^o$. Hallar el valor de x.

Resolución



Piden: x

Teorema



Teorema

$$\underbrace{\alpha + \beta + \omega + \theta}_{300^o} + x = 360^o$$

$$300^o + x = 360^o$$

$$x = 60^o$$