

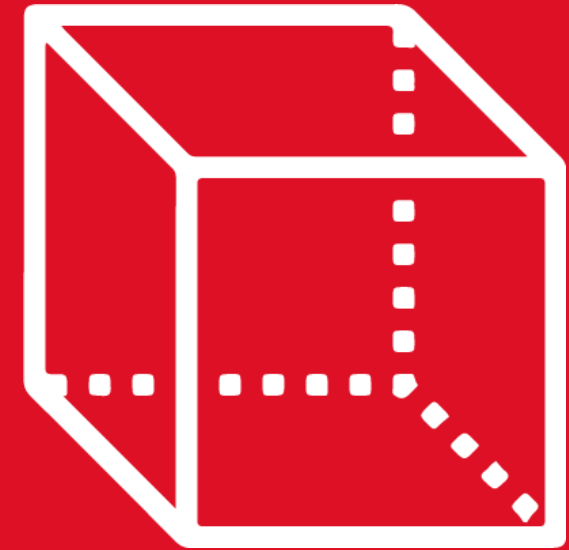


GEOMETRÍA

Tomo 2

5th
SECONDARY

Retroalimentación



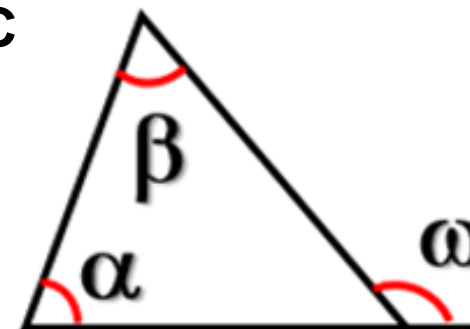
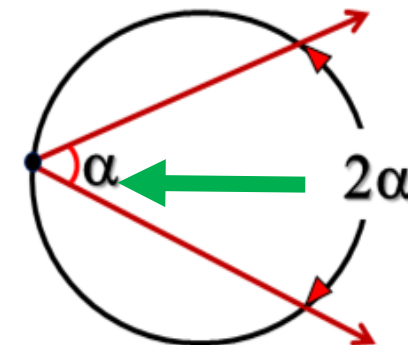
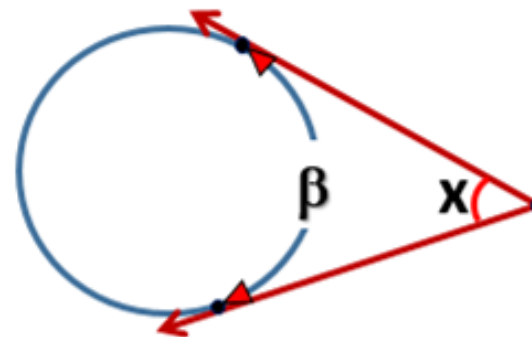
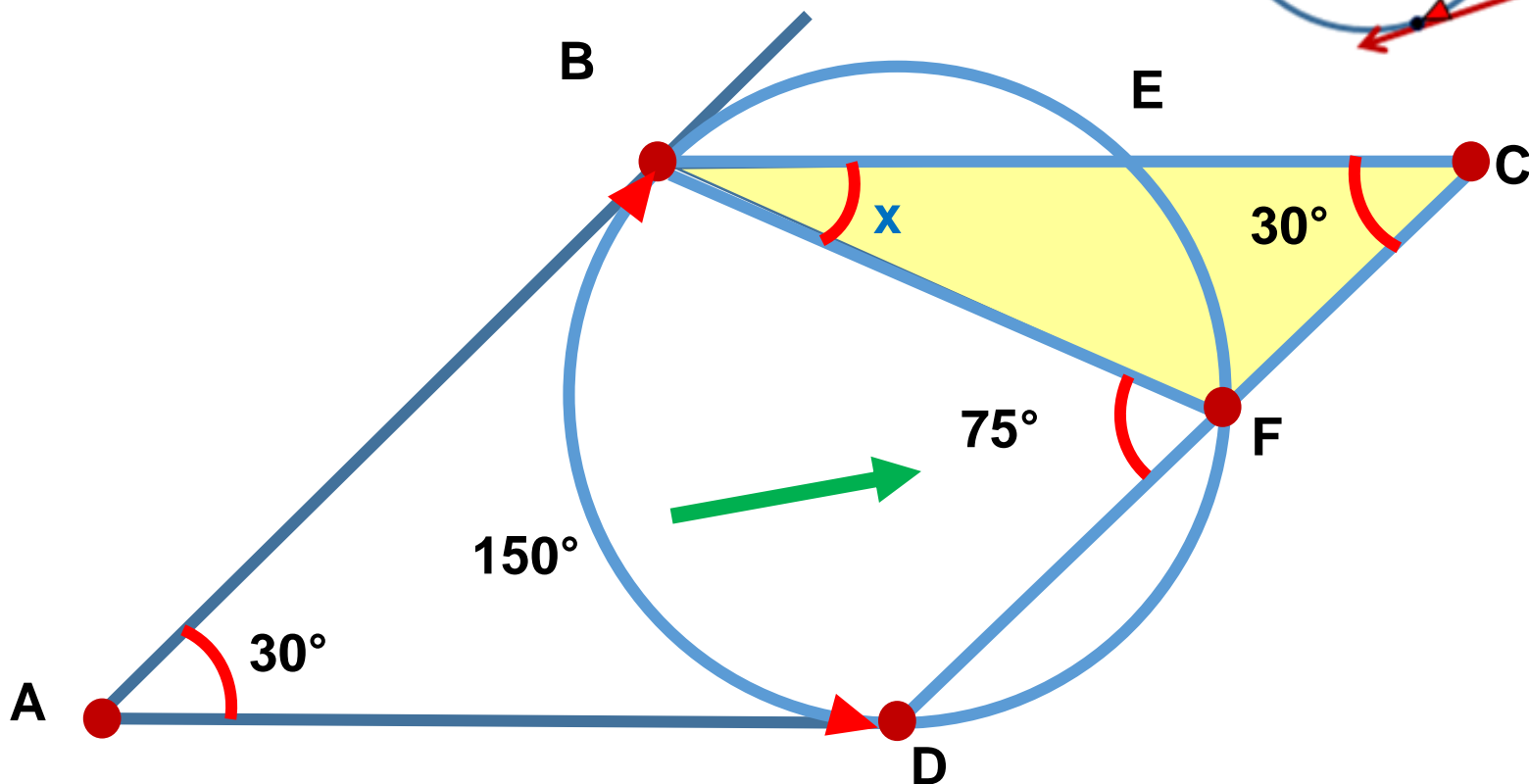
 **SACO OLIVEROS**

1. En la figura ABCD es un rombo, B y D son puntos de tangencia y la $m\angle BCD = 30^\circ$. Halle el valor de x.

- Ángulo exterior

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

- Ángulo inscrito

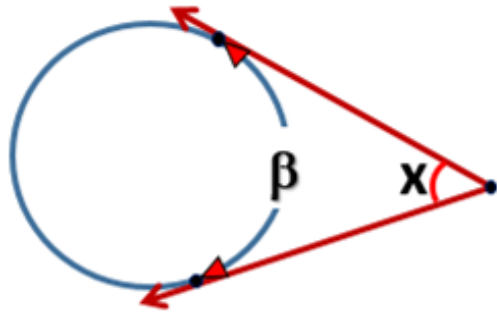


$$\omega = \alpha + \beta$$

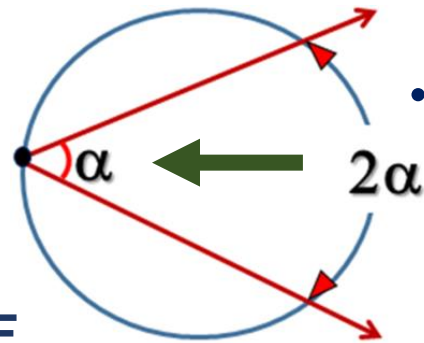
$$x + 30^\circ = 75^\circ$$

$$x = 45^\circ$$

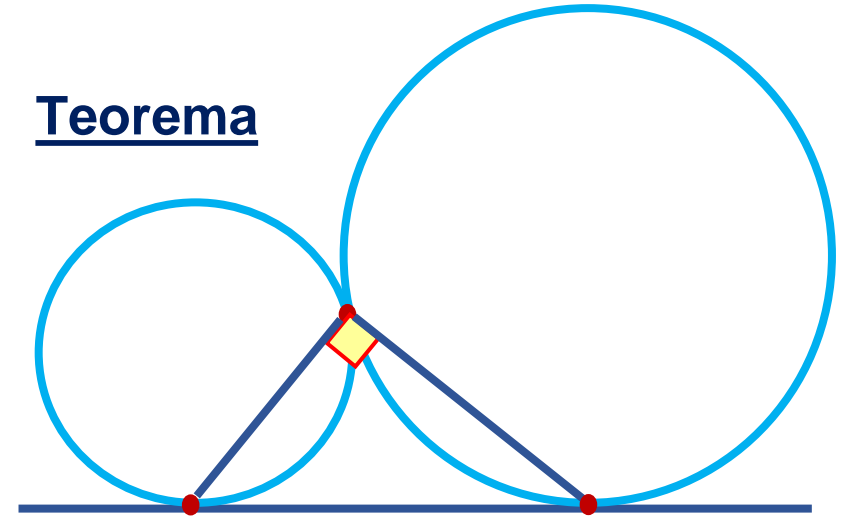
- Ángulo exterior • Ángulo inscrito



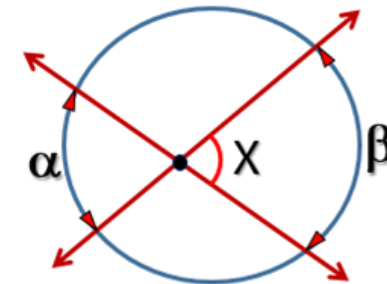
$$x + \beta = 180^\circ$$



Teorema



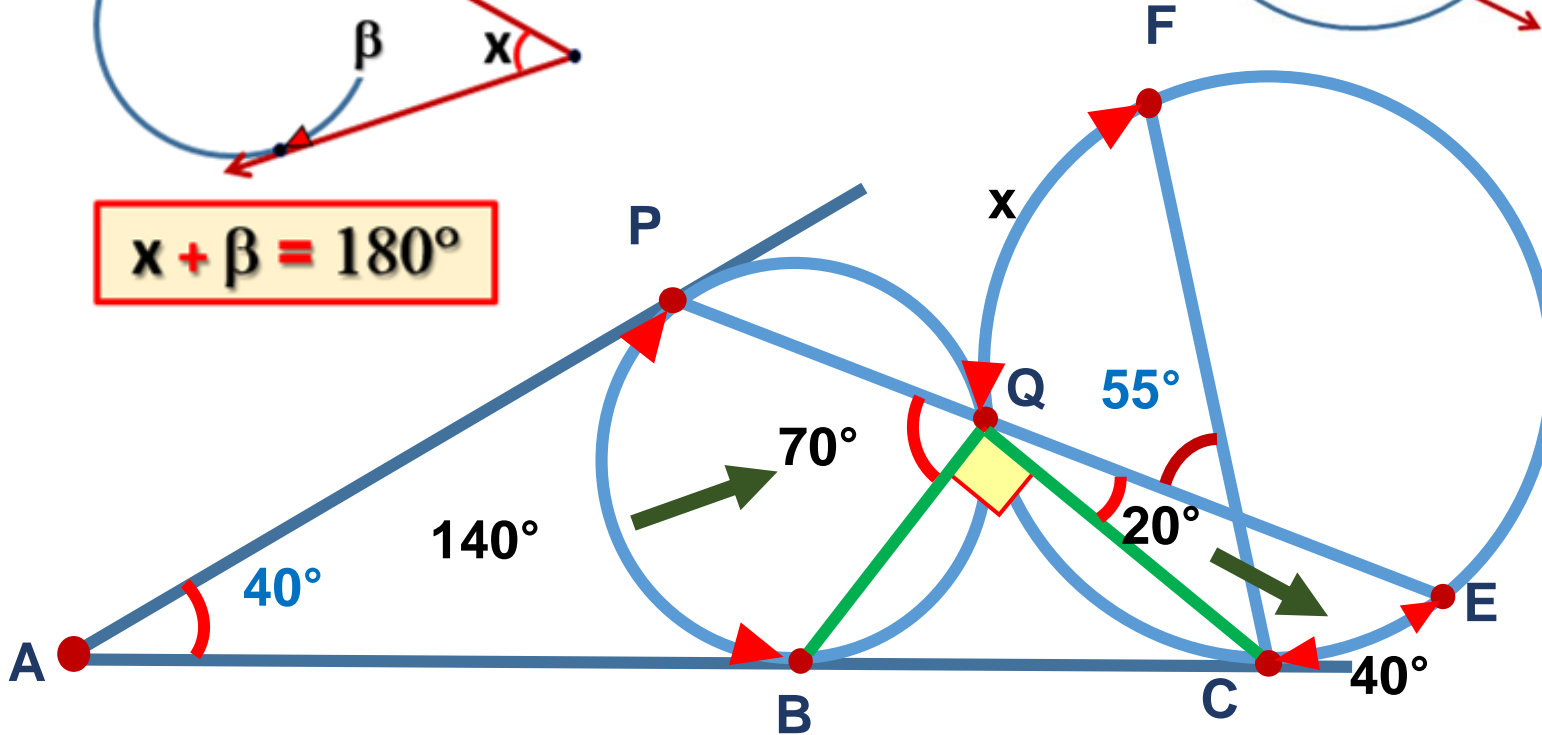
Ángulo interior

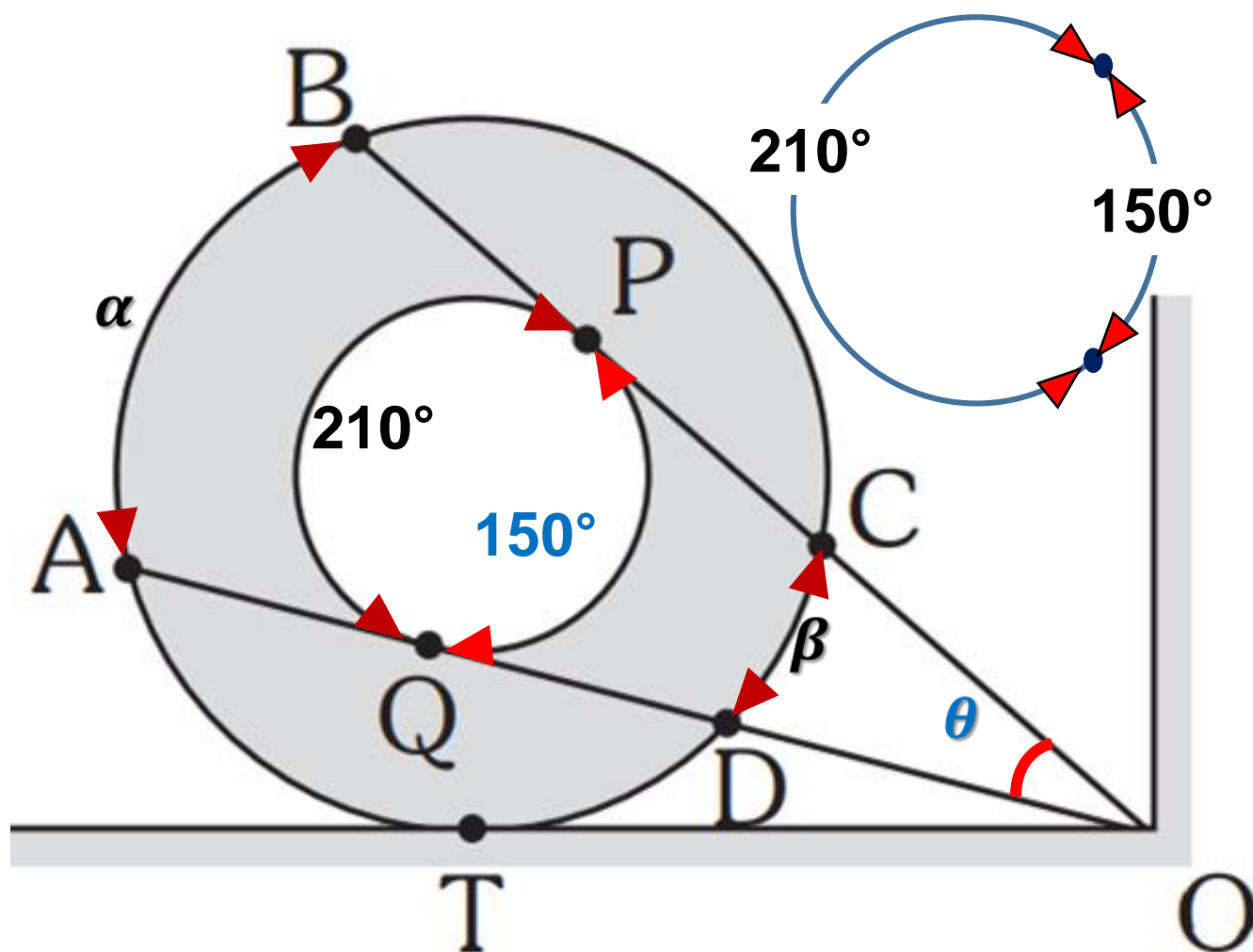


$$X = \frac{\alpha + \beta}{2}$$

$$55^\circ = \frac{x + 40^\circ}{2}$$

$x = 70^\circ$





A diagram showing a circle with a blue arc. A red line is tangent to the circle at two points, marked with black dots. The angle between the two red line segments is labeled x . The arc of the circle is labeled β .

➡ $\theta + 150^\circ = 180$
 $\theta = 30^\circ$

$$\mathbf{x} + \beta = 180^\circ$$

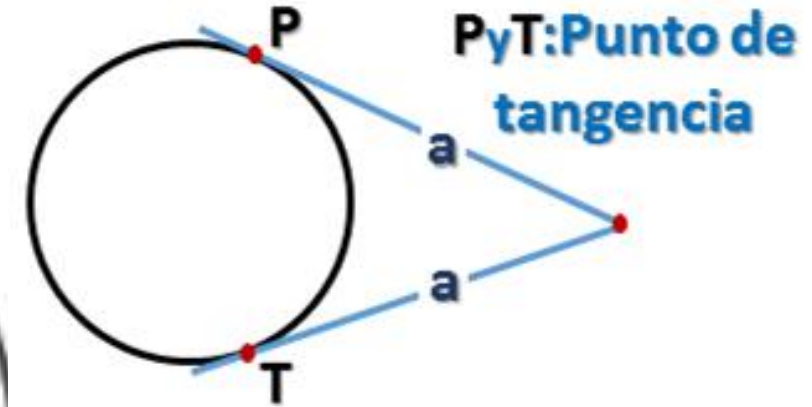
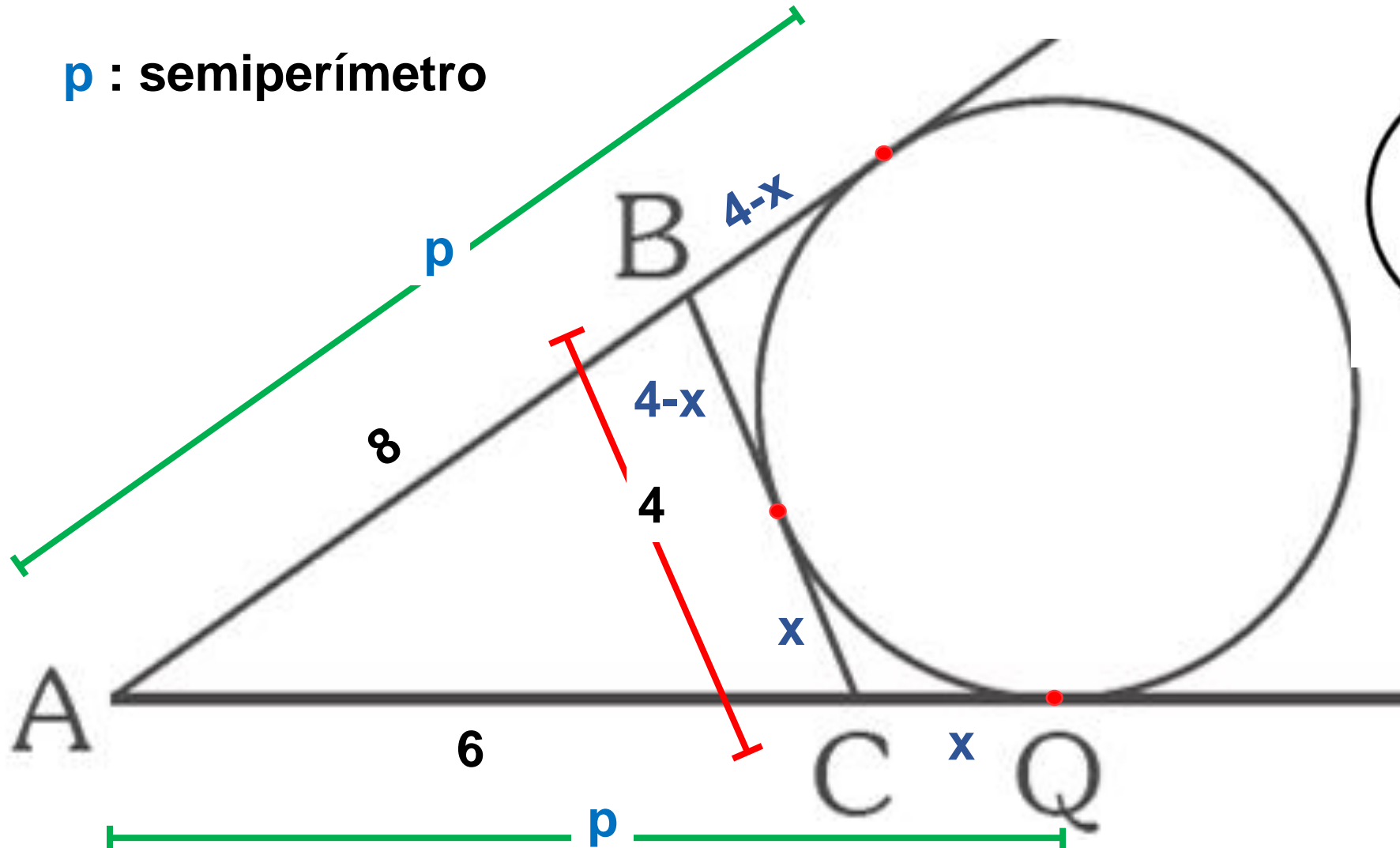
$$\theta = \frac{\alpha - \beta}{2}$$
$$30^\circ = \frac{\alpha - \beta}{2}$$

$$X = \frac{\alpha - \beta}{2}$$

$$\alpha - \beta = 60^\circ$$

4. Halle CQ si $AB = 8$ m, $BC = 4$ m y $AC = 6$ m.

p : semiperímetro

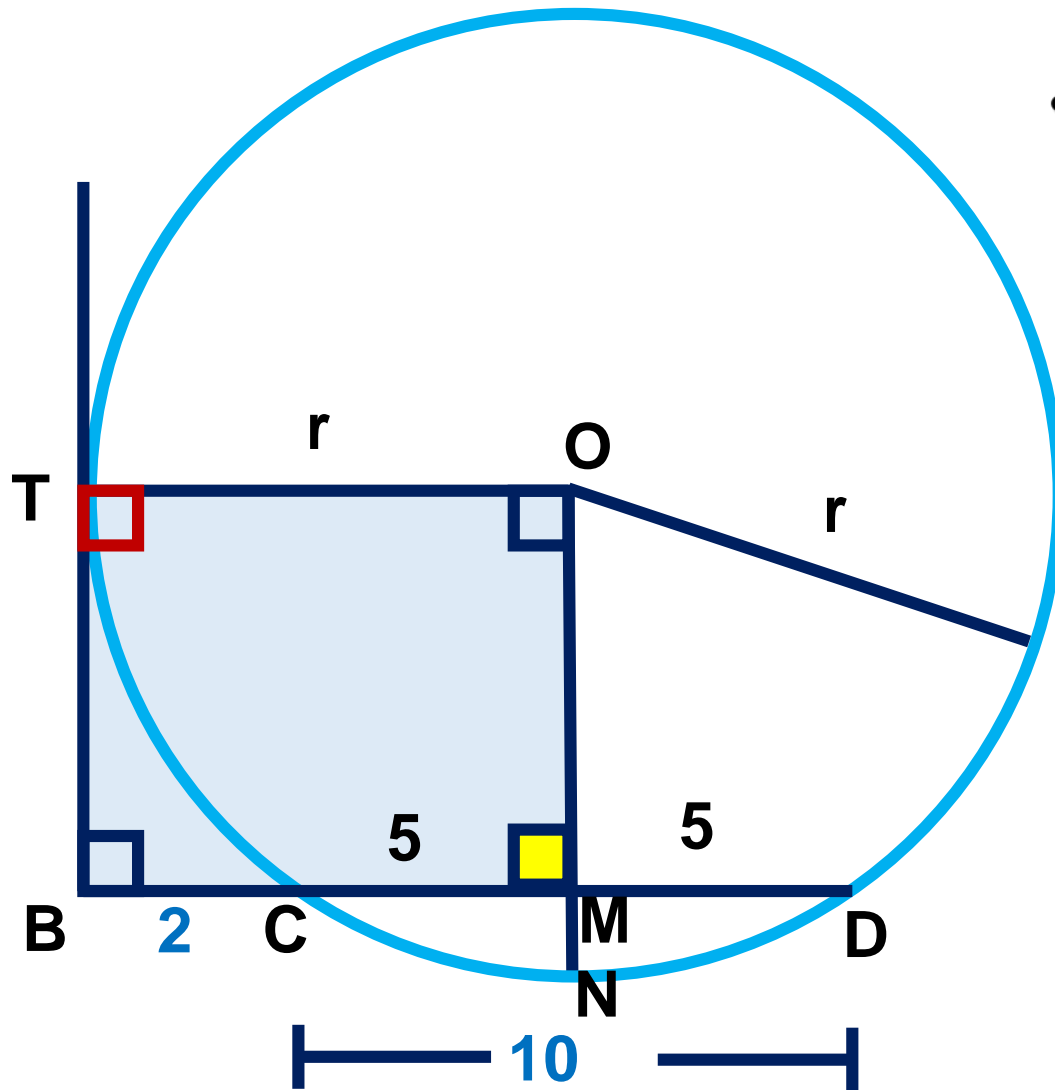


$$6 + x = 8 + 4 - x$$

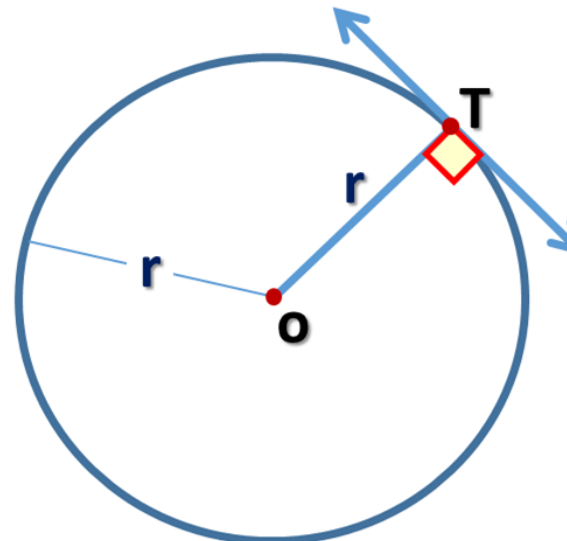
$$2x = 6$$

$$x = 3$$

5. Si O es centro, $BC = 2$, $CD = 10$ y T es punto de tangencia, halle el valor de r .



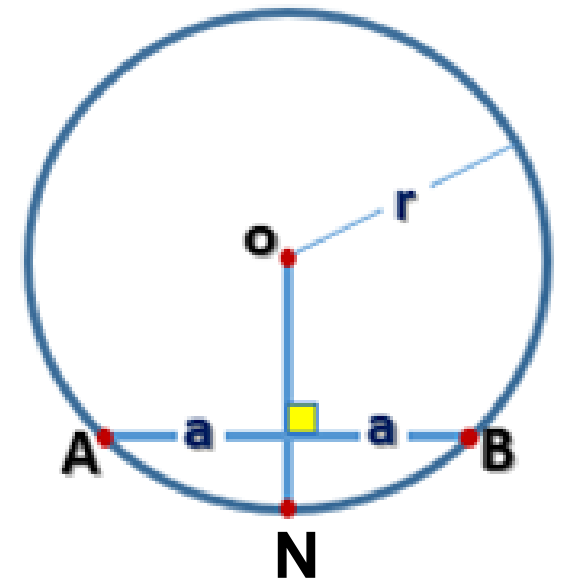
• Trazamos \overline{OT}



□ BTOM :

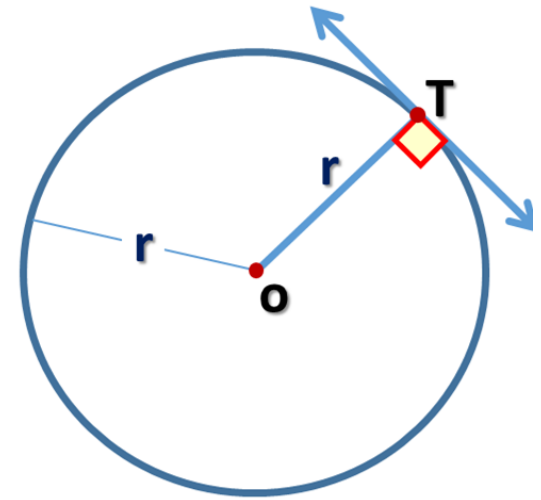
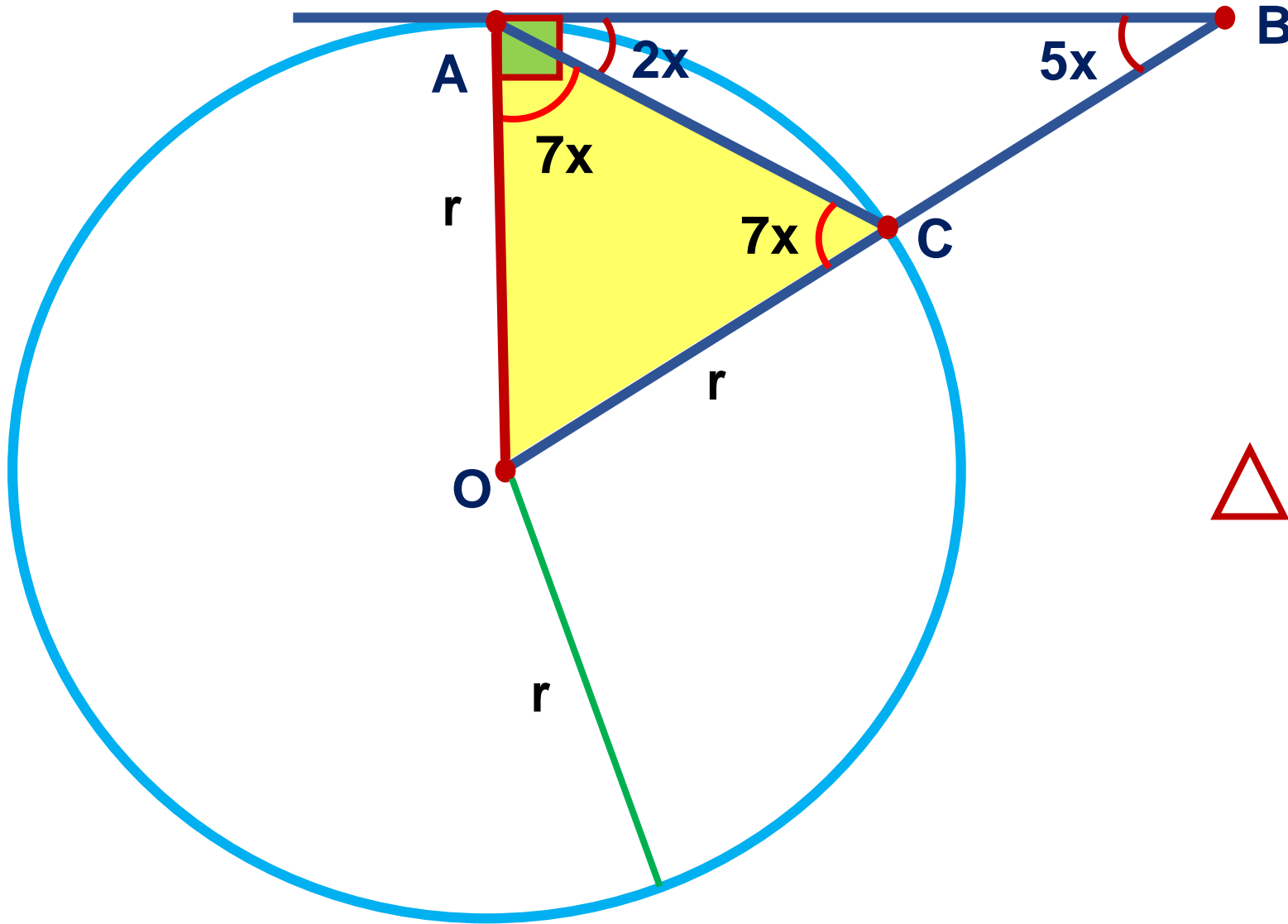
$$r = 2 + 5$$

• Trazamos $\overline{ON} \perp \overline{CD}$



$$r = 7$$

6. Halle el valor de x si O es centro y A es punto de tangencia.



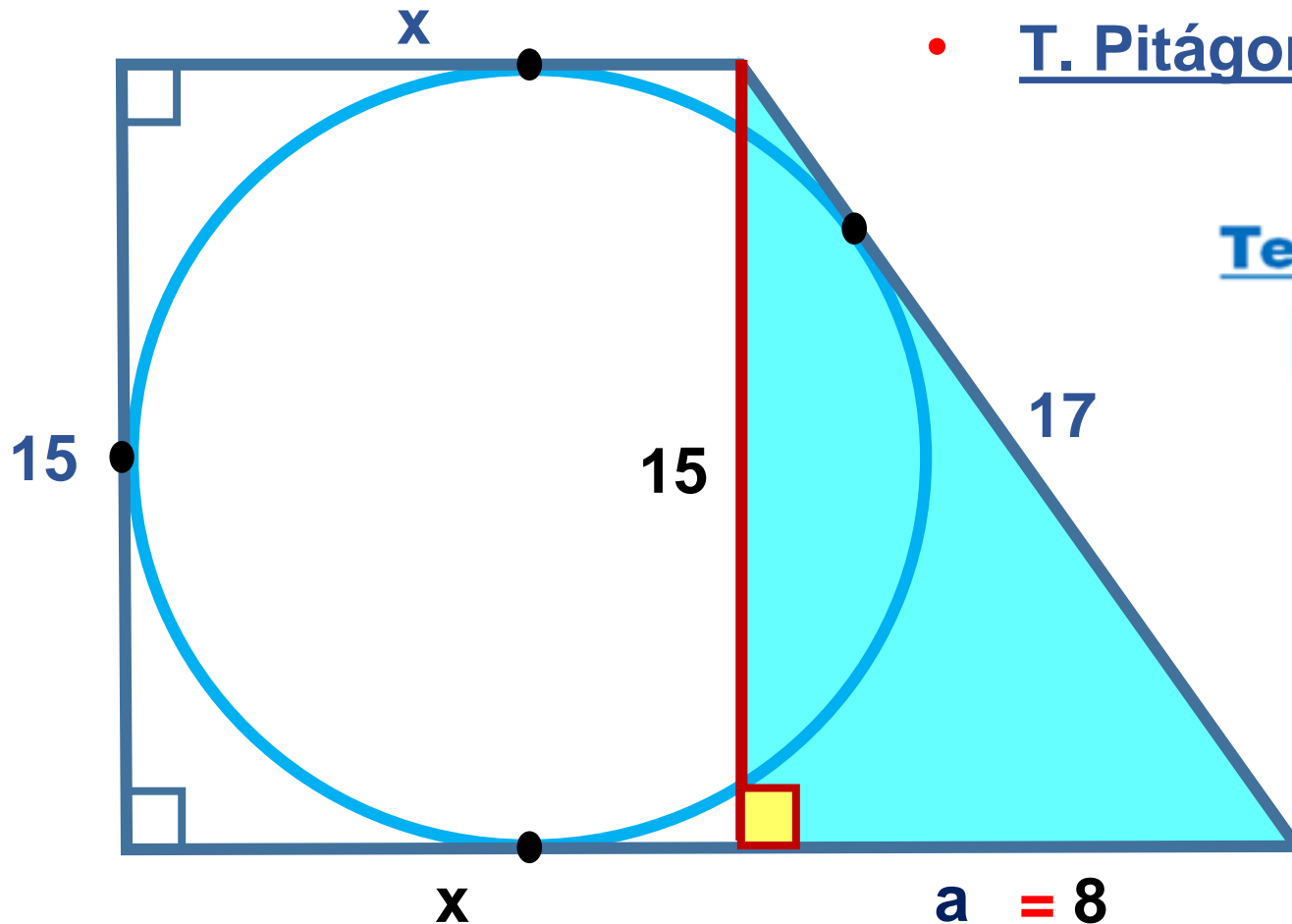
$\triangle AOC$: Isósceles

$$7x + 2x = 90^\circ$$

$$9x = 90^\circ$$

$$x = 10^\circ$$

7. Se tiene un trapecio rectángulo circunscrito en la circunferencia mostradas. Las longitudes de sus lados no paralelos son 15 y 17, halle la longitud de su base menor.



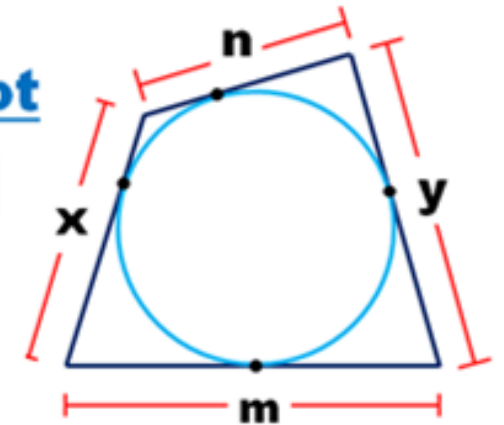
• T. Pitágoras

$$17^2 = a^2 + 15^2$$

$$a = 8$$

Teorema de Pitot

$$x + y = m + n$$

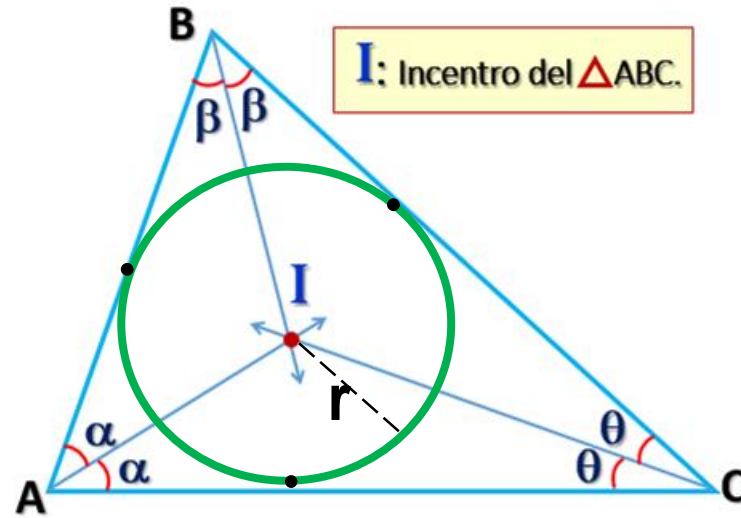
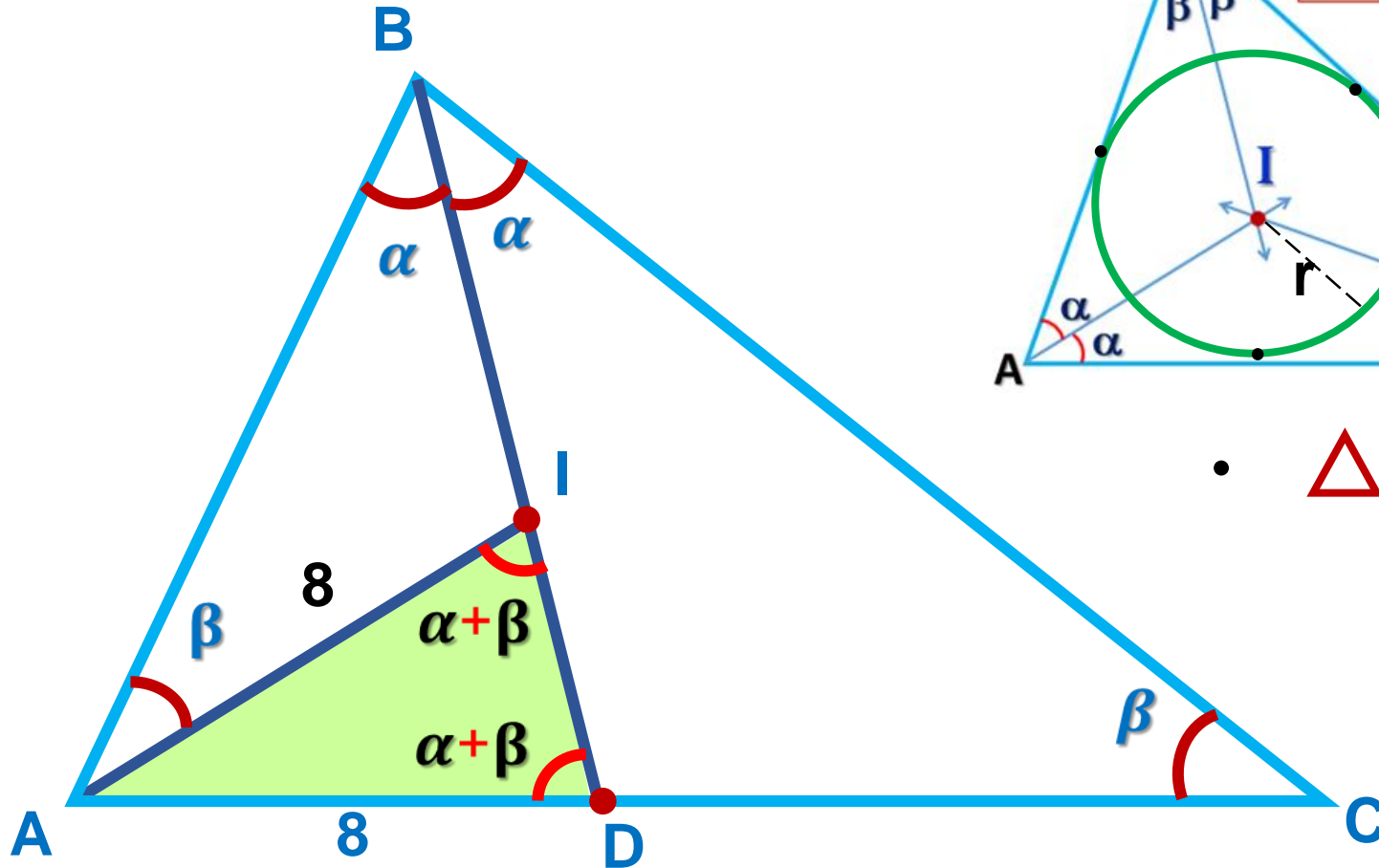


$$x + (x + 8) = 15 + 17$$

$$2x = 24$$

$$x = 12$$

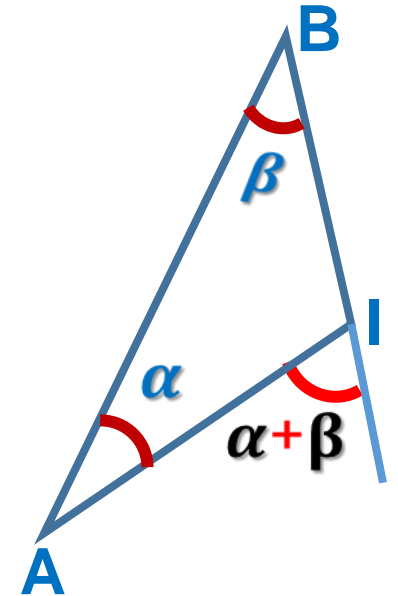
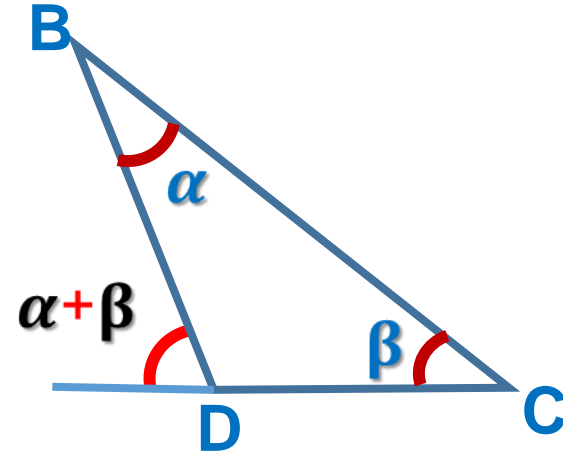
8. En un triángulo ABC de incentro I, se traza la bisectriz interior \overline{BD} . Halle AI, si $AD = 8$ y $m\angle BAI = m\angle BCD$.



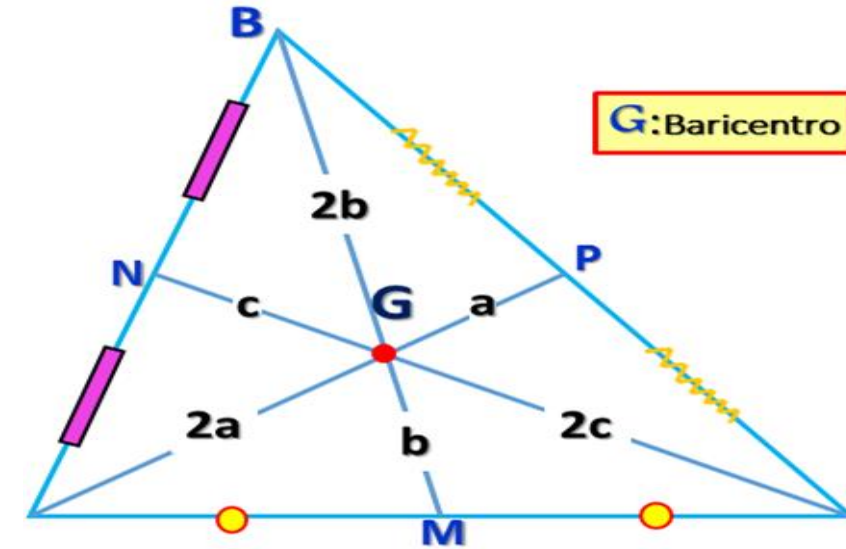
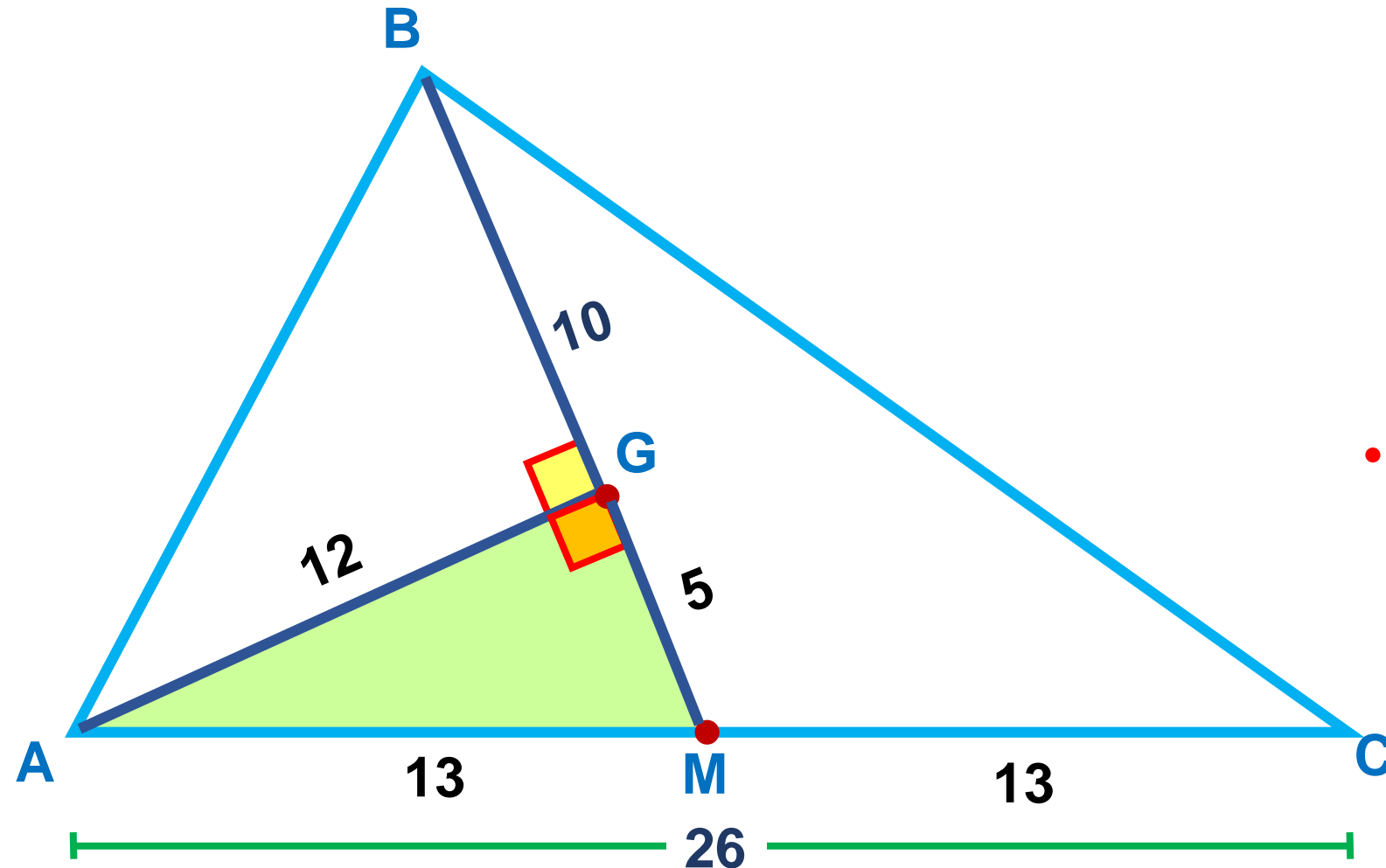
• $\triangle AID$: Isósceles

$$AI = AD = 8$$


$$AI = 8$$



9. Si G es baricentro del triángulo ABC, $BG = 10$ y $AC = 26$. Halle AG.



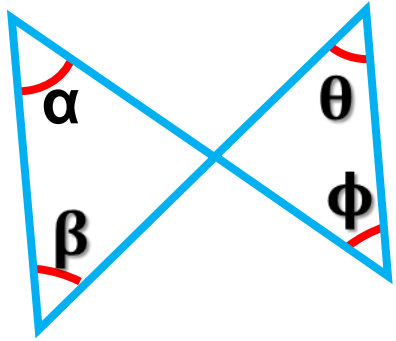
• T. Pitágoras

 AGM : $13^2 = (AG)^2 + 5^2$

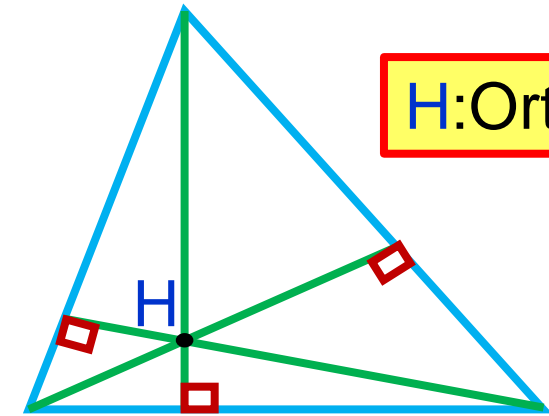
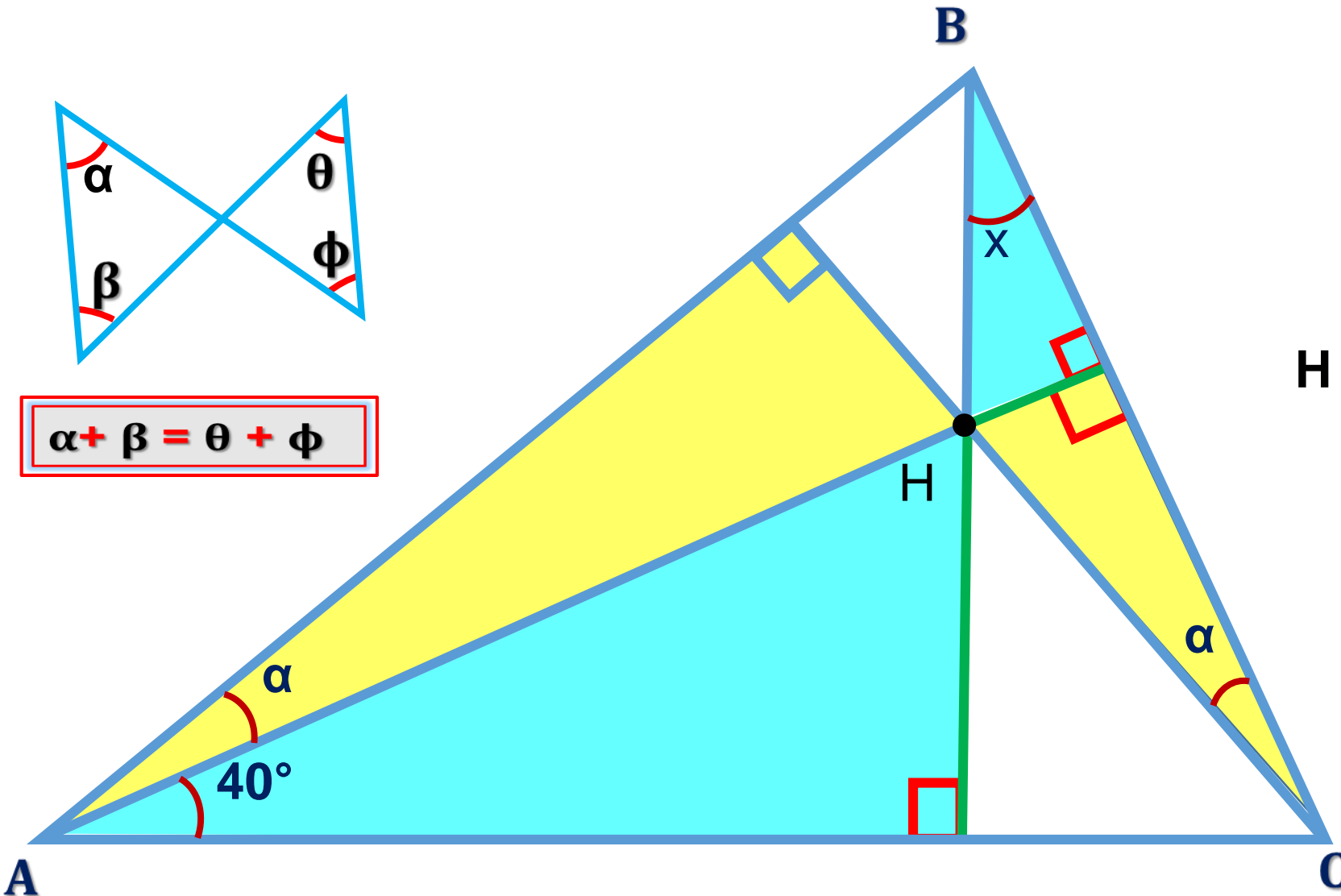
$$144 = (AG)^2$$

$$AG = 12$$

10. Halle el valor de x.



$$\alpha + \beta = \theta + \phi$$



H: Ortocentro

H es ortocentro del ΔABC

$$x + 90^\circ = 40^\circ + 90^\circ$$

$$x = 40$$