

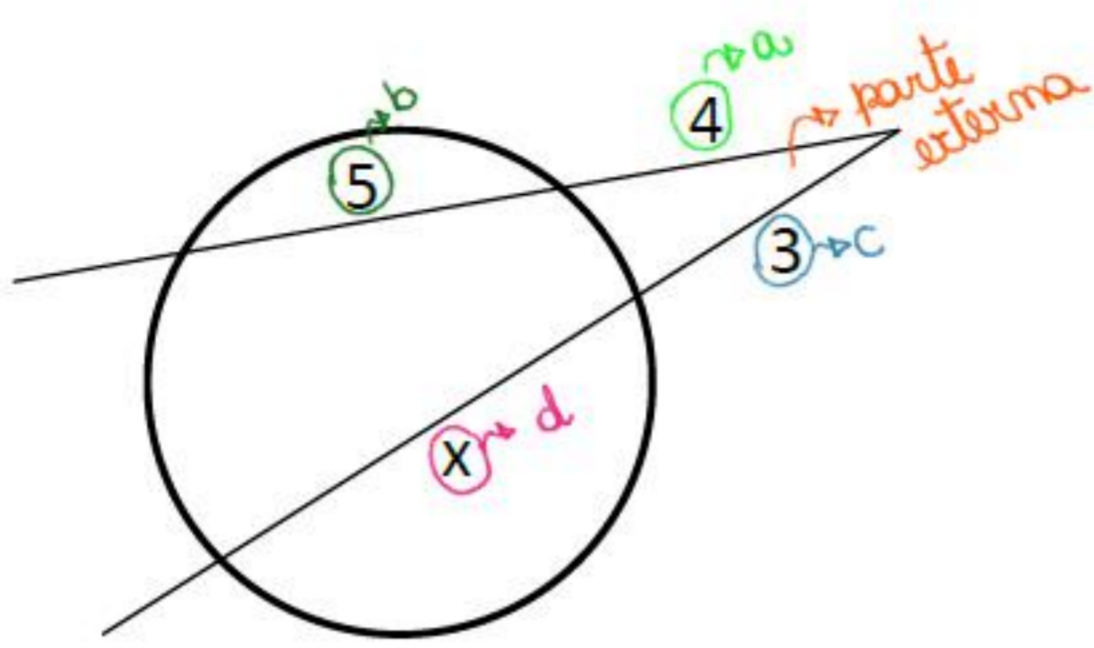
1º caso: $a \cdot b = c \cdot d$

2º caso: $a(a+b) = c(c+d)$
 Externo · Total

$a^2 = b(b+c)$
 externo → interno

Em cada caso, determine a incógnita:

1.



2º caso:

$$a(a+b) = c(c+d)$$

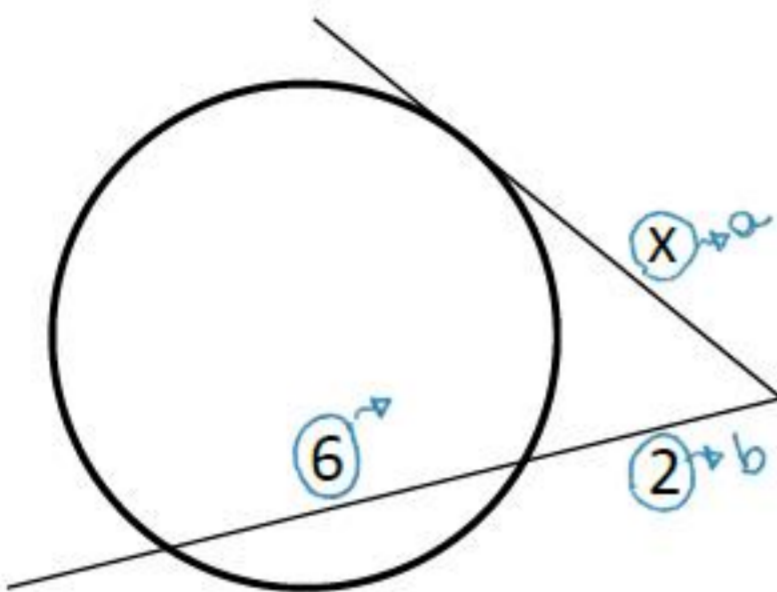
$$4(4+5) = 3(3+x)$$

$$4 \cdot 9 = 9 + 3x$$

$$3x = 27$$

$$x = 9$$

2.



caso = $a^2 = b(b+c)$

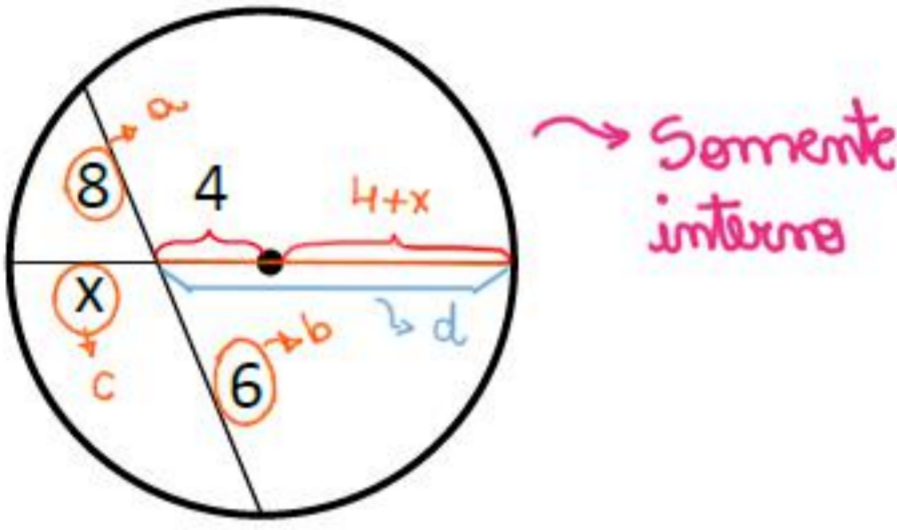
$$x^2 = 2(2+6)$$

$$x^2 = 2 \cdot 8$$

$$x^2 = 16$$

negativo não → $x = \pm 4$ x=4

3.



→ Semente interna

1º caso:

$$a \cdot b = c \cdot d$$

$$8 \cdot 6 = x \cdot (4 + (4+x))$$

$$48 = x \cdot (x+8)$$

$$48 = x^2 + 8x$$

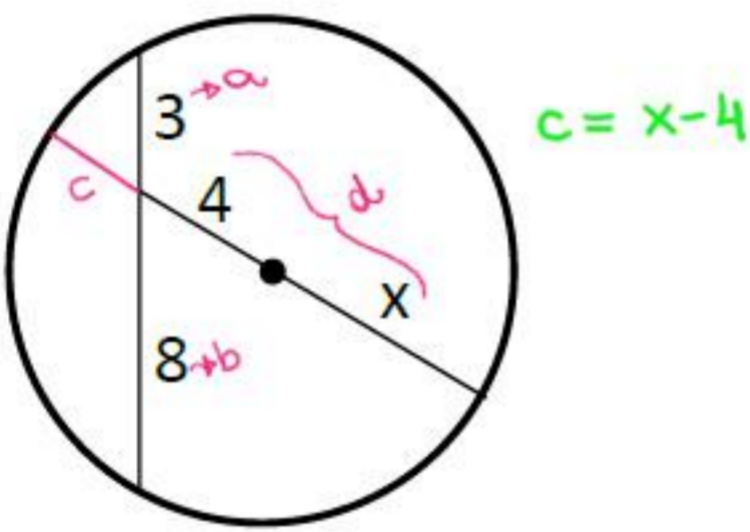
$$x^2 + 8x - 48 = 0$$

→ não $\frac{4}{4} + \frac{(-12)}{4} = -b/a = -8$

$\frac{4}{4} \cdot \frac{(-12)}{4} = +c/a = -48$

fozop, x=4

4.



$c = x - 4$

1º caso:

$$a \cdot b = c \cdot d$$

$$3 \cdot 8 = (4+x) \cdot (x-4)$$

$$24 = -16 - 4x + 4x + x^2$$

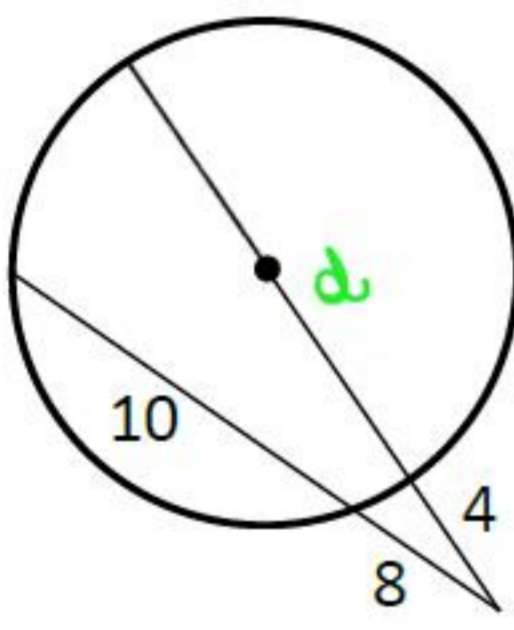
$$x^2 = 16 + 24$$

$$x = \sqrt{40} \rightarrow x = \sqrt{4 \cdot 10}$$

x = 2\sqrt{10}

Determine o raio do círculo em cada caso:

5.



2º caso:

$$a(a+b) = c(c+d)$$

$$8 \cdot (8+10) = 4 \cdot (4+d)$$

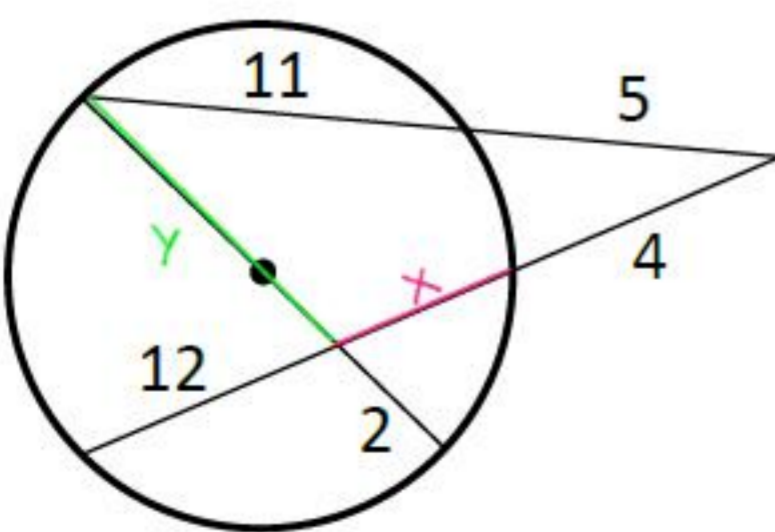
$$144 = 16 + 4d$$

$$4d = 144 - 16$$

$$4d = 128 \rightarrow d = 32$$

fozop, r=16

6.



Temos dois casos:

2º caso:

$$5 \cdot (5+11) = 4 \cdot (4+(x+12))$$

$$5 \cdot 16 = 4 \cdot (x+16)$$

$$80 = 4x + 64$$

$$4x = 16$$

x=4

1º caso:

$$12 \cdot x = 2 \cdot y$$

$$12 \cdot 4 = 2y$$

$$48 = 2y$$

$$\rightarrow y = 24$$

Como queremos o raio, ele será

$$r = \frac{2+y}{2}$$

$$r = \frac{2+24}{2} \rightarrow \text{r=13}$$