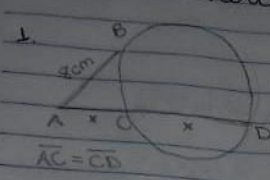


Lista de exercícios - potência de um ponto

1. 

$$AC \cdot AD = AB \cdot AB$$

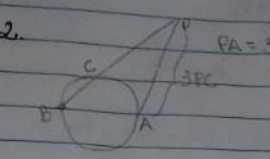
$$x_1 \cdot (x_1 + x_1) = 8 \cdot 8$$

$$x_1^2 + x_1^2 = 64$$

$$2x_1^2 = 64$$

$$x_1^2 = 64/2 \rightarrow x_1^2 = 32$$

$$alternativa (E) \parallel x_1 = \sqrt{32} \rightarrow x_1 = 4\sqrt{2}$$

2. 

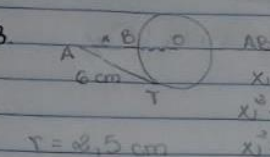
$$PA \cdot PB = PC \cdot PD$$

$$PC \cdot PB = 3PC \cdot 3PC$$

$$PB = 3PC \cdot 3PC$$

$$PB = 9PC$$

$$alternativa (B) \parallel$$

3. 

$$AB \cdot AC = AT \cdot AT$$

$$x_1 \cdot (x_1 + 5) = 6 \cdot 6$$

$$x_1^2 + 5x_1 = 36$$

$$x_1^2 + 5x_1 - 36 = 0$$

$$A = 5^2 - 4 \cdot 1 \cdot (-36)$$

$$A = 25 + 144$$

$$A = 169$$

$$T = 2,5 \text{ cm}$$

$$AT = 6 \text{ cm}$$

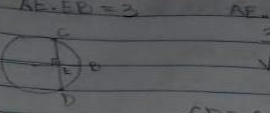
$$x_1 = \frac{-5 \pm \sqrt{169}}{2 \cdot 1}$$

$$x_1 = \frac{-5 \pm 13}{2}$$

$$x_1' = \frac{-5 - 13}{2} = \frac{-18}{2} = -9$$

$$x_1'' = \frac{-5 + 13}{2} = \frac{8}{2} = 4$$

$$alternativa (E) \parallel$$

4. 

$$AE \cdot ED = 3$$

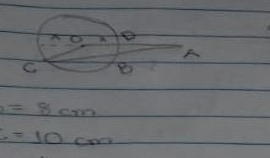
$$AE \cdot EB = CE \cdot ED$$

$$3 = ED^2$$

$$\sqrt{3} = ED$$

$$CD = 2 \cdot \sqrt{3}$$

$$alternativa (B) \parallel$$

5. 

$$8 \cdot 18 = 4 \cdot (4 + x_1 + x_1)$$

$$144 = 16 + 4x_1 + 4x_1$$

$$144 - 16 = 8x_1$$

$$128 = 8x_1$$

$$x_1 = 128/8 \quad x_1 = 16$$

$$\text{perímetro AOC} = 16 + 20 + 18$$

$$\text{perímetro AOC} = 54 \text{ cm}$$

$$alternativa (E) \parallel$$