

**INSTITUTO FEDERAL**

São Paulo

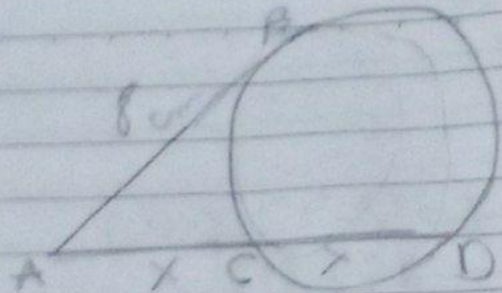
Câmpus Cubatão

## **TAREFA BÁSICA 26: POTÊNCIA DE UM PONTO**

**Nome:** André Luiz Gonçalves da Silva Teixeira

Exercício 1 e 2:

①



$$AB^2 = AC \cdot AD$$

$$8^2 = x(x+x)$$

$$64 = 2x^2$$

$$64 = x^2$$

$$\frac{64}{2} = \frac{x^2}{2}$$

$$32 = x^2$$

$$\sqrt{32} = x$$

$$\sqrt{2 \cdot 2 \cdot 2 \cdot 2} = x$$

$$2 \cdot 2 \sqrt{2} = x$$

$$4\sqrt{2} = x$$

$$AB = 8 \text{ cm}$$

$$AC = CD = x$$

$$x = AC + CD$$

32		2
16		2
8		2
4		2
2		2
1		2 <sup>5</sup>

②

$$PA = 3PC \quad (I)$$

$$\frac{PB}{PA} = \frac{PA}{PC} \rightarrow PA^2 = PB \cdot PC \quad (II)$$

$$(3PC)^2 = PB \cdot PC$$

$$9PC = PB$$

Exercício 3, 4, 5 e 6:

③

$$\begin{aligned}
 G^2 &= x \times (5+x) \\
 x^2 + 5x - 36 &= 0 \quad \left\{ \begin{array}{l} a=1 \\ b=5 \\ c=-36 \end{array} \right. \quad \Delta = 5^2 - 4 \cdot 1 \cdot (-36) \\
 x &= \frac{-5 \pm \sqrt{169}}{2} \quad \left\{ \begin{array}{l} 25 + 144 \\ 169 \end{array} \right. \\
 x &= \frac{-5 \pm 13}{2} \\
 x' &= \frac{-5+13}{2} = \frac{8}{2} = 4 \quad V = \{4\} \\
 x'' &= \frac{-5-13}{2} = \frac{-18}{2} = -9
 \end{aligned}$$

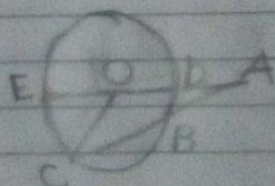
④

$CD \perp AP$

$$AE \times EB = CE \times ED$$

$$\begin{aligned}
 CE &= ED \\
 3 &= CE \\
 CE &= \sqrt{3} \quad \left\{ \begin{array}{l} CD = 2CE \\ CO = 2\sqrt{3} \end{array} \right.
 \end{aligned}$$

⑤



$$AE \times AD = AC \times AB$$

$$r + 2r = R$$

Perímetro

$$18 + 16 + 20 = 54$$

$$\begin{aligned}
 (4+2R) \times 4 &= 18 \times 8 \\
 16 + 8R &= 144 \\
 8R &= 144 - 16 \\
 8R &= 128 \\
 R &= 16 \\
 R &= 16
 \end{aligned}$$