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Turma: CTII 348

Prontuário: CB1990209

Disciplina: Matemática

IFSP - Câmpus Cubatão

Tarefa Básica 08

Potência de Ponto

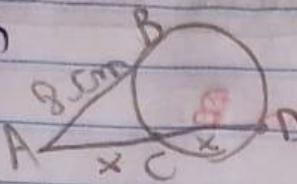
(Fotos nas páginas seguintes)

Exercícios 1, 2 e 3:

Matemática 8 - Potência de um ponto

Solução Básica

1-)



$$\overline{AC} \cdot \overline{AD} = \overline{AB} \cdot \overline{AB}$$

$$x \cdot 2x = 8 \cdot 8 \quad \rightarrow x^2 = 32$$

$$2x^2 = 64 \quad \rightarrow x = \sqrt{32}$$

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

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

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

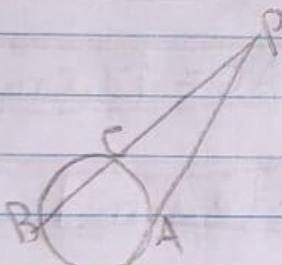
$$x = 4\sqrt{2}$$

Resposta E

$$\begin{array}{r} 32 \\ | \quad 2) 2 \\ 16 \\ | \quad 2 \\ 8 \\ | \quad 2) 2 \\ 4 \\ | \quad 2 \\ 2 \end{array}$$

Resposta E

2-)



$$\overline{PA} \cdot \overline{PA} = \overline{PB} \cdot \overline{PC}$$

$$3\overline{PC} \cdot 3\overline{PC} = \overline{PB} \cdot \overline{PC}$$

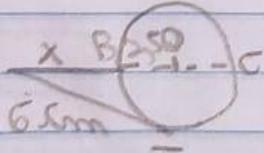
$$9\overline{PC}^2 = \overline{PB} \cdot \overline{PC} \quad \rightarrow \boxed{\overline{PC} = \overline{PE}}$$

$$9\overline{PC}^2 = \overline{PB}^2$$

$$\boxed{\overline{PB} = \overline{PC}} \text{ Resposta B.}$$

Resposta E

3-)



$$\overline{AB} \cdot \overline{AC} = \overline{AT} \cdot \overline{AT}$$

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

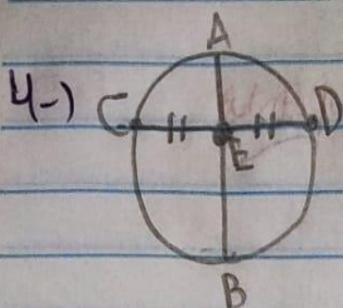
$$x^2 + 5x - 36 = 0$$

$$\frac{-9 + 4}{-9 \cdot 4} = -5 \quad \text{7x}^2 - 9 \text{ não convém, então, } \boxed{x=4}$$

$$\boxed{x = AB = 4 \text{ cm}}$$

Resposta E

Exercícios 4 e 5:



4-)

$$\overline{AE} \cdot \overline{EB} = \overline{CE} \cdot \overline{ED}$$

$$3 = \overline{CE} \cdot \overline{CE}$$

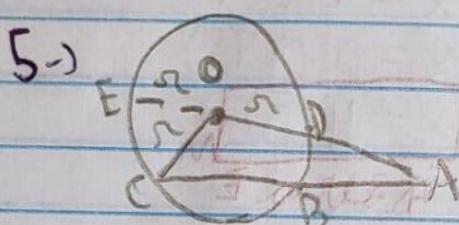
$$3 = CE^2$$

$$CE = \sqrt{3}$$

$CE = ED$, porq o
diâmetro é o dobro
das outras afinal
é perpendicular.

$$CD = 2CE \Rightarrow CD = 2\sqrt{3} \text{ m Seta B}$$

$$2\sqrt{3}$$



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

$$BC = 10 \text{ cm}$$

$$AD = 4 \text{ cm}$$

$$DO = \text{Raio} \Rightarrow r$$

$$\overline{AE} \cdot \overline{AD} = \overline{AC} \cdot \overline{AB}$$

$$(2r+4) \cdot 4 = 18 \cdot 8$$

$$AO = 4+r$$

$$AO = 4+16 \Rightarrow AO = 20 \text{ cm}$$

$$8r+16 = 144$$

$$8r = 144 - 16$$

$$8r = 128$$

$$r = 128 \Rightarrow r = 16$$

8 gerares r

$$AC = 10 + 8 \Rightarrow AC = 18 \text{ cm}$$

$$CO = r \Rightarrow CO = 16 \text{ cm}$$

$$P = 20 + 18 + 16$$

$$P = 54 \text{ cm}$$

↳ Seta E.