Tarefa Básica - Potência de um ponto
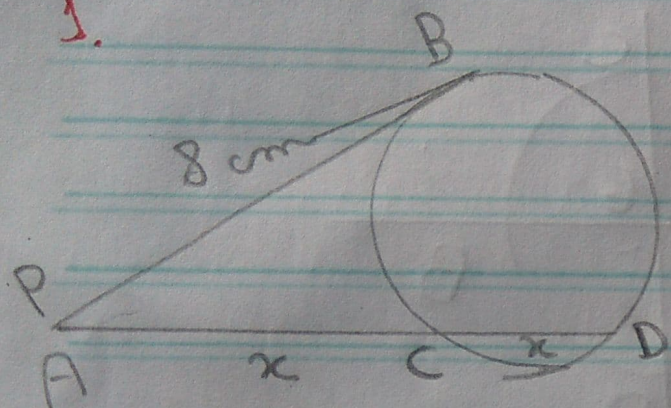
1.

$PA \cdot PB = PO \cdot PD$

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

$64 = 2x^2$

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

$x^2 = 32$

$x = \sqrt{32}$

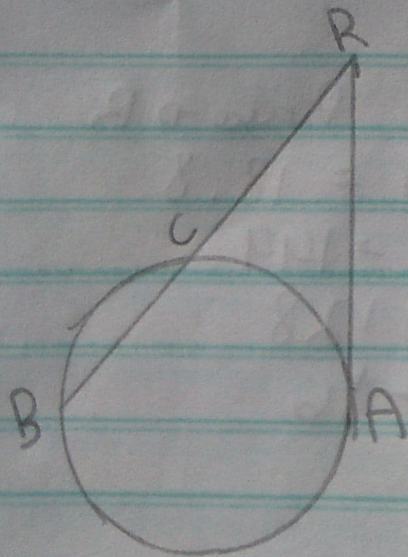$x = 4\sqrt{2}$

$\sqrt{32}$

$2^2\sqrt{2}$

R: e) $4\sqrt{2}$

2.

$PA = 3Pc$

$\dfrac{PB}{PA} = \dfrac{PA}{PC} \to PA^2 = PB \cdot PC$

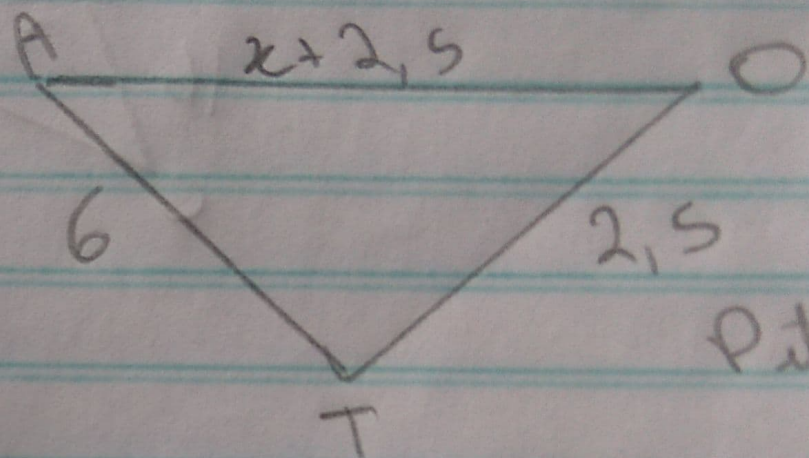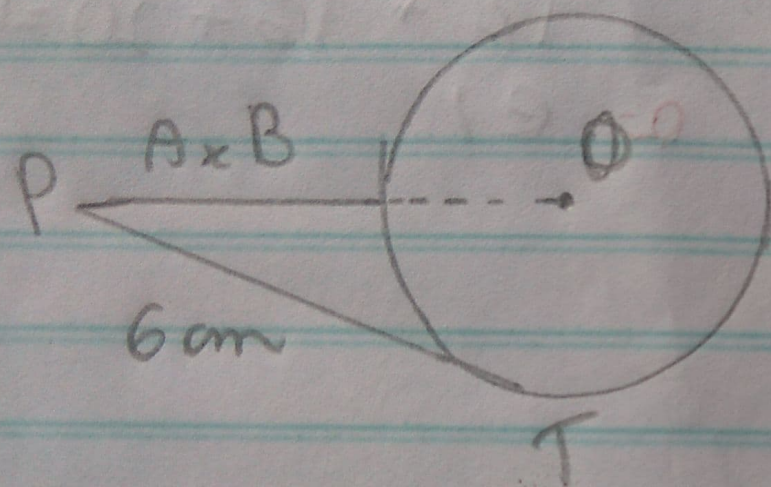$(3PC)^2 = PB \cdot PC$

$9PC^2 = PB \cdot PC$

$9PC = PB$

$PB = 9B$

3.

P   A×B   O

6 cm   T

A ――x+2,5―― O

6   2,5

T

Pitágoras

$$x^2 + 5x + (2,5)^2 = (2,5)^2 + 36$$
$$x^2 + 5x - 36 = 0$$

$$\Delta = 25 + 144 = 169$$
$$x = \frac{-5 + 13}{2} = \frac{8}{2} = 4$$
$$x = \frac{-5 - 23}{2} \mid \text{não convém}$$
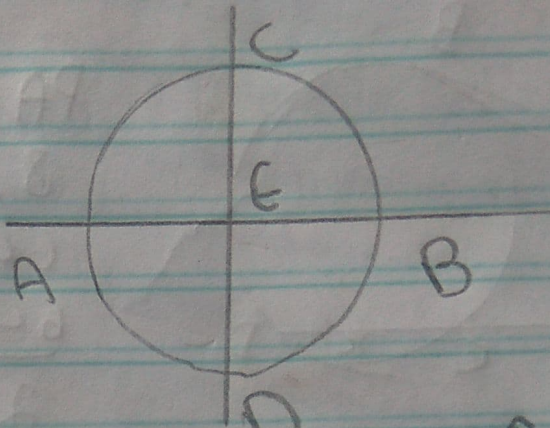
4.

$AE \cdot EB = 3$

$CE = ED$

$CG \cdot ED = AE \cdot EB = 3$

$CE^2 = 3$

$CE = \sqrt{3}$

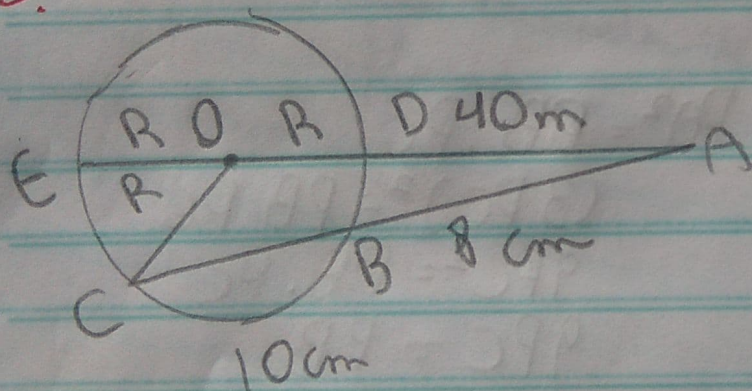$CD = CE + ED \rightarrow CD = CE + CE$

$\qquad CD = 2 \cdot CE \rightarrow CD = 2\sqrt{3}$ R: b)

$A\hat{E}C = A\hat{E}D = B\hat{E}C = B\hat{E}D = 90°$

5.

Raio → R

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

$16 + 8R = 144$

$8R = 128$

$R = 16$

Perímetra de AOC

$\begin{array}{c} AC \quad CO \quad OA \\ 18 + 16 + 20 = \boxed{54} \end{array}$

R: e)