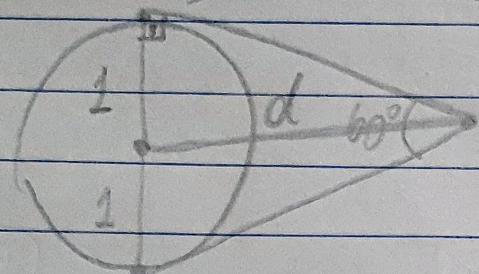


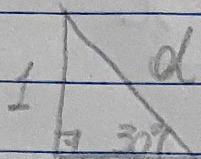
Morelo Básico - Lugar Geométrico de pontos notáveis do triângulo

Nome: Bárbara U. Grosse

- ① $R = 1$, d = distância entre centro e vértice



tangente forma ângulo reto com raio

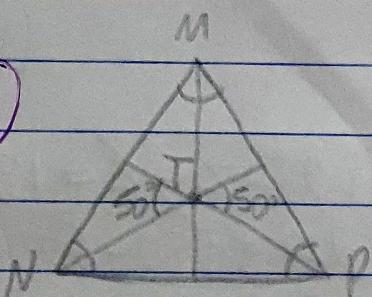


$$\sin 30^\circ = \frac{1}{d}$$

$$\frac{1}{2} > \frac{1}{d} \rightarrow d = \boxed{2}$$

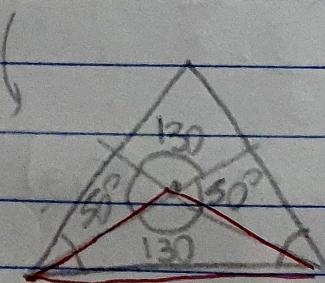
alternativo (d)

- ②

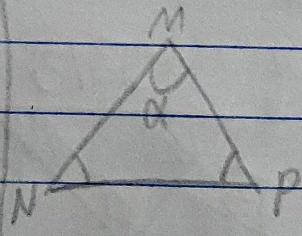


$$\hat{N} + \hat{P} = 50 \cdot 2$$

$$\hat{N} + \hat{P} = 100^\circ$$



$$\frac{130}{2} + \frac{\hat{N}}{2} + \frac{\hat{P}}{2} = 180$$



$$\hat{N} + \hat{P} + \alpha = 180^\circ$$

$$100^\circ + \alpha = 180^\circ$$

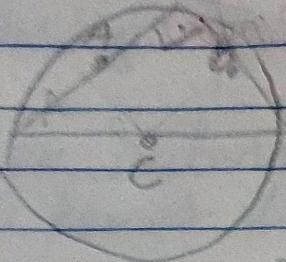
$$\alpha = 180 - 100$$

$$\alpha = \boxed{80^\circ}$$

$$\frac{(\hat{N} + \hat{P})}{2} = 180 - 130$$

alternativo (e)

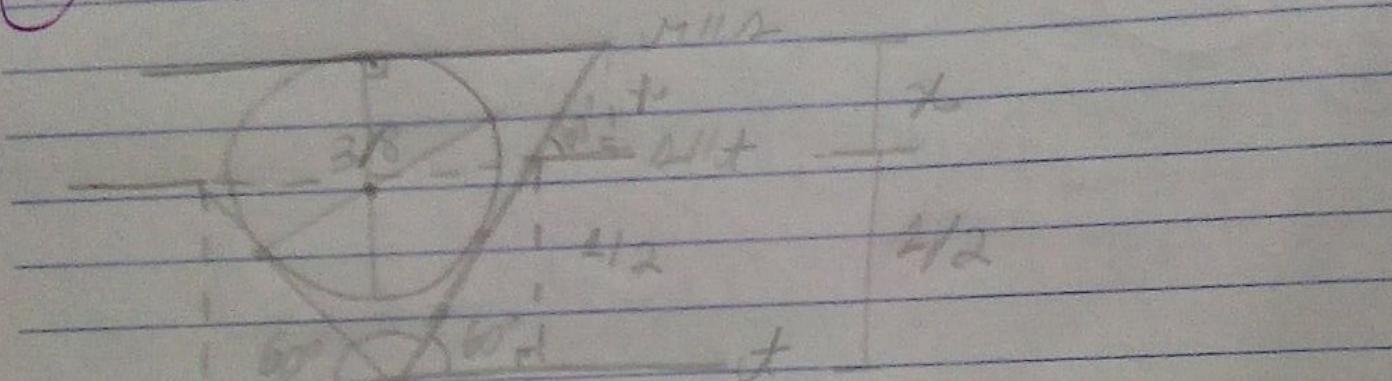
3



altômetro (b)

O lado que posso pelo centro é o diâmetro do círculo. Daí o triângulo inscrito em 1 círculo só possui 1 diâmetro como 1 dos lados, se o ângulo oposto é recto.

4

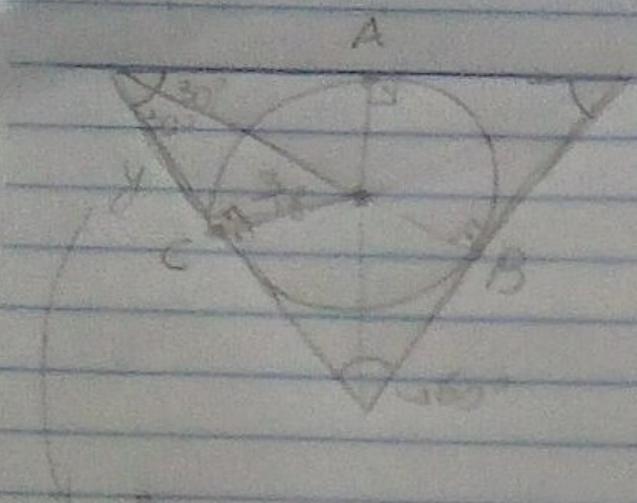


$$\begin{array}{l} \text{?} \\ \text{?} \\ \text{?} \end{array} \quad 60^\circ + z + z = 180^\circ$$

$$2z = 180^\circ - 60^\circ$$

$$z = 120^\circ / 2 = 60^\circ$$

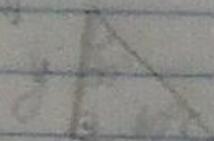
卷之三



$$\frac{3}{8}$$

$$\frac{3}{8} \cdot 16 = 3 = 5 \text{ min}$$

$$y = \frac{3}{16} \cdot \frac{3}{\sqrt{3}}$$



$$\tan 30^\circ = \frac{3}{16}$$

$$y = \frac{9}{16\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$$

$$3/16$$

$$\frac{3}{30} y = \frac{3}{16}$$

$$y = \frac{9\sqrt{3}}{16\sqrt{3}} - \frac{3\sqrt{3}}{16}$$

三十九

~~1/2 * 3/8 * 60°~~

* Jadi Triangular
Sembah : $2 \cdot 3 \sqrt{3}$

$$16 \cdot 2$$

$$= 3\sqrt{3}$$

x

$$z = \frac{3\sqrt{3}}{8} - \frac{\sqrt{3}}{3}$$

$$\rightarrow 400 \cdot 30^\circ = x \quad \left(z = \frac{\sqrt{3}}{2} \cdot \frac{\sqrt{3}}{2} \right)$$

$$84$$

$$z = \frac{400 \cdot 30^\circ}{84} = \frac{\sqrt{3}}{3}$$

$$\frac{\sqrt{3}}{3} = \frac{x}{24}$$

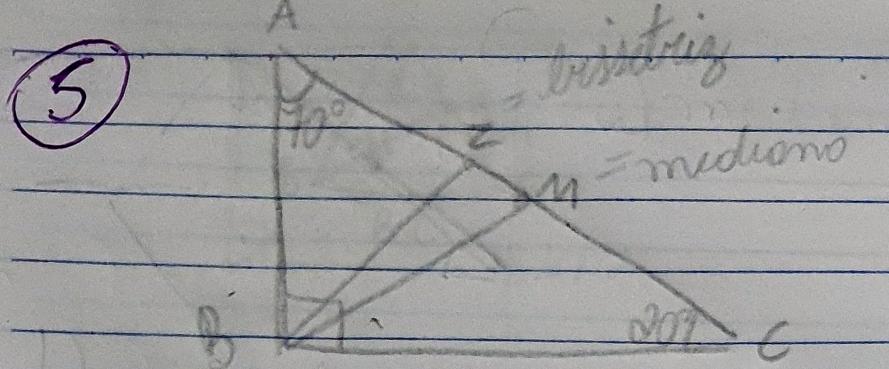
$$x = 3 \cdot 3$$

$$7 \cdot 24 \cdot 3$$

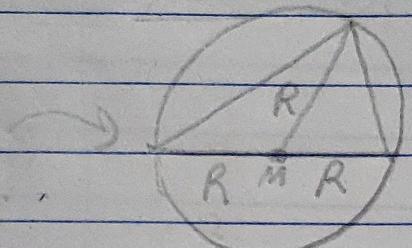
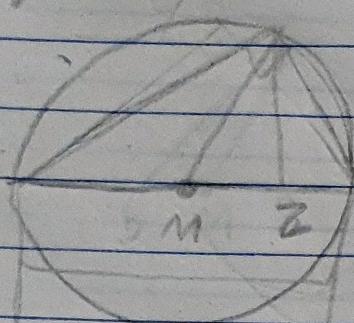
$$24 \cdot 7 = 168$$

$$28$$

$$16$$



a)



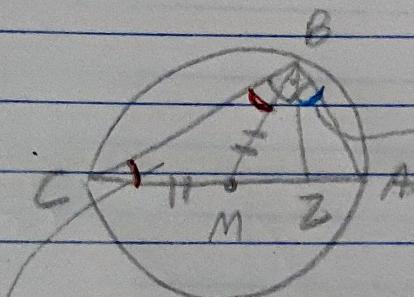
$$\text{mediane} = R$$

$$= \frac{20}{2}$$

$$= 10 \text{ cm}$$

20

b)



$$CM = BM = R$$

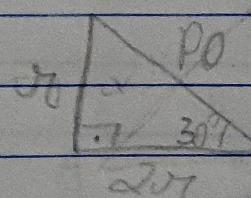
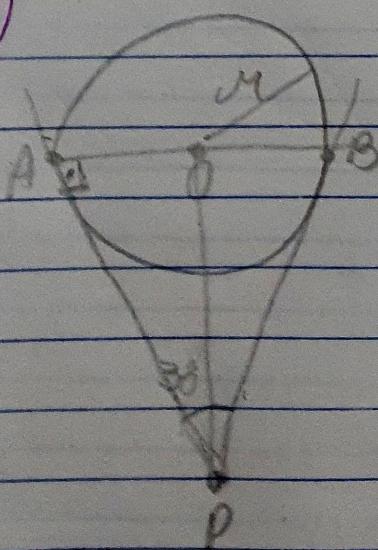
45° (BZ ist \perp zur Verl. der 90°)

20

$$MBZ = x$$

$$20 + x + 45^\circ = 90 \rightarrow x = 90 - 65 = \underline{\underline{25^\circ}}$$

⑥



$$PO = \frac{2r}{\sqrt{3}}$$

$$\tan 30^\circ = \frac{M}{PO}$$

$$PO = \underline{\underline{\sqrt{3}r}} \quad \text{C}$$

$$1 + \alpha = \frac{M}{PO}$$