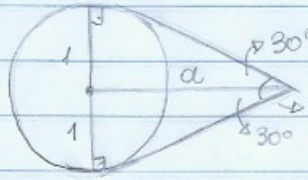
tarefa básica

LUGAR GEOMÉTRICO E PONTOS NOTÁVEIS DO TRIÂNGULO

①



raio = 1

d = distância

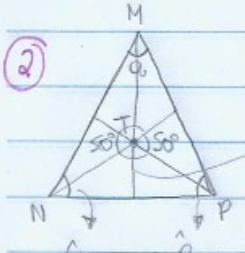
tangente forma ângulo de 90° graus com o raio

$\text{sen } 30° = \frac{1}{d}$

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

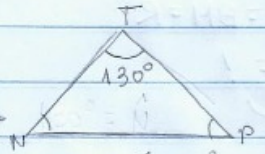
Alternativa D)

②



a = ?

130° →

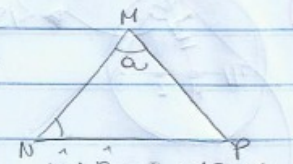


$130° + \frac{\hat{N}}{2} + \frac{\hat{P}}{2} = 180°$

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

$\hat{N} + \hat{P} = 50° \cdot 2$

$\hat{N} + \hat{P} = 100°$



$\hat{N} + \hat{P} + a = 180°$

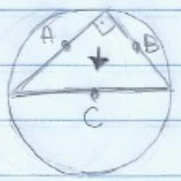
$100° + a = 180°$

$a = 180° - 100°$

$a = 80°$

Alternativa E)

③

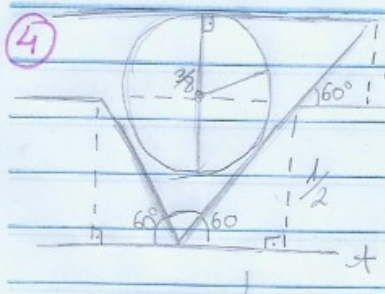


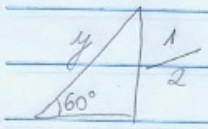
É um retângulo. O diâmetro da circunferência é igual a um lado do triângulo inscrito. Com isso, o ângulo oposto desse lado é um ângulo reto (= 90°), tendo, assim, um triângulo retângulo.

Alternativa B)

tilibra

④



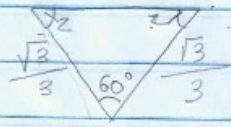


$\operatorname{sen} 60° = \frac{1}{2} : y$

$\frac{\sqrt{3}}{2} y = \frac{1}{2}$

$y = \frac{1}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$

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

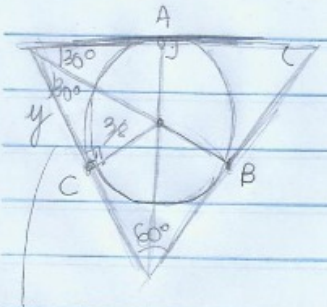


$60° + z + z = 180°$

$2z = 180° - 60°$

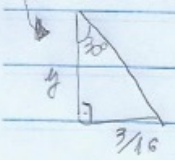
$z = \frac{120}{2} = 60°$

Triângulo equilátero



$\frac{3}{8} : 2$

$\frac{3}{8} \cdot \frac{1}{2} = \frac{3}{16}$ → raio

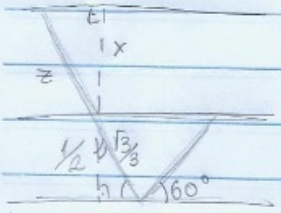


$\operatorname{tg} 30° = \frac{3/16}{y}$

$\sqrt{3}/3 = 3/16$

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

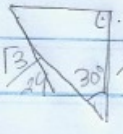
$y = \frac{3\sqrt{3}}{16}$ //



$2 : \frac{3\sqrt{3}}{16} : z$

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

$z = \frac{3\sqrt{3}}{8} - \frac{\sqrt{3}}{3} = \frac{\sqrt{3}}{24}$ //



$\cos 30° = \frac{x}{\sqrt{3}/24}$

$\frac{\sqrt{3}}{2} = \frac{x}{\sqrt{3}/24}$

$x = \frac{\sqrt{3}}{2} \cdot \frac{\sqrt{3}}{24}$

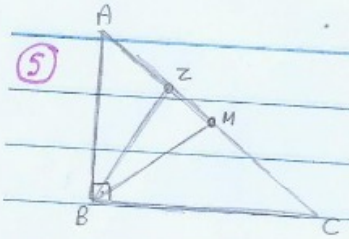
$x = \frac{3}{2.24}$

$x = \frac{1}{16}$

Alternativa E)

tilibra

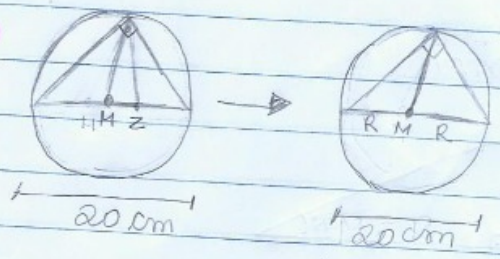
⑤



M = mediana

Z = bissetriz

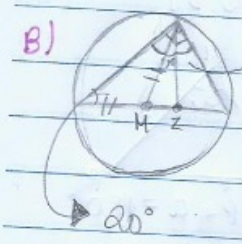
A)



$M = R$

$M = \frac{20}{2}$ → $M = 10\,cm$

B)



$CM = BM = R$

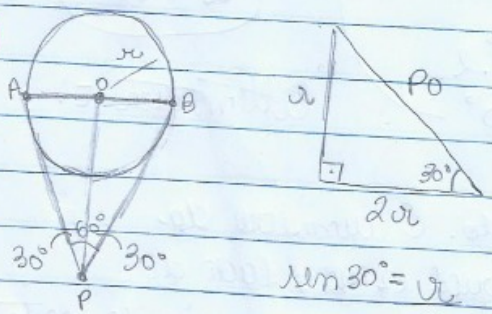
$B = ?$

$20° + X + 45° = 90°$

$X = 90° - 65°$

$X = 25°$

⑥



$\sin 30° = \frac{r}{PO}$

$\frac{1}{2} = \frac{r}{PO}$ → $PO = 2r$

Alternativa C)

tilibra