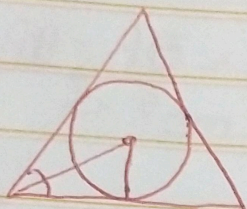


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Geometria e pontos notáveis

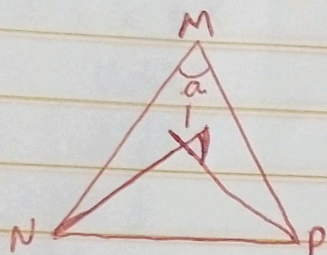
1.



$$\frac{30}{y} = 1$$

$$y = 2 \quad \textcircled{D}$$

2.



$$\begin{array}{r} 180 \\ - 50 \\ \hline 130^\circ \end{array}$$

$$\begin{aligned} \angle N + \angle P + \angle T &= 180^\circ \\ \angle P + \angle T &= 180^\circ - 130^\circ \\ \angle P + \angle T &= 50^\circ \end{aligned}$$

$$\begin{aligned} \angle MNP + \angle NPM &= 2 \cdot (\angle P + \angle T) & \angle MNP + \angle NPM &= 2(50) \\ \angle MNP + \angle MNP + \angle NPM &= 180^\circ & 100 + \angle NMP &= 180^\circ \end{aligned}$$

$$\angle MNP + \angle NPM = 100^\circ$$

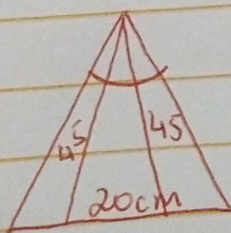
$$\angle NMP = 180 - 100$$

$$\angle NMP = 80^\circ \quad \textcircled{E}$$

30

40

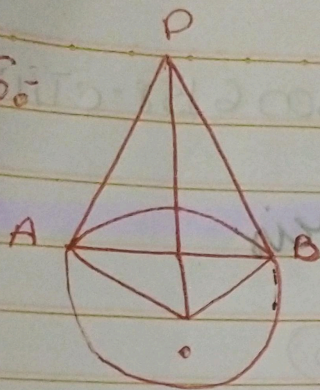
50



$$a) m = \frac{4}{2} = 10 \text{ cm}$$

$$b) \theta = 45^\circ - 20^\circ = 25^\circ$$

6.



$$\angle APB = \angle BPA = \angle PAB = 60^\circ$$

$$\angle ORB = \angle ORA = 30^\circ$$

$$PO = 2r$$

$$\sin \angle ORA = \frac{OR}{PO} + \frac{1}{2} = \frac{r}{PO}$$

(C)