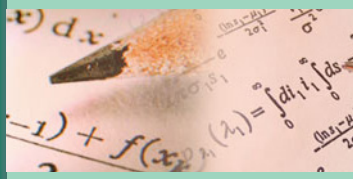
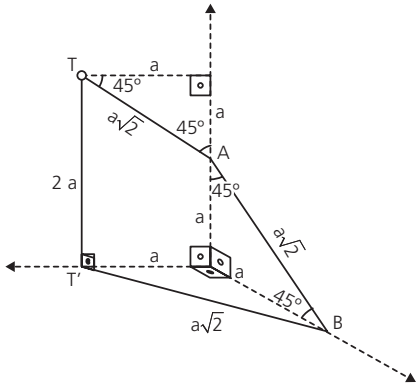
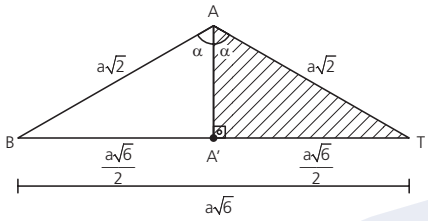


01. Diante do exposto, temos:



- Pitágoras no BT 'T → $BT^2 = (a\sqrt{2})^2 + (2a)^2 \rightarrow BT = a\sqrt{6}$.
- ΔBAT é isósceles de base $\overline{BT}$.



$\operatorname{sen}\alpha = \dfrac{\frac{a\sqrt{6}}{2}}{a\sqrt{2}} = \dfrac{\sqrt{3}}{2}$

Logo:

$\alpha = 60° \rightarrow B\hat{A}T = 2\alpha = 120°$

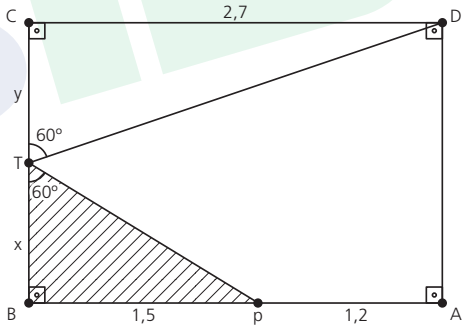
Resposta: C

02. Diante do exposto, temos:

- $\operatorname{tg} 60° = \dfrac{1,5}{x} = \sqrt{3} \rightarrow \dfrac{1,5\sqrt{3}}{x} = 3 \rightarrow x = 0,5\sqrt{3}$
- $\operatorname{tg} 60° = \dfrac{2,7}{y} = \sqrt{3} \rightarrow \dfrac{2,7\sqrt{3}}{y} = 3 \rightarrow y = 0,9\sqrt{3}$

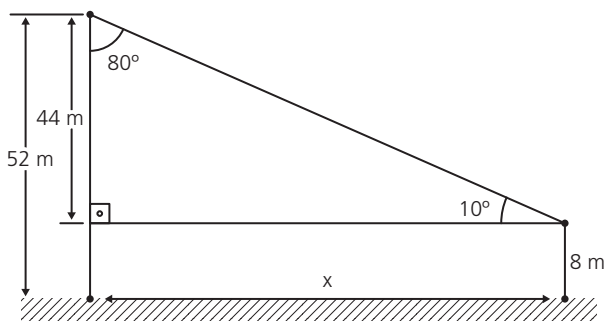
Logo:

$BC = x + y = 1,4\sqrt{3} \cong 2,422$ m



Resposta: A

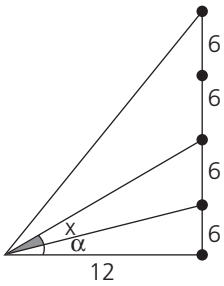
03. Diante do exposto, temos:



$\operatorname{tg}10° = \dfrac{44}{x} \rightarrow x = \dfrac{44}{0,176} \rightarrow x = 250$ m

Resposta: A

04.



I. $tg\alpha = \frac{6}{12} = \frac{1}{2} \rightarrow \alpha = 27°$

II. ΔABC é retângulo isósceles $\rightarrow x + \alpha = 45° \rightarrow x = 18°$

Resposta: A

05. $tg\ \alpha = \frac{h}{a} \rightarrow a = \frac{h}{tg\alpha}$

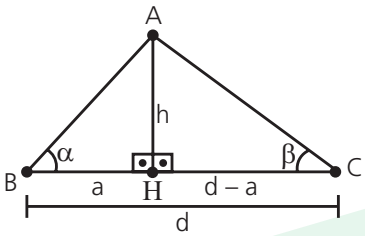
$tg\ \beta = \frac{h}{d-a} \rightarrow d - a = \frac{h}{tg\beta}$

Então:

$d - \frac{h}{tg\alpha} = \frac{h}{tg\beta}$

$d = \frac{h}{tg\alpha} + \frac{h}{tg\beta}$

Logo: $h = \frac{dtg\alpha\ tg\beta}{tg\beta + tg\alpha}$



Resposta: E