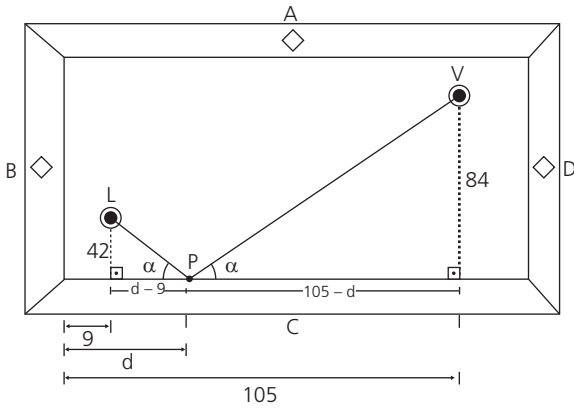


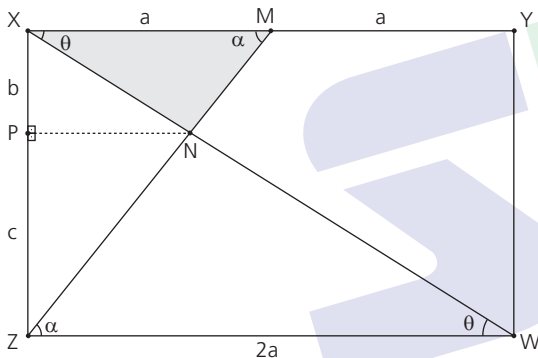
01. Do enunciado, temos:



semelhança $\rightarrow \frac{42}{d-9} = \frac{84}{105-d} \rightarrow d = 41$

Resposta: B

02. Diante do exposto, tem-se:



I. $\frac{a \cdot b}{2} = 1$ (área do ΔXMN) $\rightarrow ab = 2$.

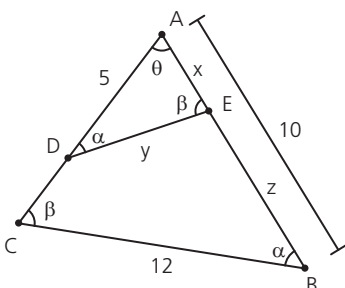
II. $\Delta XMN \sim \Delta WZN \rightarrow \frac{a}{2a} = \frac{b}{c} \rightarrow c = 2b$.

Logo:

Área (XYZW) = $2a \cdot (b + c) = 6ab = 12 \text{ m}^2$.

Resposta: C

03.



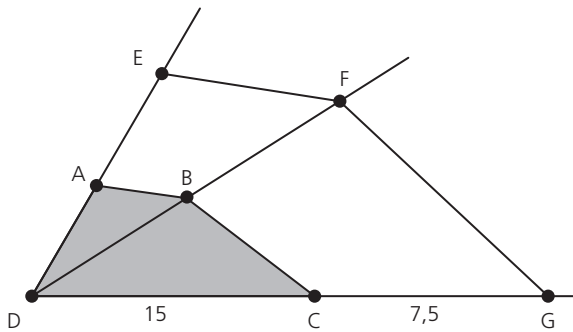
Veja que: $\Delta ADE \sim \Delta ABC \rightarrow \frac{y}{12} = \frac{5}{10} \rightarrow y = 6 \text{ km}$

Logo:

Comprimento (percurso citado) = $x + 5 + y + z = 21 \text{ km}$

Resposta: B

04. De acordo com o enunciado, temos:



Polígono (ABCD) ~ Polígono (EFGD)

Estão:

$$\left(\frac{15+7,5}{15}\right)^2 = \frac{[EFGD]}{150}$$

Logo:

$$[EFGD] = 337,5 \text{ m}^2$$

Resposta: B

05. i. $\Delta PVR \sim \Delta PQM$

$$\frac{y}{3} = \frac{4-x}{4}$$

$$4y = 12 - 3x$$

$$3x + 4y = 12$$

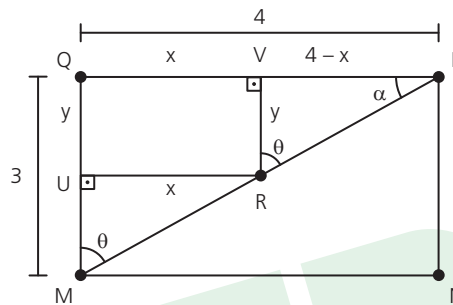
ii. $M \cdot A \geq M \cdot G$

$$\frac{3x+4y}{2} \geq \sqrt{3x \cdot 4y}$$

$$6 \geq \sqrt{12xy}$$

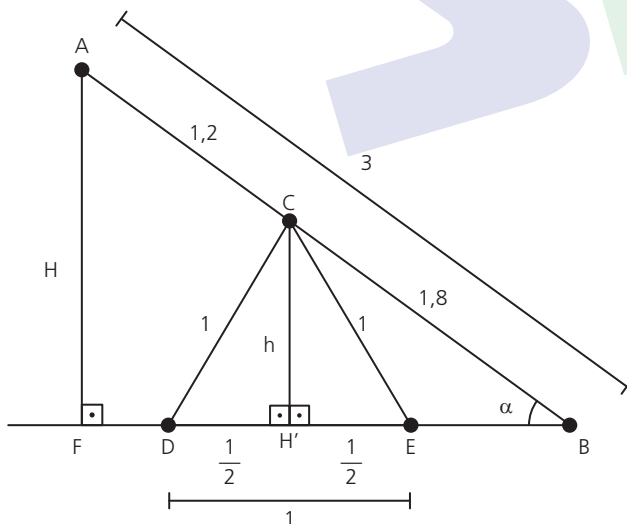
$$xy \leq 3$$

Logo: $(xy)_{\text{máx}} = 3 \text{ m}^2$



Resposta: D

06.

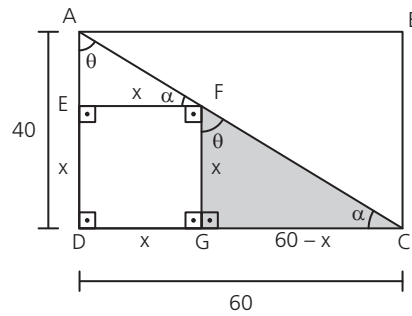


- Pitágoras ($\Delta CH'E$) $\rightarrow 1^2 = \left(\frac{1}{2}\right)^2 + h^2 \rightarrow h = \frac{\sqrt{3}}{2} \text{ m}$

- $\Delta BH'C \sim \Delta BFA \rightarrow \frac{h}{1,8} = \frac{H}{3} \rightarrow H = \frac{5\sqrt{3}}{6} \text{ m}$

Resposta: D

07.

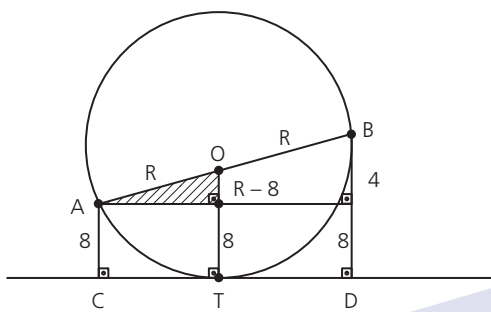


Veja que: $\triangle CGF \sim \triangle CDA \rightarrow \frac{x}{40} = \frac{60-x}{60}$

Logo: $x = 24$ m

Resposta: B

08.



Semelhança

$$\frac{R-8}{4} = \frac{R}{2R}$$

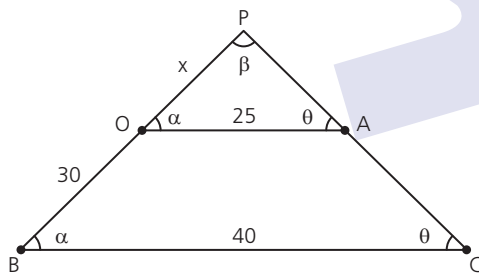
$$\frac{R-8}{4} = \frac{1}{2}$$

$$2R - 16 = 4$$

$$2R = 20\text{m}$$

Resposta: E

09.



Semelhança

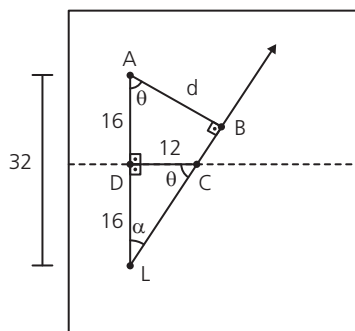
$$\frac{25}{40} = \frac{x}{x+30}$$

Logo:

$$x = 50 \text{ m}$$

Resposta: E

10.



d: distância solicitada.

i) Pitágoras $\rightarrow (LC)^2 = 16^2 + 12^2 \rightarrow LC = 20$ m

ii) $\triangle LDC \sim \triangle LBA \rightarrow \frac{12}{d} = \frac{20}{32} \rightarrow d = 19,2\text{m}$

Resposta: B