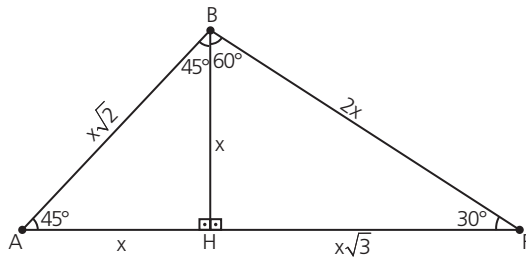


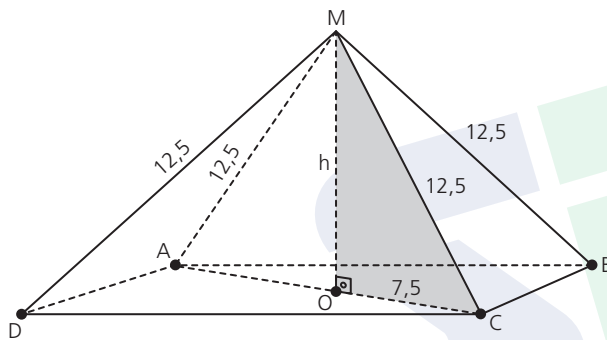
01. Diante do exposto, tem-se:



- I)  $x\sqrt{2} = 14,7 \rightarrow x = 10,5$
- II)  $BF = 2x \rightarrow BF = 21 \text{ km}$

Resposta: D

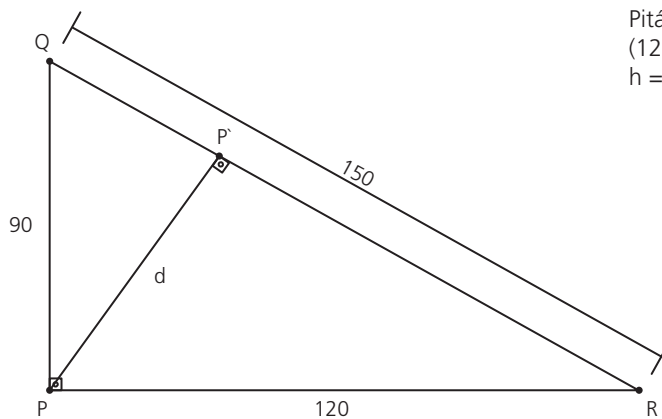
02. Ilustração:



Pitágoras  
 $(12,5)^2 = (7,5)^2 + h^2$   
 $h = 10 \text{ m}$

Resposta: B

03. Ilustração:

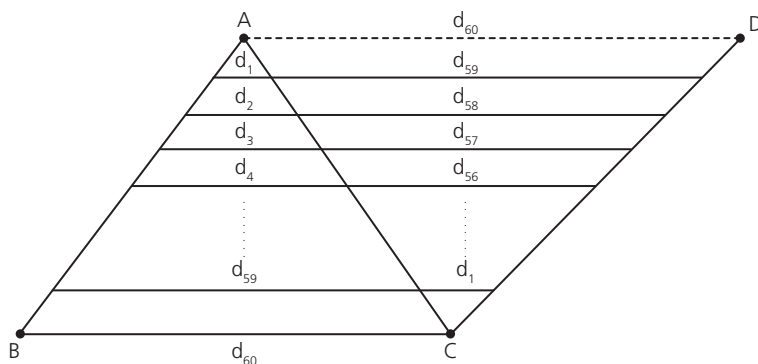


Pitágoras  
 $(12,5)^2 = (7,5)^2 + h^2$   
 $h = 10 \text{ m}$

Resposta: E

## Resolução – Matemática IV

04. De acordo com as condições apresentadas, podemos ter:



Veja que:

- ABCD é um paralelogramo;
- $d_{60} = d_1 + d_{59} = d_2 + d_{58} = \dots = d_{59} + d_1$

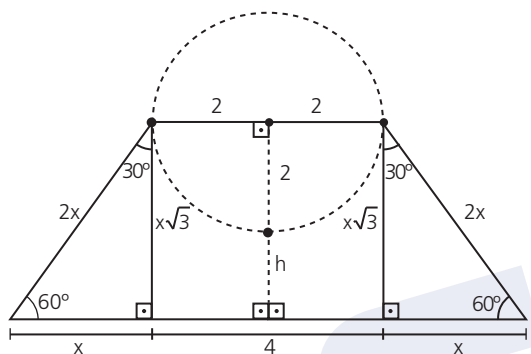
Logo:

Queremos

$$60 \cdot d_{60} = 60 \cdot 600\sqrt{2} \cong 50400 \text{ cm} = 50,4 \text{ dam}$$

Resposta: A

05. Diante do exposto, tem-se:

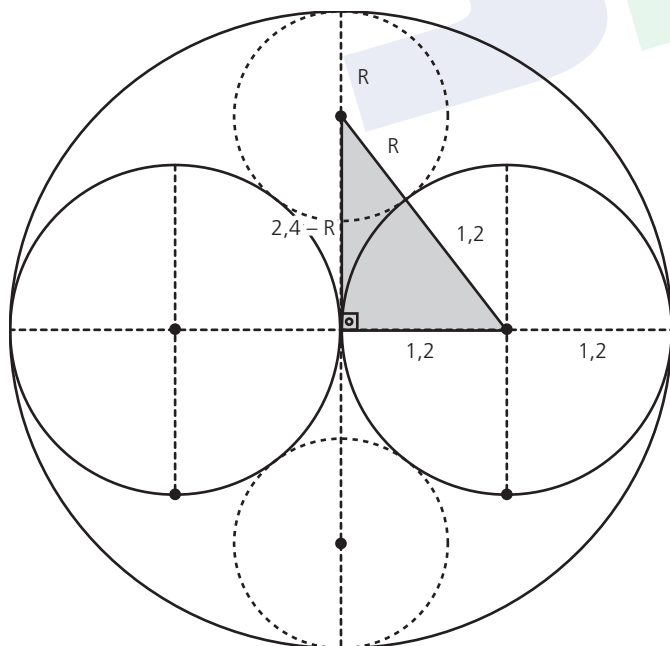


Logo:

$$h + 2 = x\sqrt{3} \rightarrow h = 3\sqrt{3} - 2 \cong 3,19 \text{ m.}$$

Resposta: C

06. Ilustração:



Pitágoras:

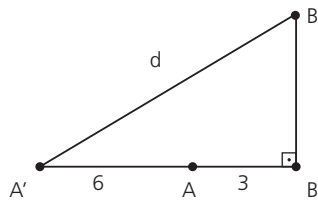
$$(R + 1,2)^2 = (2,4 - R)^2 + (1,2)^2$$

$$R = 0,8 \text{ cm}$$

Resposta: A

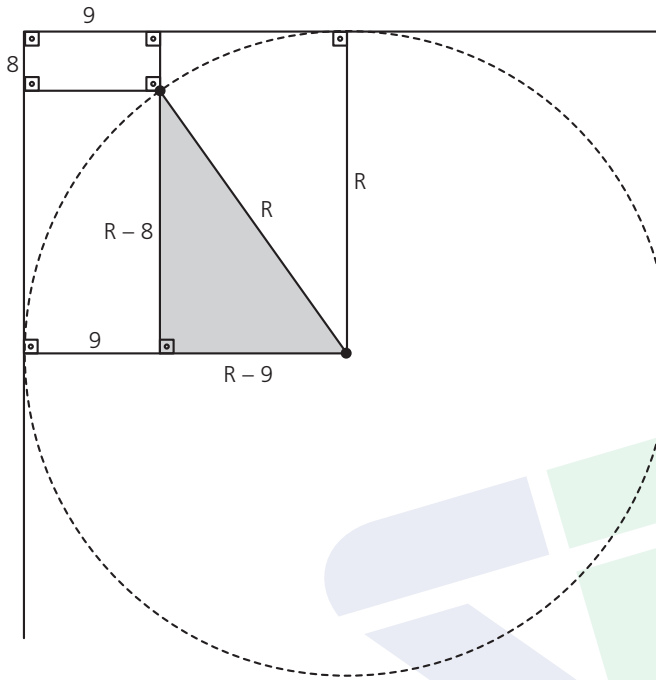
## Resolução – Matemática IV

07. Após duas horas  $\rightarrow AA' = 2 \cdot 3 = 6$  km  
 Após duas horas  $\rightarrow BB' = 2 \cdot 3 = 6$  km  
 Logo:  $d^2 = 9^2 + 6^2$   
 $d^2 = 117$   
 $d = \sqrt{117}$  km



Resposta: D

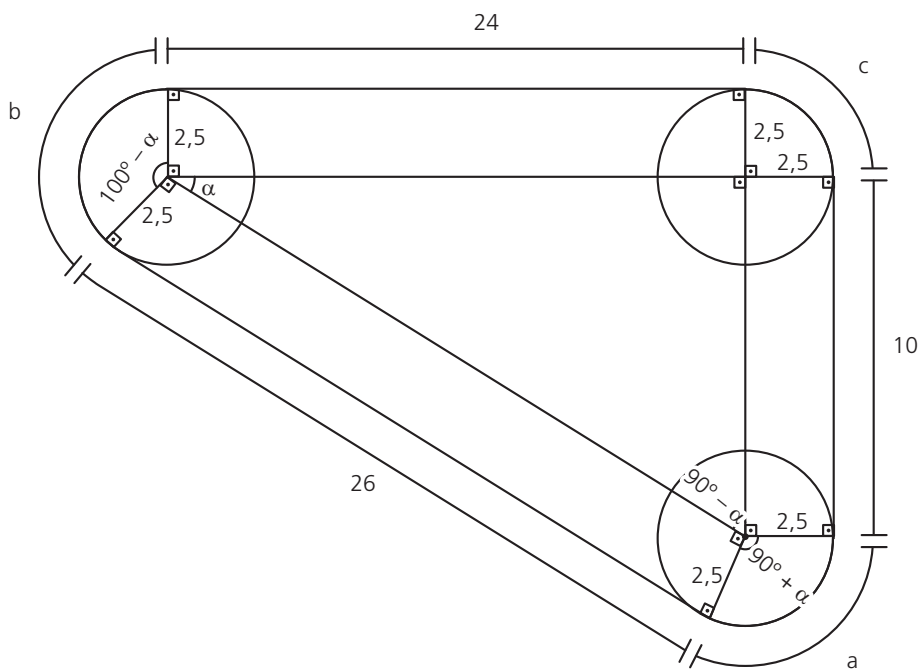
08. Ilustração:



Pitágoras  
 $R^2 = (R - 8)^2 + (R - 9)^2$   
 Logo:  
 $R = 29$  dm

Resposta: D

09. Ilustração:



## Resolução – Matemática IV

$$\text{Comp.}_{(\text{correia})} = 26 + 10 + 24 + a + b + c$$

Veja que:

$$a + b + c = \left(\frac{90^\circ + \alpha}{360^\circ}\right) \cdot 2\pi \cdot 2,5 + \left(\frac{180^\circ - \alpha}{360^\circ}\right) \cdot 2\pi \cdot 2,5 + \left(\frac{90^\circ}{360^\circ}\right) \cdot 2\pi \cdot 2,5$$

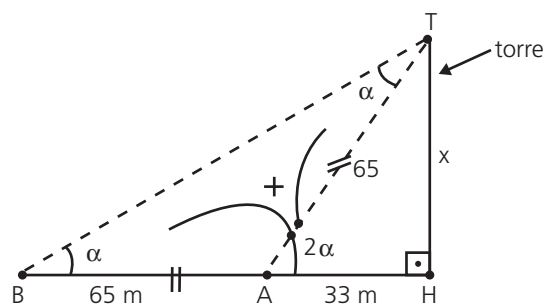
$$a + b + c = 5\pi$$

Logo:

$$\text{Comp.}_{(\text{correia})} = (60 + 5\pi) \text{ m}$$

**Resposta: B**

10. Considere a figura seguinte relativa ao enunciado.



Observando que o triângulo TBA é isósceles de base  $\overline{BT}$ , temos que  $AB = AT = 65$  m. Daí, aplicando o teorema de Pítagoras no triângulo ATH, obtemos:

$$65^2 = 33^2 + x^2 \Rightarrow 65^2 - 33^2 = x^2 \Rightarrow x^2 = \sqrt{(65+33)(65-33)} \Rightarrow x = \sqrt{98 \cdot 32} = \sqrt{(49 \cdot 2)(16 \cdot 2)} = 7 \cdot 2 \cdot 4 = 56 \text{ m}$$

**Resposta: C**