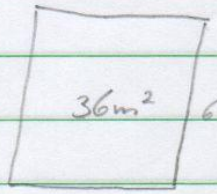
Beatriz Bastos Borges Nº03 CTII 350

Tarefa Básica

1.



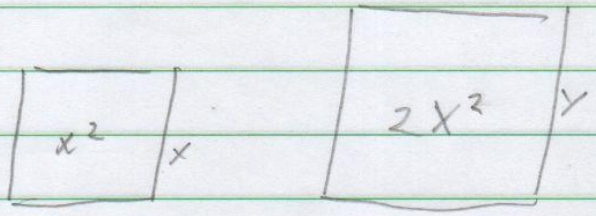
a) 3600/400 → $A_q = 0,09\ m^2$

0,09

b) $0,09 = x^2 \rightarrow x = \sqrt{0,09} \rightarrow x = 0,3$

$P = 0,3 \cdot 4 \rightarrow P = 1,2\ m$

2.

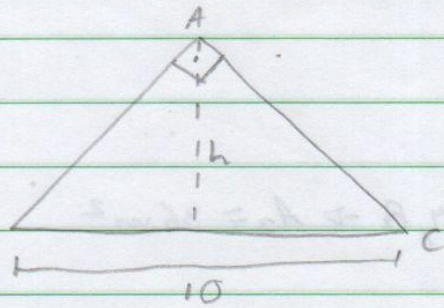


$y^2 = 2x^2 \rightarrow y = \sqrt{2x^2}$

$Y = \sqrt{2}\,X$

Alternativa D

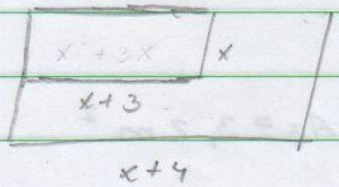
3.



$15 = \frac{10 \cdot h}{2} \rightarrow h = \frac{15}{5} \rightarrow h = 3$

Alternativa D

4.

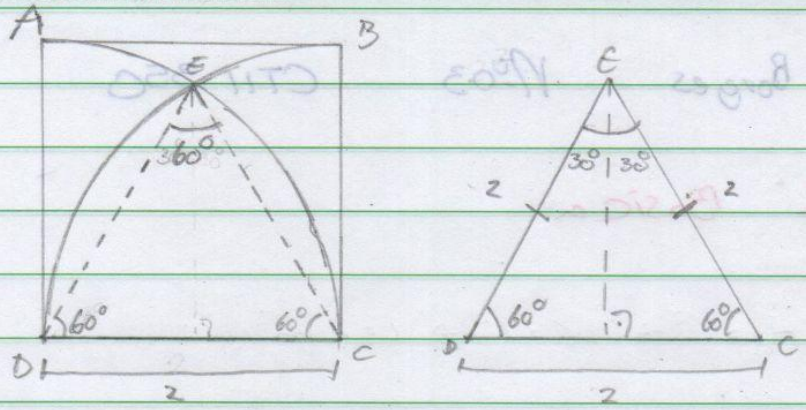


$A_1 = x^2 + 3x$ $A_2 = x^2 + 5x + 4$

$A_2 = A_1 + 16 \rightarrow x^2 + 5x + 4 = x^2 + 3x + 16 \rightarrow 2x = 12 \rightarrow x = 6$

$At = (6+1) \cdot (6 \cdot 4) \rightarrow At = 7 \cdot 10 \rightarrow At = 70\ m^2$

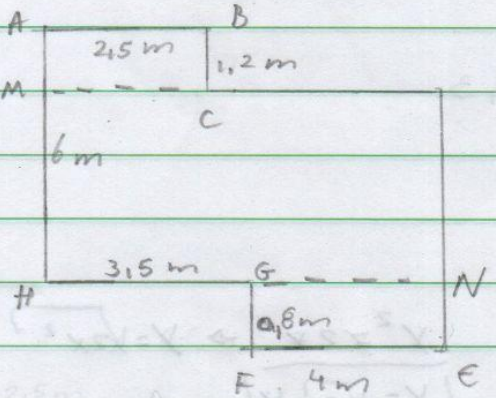
5.

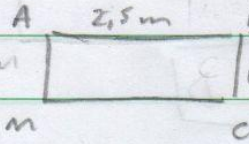


$2^2 = 1^2 + x^2 \rightarrow x^2 = 4 - 1 \rightarrow x = \sqrt{3}$

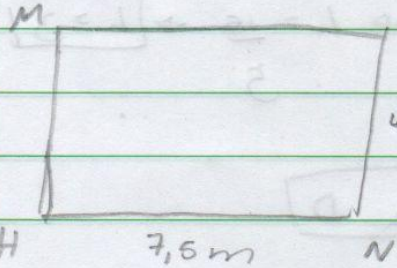
$A = \frac{2 \cdot \sqrt{3}}{2} \rightarrow \boxed{A = \sqrt{3}}$ $\boxed{\text{Alternativa B}}$

6.

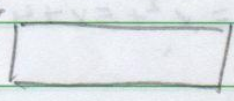




$A_1 = 2,5 \cdot 1,2 \rightarrow A_1 = 3\,m^2$



$A_2 = 7,5 \cdot 4,8 \rightarrow A_2 = 36\,m^2$

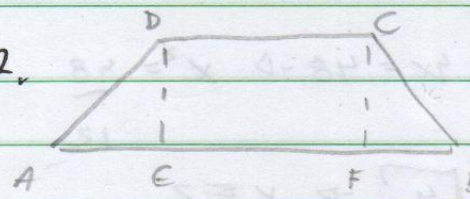


$A_3 = 0,8 \cdot 4 \rightarrow A_3 = 3,2\,m^2$

$At = 3 + 36 + 3,2 \rightarrow \boxed{At = 42,2\,m^2}$

$\boxed{\text{Alternativa E}}$

7.



$A_{ABCD} = 36\,m^2$

$AB = 2CD$

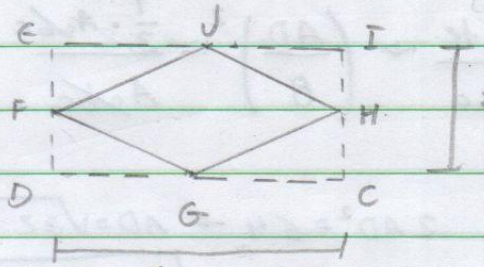
$A = \frac{(B+b)h}{2} \rightarrow 36 = \frac{(CD+2CD)h}{2} \rightarrow 72 = 3CD \cdot h$

$h = \frac{72}{3CD} \rightarrow h = \frac{24}{CD}$

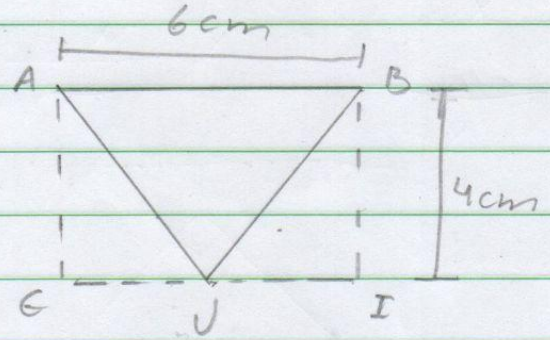
Alternativa E

$A_{CDEF} = CD \cdot h \rightarrow A_{CDEF} = \cancel{CD} \cdot \frac{24}{\cancel{CD}} \rightarrow A_{CDEF} = 24\,m^2$

8.



$A_{losango} = \frac{6 \cdot 2}{2} = 6\,cm^2$



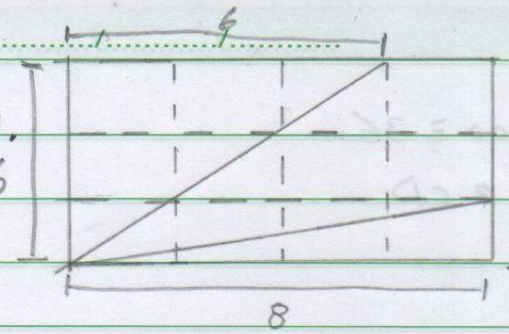
$A_{\Delta} = \frac{6 \cdot 4}{2} = 12\,cm^2$

- Razão entre as áreas:

$\frac{6}{12} \overset{:6}{\underset{:6}{}} \rightarrow \frac{1}{2}$

Alternativa D

9.



$3x \cdot 4x = 48 \rightarrow x^2 = \frac{48}{12}$

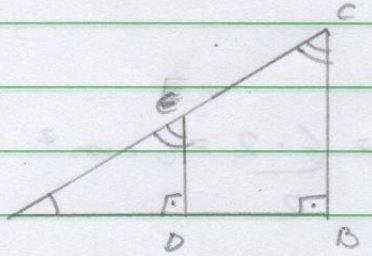
$x = \sqrt{4} \rightarrow x = 2$

$A_1 = \frac{2 \cdot 8}{2} = 8$ $\quad A_2 = \frac{6 \cdot 6}{2} = 18$

$Af = 48 - 8 - 18 \rightarrow Af = 48 - 26 \rightarrow \boxed{Af = 22}$

Alternativa E

10.



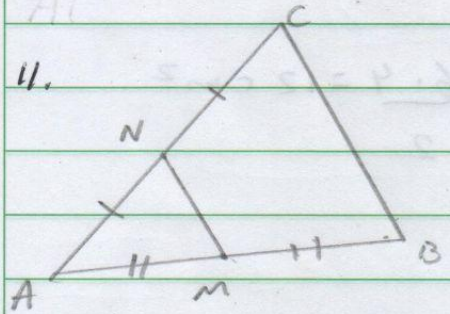
$\left(\frac{AD}{AD}\right)^2 = \frac{A_{ade}}{A_{abc}} \rightarrow \left(\frac{AD}{8}\right)^2 = \frac{\frac{1}{2} \cdot A_{abc}}{A_{abc}}$

$\frac{AD^2}{64} = \frac{1}{2} \rightarrow 2AD^2 = 64 \rightarrow AD = \sqrt{32}$

$\boxed{AD = 4\sqrt{2}}$

Alternativa A

11.



AMN e ABC são semelhantes e a razão dessa semelhança é a razão das bases MN e BC, ou seja, 1:2.

$\frac{A_{amn}}{A_{abc}} = \left(\frac{1}{2}\right)^2 \rightarrow A_{amn} = \frac{1}{4} \cdot A_{abc} \rightarrow A_{amn} = \frac{96}{4} \rightarrow A_{amn} = 24m^2$

$A_{bmnc} = 96 - 24 \rightarrow \boxed{A_{bmnc} = 72m^2}$