S T Q Q S S D

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Tarefa Básica - Área de Quadriláteros e Triângulos

01) a) $\frac{\text{área total}}{\text{nº de peças}} = \frac{36}{400} = \boxed{0{,}09\ m^2}$

b) área do quadrado $= l \cdot l = l^2$

$l^2 = 0{,}09$

$l = \sqrt{0{,}09}$

$l = 0{,}3$

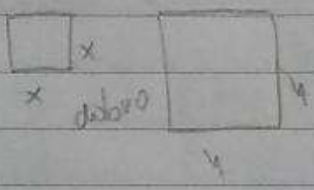
Perímetro

$P = 4 \cdot l$

$P = 4 \cdot 0{,}3$

$\boxed{P = 1{,}2\ m}$

02)



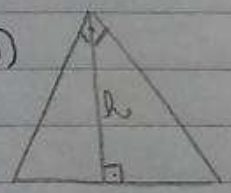
$A_1 = x^2$ $\quad A_2 = y^2$

$A_2 = 2A_1$ igual a duas vezes a área do menor

$y^2 = 2x^2$

$\boxed{y = \sqrt{2x}}$ $\quad R: (D)$

03)



$A = \frac{b \cdot h}{2}$

$15 = \frac{10 \cdot h}{2}$

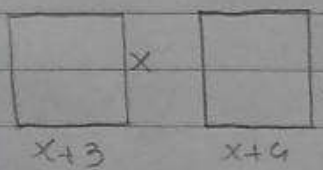
$15 = 5 \cdot h$

$h = \frac{15}{5}$

$\boxed{h = 3}$

$R: (D)$

04)



$x + x + 3 = x^2 + 3x$

$x + 1 = 6 + 1 = 7$

$x + 4 = 6 + 4 = 10$

$10 \cdot 7 = \boxed{70\ m^2}$

$x^2 + 16 + 3x = x + 4x + 4$

$x^2 + 16 + 3x = x^2 + x + 4x + 4$

$-2x = -12 \quad (-1)$

$2x = 12$

$x = \frac{12}{2}$

$\boxed{x = 6}$

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S T Q Q S S D

05) A quadrado = 2.2 = 4

A triângulo = $\frac{b.h}{2}$

$A = \frac{2.\sqrt{3}}{2}$

$A = \sqrt{3}$

DCE = Δ equilátero

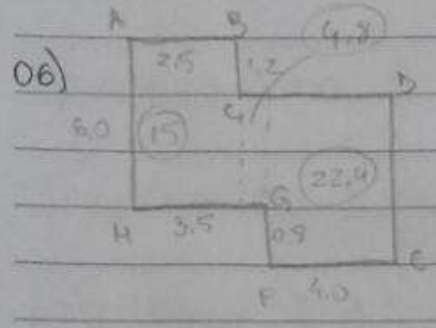
$h = \frac{x\sqrt{3}}{2}$

$h = \frac{2\sqrt{3}}{2}$

$h = \sqrt{3}$,

R: (B)

06)



$A_1 = b.h$

$A_1 = 2,5\ 6$

$A_1 = 15\ m^2$,

$6 - 1,2 = 4,8$

$3,5 - 2,5 = 1$

$A_2 = b.h$

$A_2 = 1\ 4,8$

$A_2 = 4,8\ m^2$,

$4,8 + 0,8 = 5,6$

$A_3 = b.h$

$A_3 = 4.5,6$

$A_3 = 22,4\ m^2$

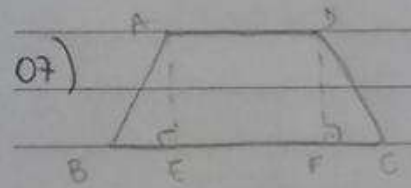
A total = $A_1 + A_2 + A_3$

$A = 15 + 4,9 + 22,4$

$A = 42,2\ m^2$

R: (E)

07)



$A_{trap} = 36\ cm^2$

$AB = 2CD$

$A = \frac{(B+b).h}{2}$

$36 = \frac{(2CD + CD).DE}{2}$

$72 = 3CD.DE$

$DE = \frac{72 \cdot 3}{3CD \cdot 3}$

$DE = \frac{24}{CD}$

$A_{CDEF} = \frac{CD.24}{CD}$

$A_{CDEF} = 24\ cm^2$

R: (E)

S T Q Q S S D

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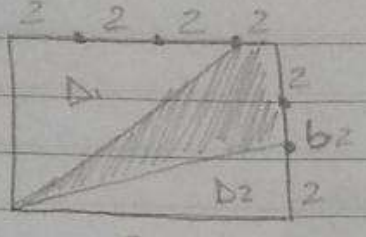
09)



Supondo que A = b.h

lado 8 → $\frac{8}{4} = 2$

lado 6 → $\frac{6}{3} = 2$

A = 8.6

A = 48,

$A = 49 - (A_{D1} + A_{D2})$

$A = 49 - \left(\frac{(6.6)}{2} + \frac{(8.2)}{2}\right)$

A = 49 - (18+6)

A = 49 - 26

A = 22

R: (E)

10) ΔABC

$A = \frac{b.h}{2}$

$A = \frac{7.6}{2}$

$A = \frac{42}{2}$

A = 21,

ΔADE (metade)

$A = \frac{21}{2}$

A = 10,5,

Semelhança

$\frac{AD}{AB} = \frac{DE}{BC}$

$\frac{AD}{7} = \frac{DE}{6}$

7DE = 6AD

$DE = \frac{6AD}{7}$,

A de ADE

$A = \frac{AD.DE}{2}$

$10,5 = \frac{AD.DE}{2}$ x

AD.DE = 2.10,5

AD.DE = 21

AD.DE = 21

$AD.\left(\frac{6AD}{7}\right) = 21$

$\frac{6AD^2}{7} = 21$

$6AD^2 = 21.7$

$6AD^2 = 147$

$AD^2 = \frac{147}{6}$ 3

3

$AD^2 = \frac{49}{2}$

$AD = \frac{\sqrt{49}}{\sqrt{2}}$

$AD = \frac{7}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$

$AD = \frac{7\sqrt{2}}{2}$

R: (E)

spiral

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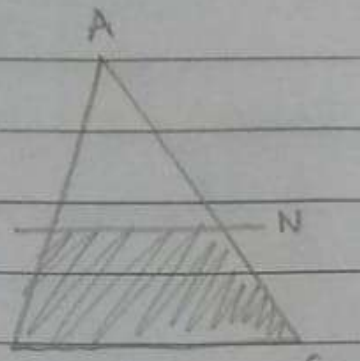
S T Q

11)



$MN = \frac{1}{2}$ metade de ABC

ΔAMN é semelhante a ΔABC

$\frac{\Delta AMN}{\Delta ABC} = \frac{1}{4}$

$A = 96\ m^2$

$A_{MBNC} = A_{ABC} - A_{AMN}$

$A_{MBNC} = 96 - \frac{1}{4}(96)$

$A_{MBNC} = 96 - 24$

$\boxed{A_{MBNC} = 72\ m^2}$