1- a.)

• 400 na forma de quadrado (idênticos) área da sala = $36 m^2$

$x = \frac{36 m^2}{400} = 0,09 m^2$

cada peça tem $0,09 m^2$

b.)

• area do quadrado = l^2

$0,09 = l^2$

$l = \sqrt{0,09}$

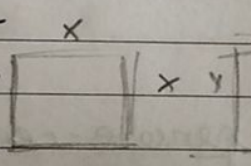
$l = 0,3$

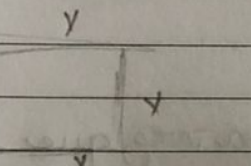
$P = 4.l$

$P = 4 . 0,3$

$P = 1,2 m$

2-





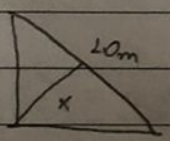
$A_1 = x^2$

$A_2 = y^2$

$A_2 = 2A_1 \Rightarrow y^2 = 2x^2 \Rightarrow y = x\sqrt{2}$

$y = x\sqrt{2}$

3-



$A_t = 15 m^2$

$b = h = 10 m$

$h = x$

$A_t = \frac{b.h}{2} \Rightarrow 15 = \frac{10.h}{2}$

$30 = 10h$

$h = \frac{30}{10}$

$h = 3$

I)

4.

$L = x + 3$

$l = x$

aumentou 1 em cada lado

$A = a + 16\,m^2$

$A - a = 16\,m^2$

$Ar = b.h$

$Ar = (x+3).x$

$Ar = (2+3).2 = 10$

$Ar = (3+3).3 = 18$

$Ar = (4+3).4 = 28$

Se no $x = 4$ a área cresceu $10\,m^2$ em relação a de $x = 3$ que foi $8\,m^2$ em comparação a $x = 2$, o valor de x para que a área cresça $16\,m^2$ é igual a 7

$Ar_2 = (6+3).6 = 54$

$ArA = (7+3).7 = 70\,m^2$

$70 - 54 = \boxed{16\,m^2}$

5- O triângulo DCE é equilátero, uma vez que percebe-se dois ângulos de 60°

180 - 60 - 60 = 60° então, os lados são iguais ao lado do quadrado (2)

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

$b = 2$

$h = ?$

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

$h = \sqrt{3}$

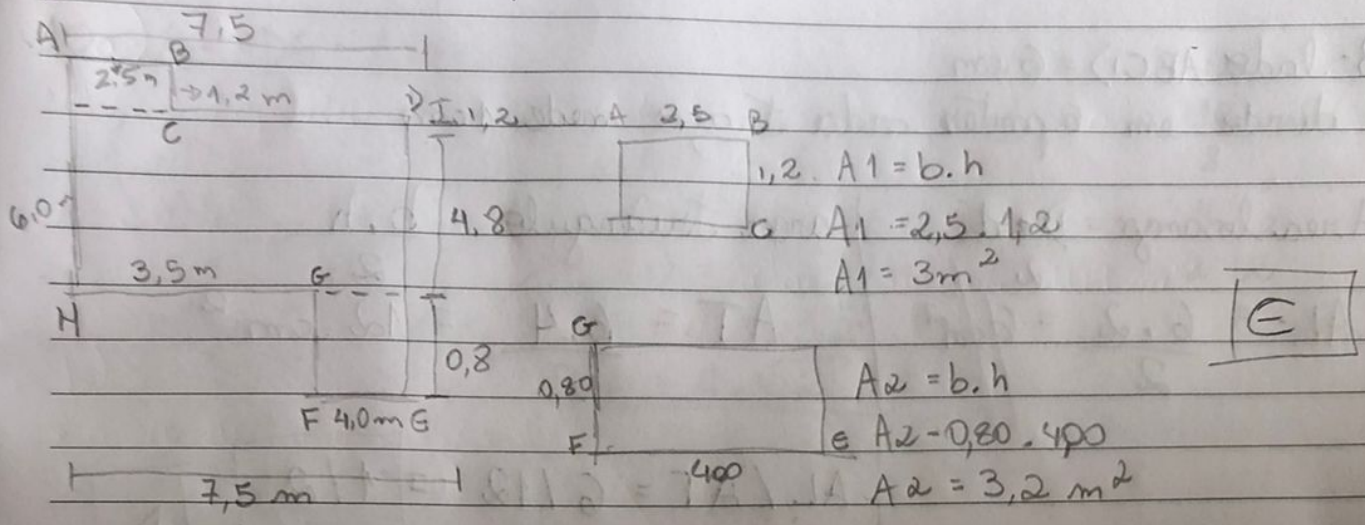
$A = \frac{b.h}{2}$

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

$\boxed{A = \sqrt{3}}$

$\boxed{B}$

6-



$A1 = b.h$

$A1 = 2,5 . 1,2$

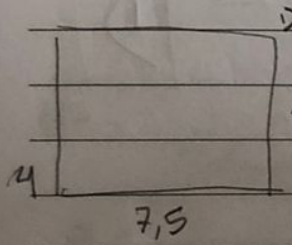
$A1 = 3m^2$

∈

$A2 = b.h$

$A2 = 0,80 . 4,00$

$A2 = 3,2\ m^2$



$A3 = h.h$

$A3 = 7,5 . 4,8$

$A3 = 36m^2$

$At = A1 + A2 + A3$

$At = 3 + 3,2 + 36$

$At = 42,2\ m^2$

7-

ABCD

$ABCD = 36\ cm^2$

$AB = 2CD$

$AB/2 = CD$

$EF = CD$

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

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

$72 = (2CD + CD).h$

$72 = (2CD + CD).h$

$72 = 3CD.h$

$\frac{72}{3} = CD.h$

$CD.h = 24$

∈

8- lado ABCD = 6 cm
• dividido em 6 partes, cada traço mede 1 cm

Área losango = $\frac{D \cdot d}{2}$

$AL = \frac{6 \cdot 2}{2} = 6 cm^2$

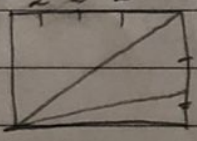
área triângulo = $\frac{b \cdot h}{2}$

$AT = \frac{6 \cdot 4}{2} = 12 cm^2$

$AL / AT = 6 / 12 = 1/2$

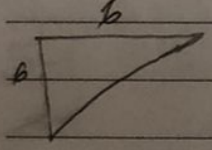
D

9-

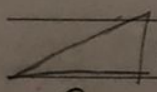


b = 8
h = 6

$A_{RCt} = 48$



$A_{tgM} = \frac{b \cdot h}{2} \Rightarrow \frac{6 \cdot 6}{2} = \frac{36}{2} = 18$



$A_{tgm} = \frac{b \cdot h}{2} \Rightarrow \frac{2 \cdot 8}{2} = \frac{16}{2} = 8$

$A_{RCA sob} = A_{RCt} - (A_{tgM} - A_{tgm})$
$A_{RCA sob} = 48 - (18 - 8)$
$A_{RCA sob} = 48 - 26$
$A_{RCA sob} = 22$

10- $\Delta ADE \sim \Delta ABC$

$\left(\frac{AD}{AB}\right)^2 = \frac{A+p}{A+q}$

$\left(\frac{AD}{8}\right)^2 = \frac{\frac{1}{2}A+q}{A+q}$

$\frac{AD^2}{64} = \frac{1}{2}$

$2AD^2 = 64$

$AD^2 = 32$

$AD = \sqrt{32}$

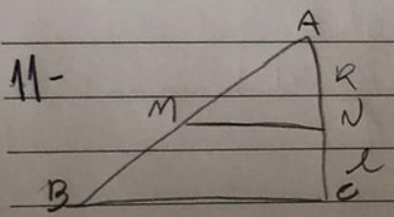
$A = \sqrt{2^2 \cdot 2^2 \cdot 2^1}$

$\boxed{A = 4 \cdot \sqrt{2}}$

32	2
16	2
8	2
4	2
2	2

$\boxed{A}$

11-



$A_{ABC} = 96m^2$

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

$A_{BMNC} = 96 - A_{AMN}$

$\frac{A_{AMN}}{96} = \frac{1}{4} \Rightarrow 4A_{AMN} = 96$

$A_{AMN} = \frac{96}{4}$

$\boxed{A_{AMN} = 24m^2}$

$A_{BMNC} = 96 - 24$

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