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Tarefa Bônus - Áreas de quadriláteros e triângulos

1.

$$a, 400 \cdot l^2 = 36$$

$$l^2 = \frac{36}{400}$$

$$400$$

$$l = \frac{6}{20}$$

$$20$$

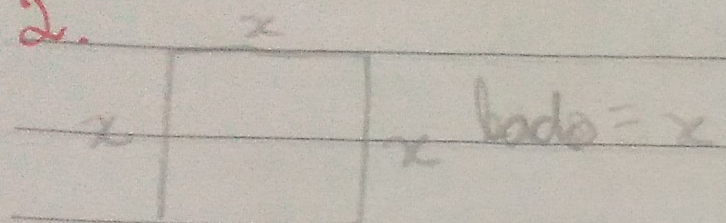
$$l = \frac{3}{10} = 0,3$$

$$10$$

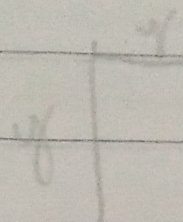
$$b, 0,3 \cdot 4 = 1,2 \text{ m}$$

$$l^2 \rightarrow 0,3^2 = 0,9 \text{ m}^2$$

2.



x

área $\rightarrow x^2$ 

y

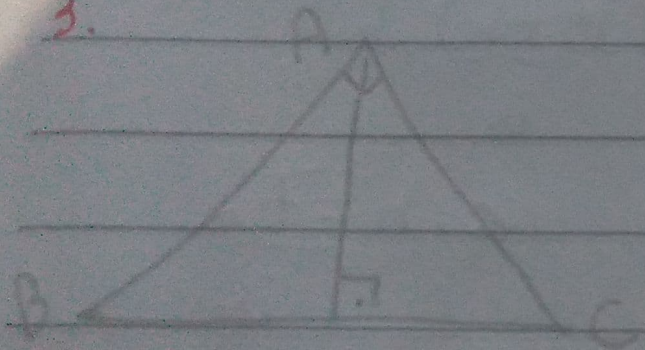
área $\rightarrow y^2$ y²

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

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

R. d)

3.



10/ base

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

$$10h = 30$$

$$h = 3$$

$$h = 3$$

$$h = 3$$

R. d)

4,

 $a+3$

1

$$\text{verde} = 1 \cdot (a+3)$$

$$2a+4=16$$

a

R

$$\text{Roxo} = 1 \cdot a$$

$$(a+4) \cdot (a+1) = 10 \cdot 7$$

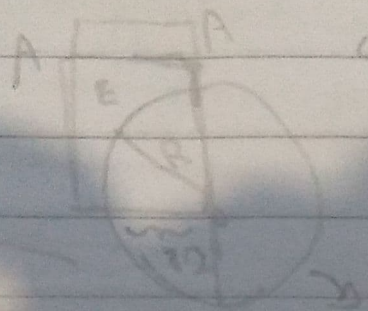
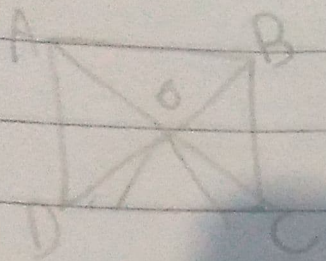
Verde

B

anexo

70m

5.



com o ret. inscrita na circunferência

Noto prime, DC e EC são lados da circunferência e retas
tangentes ao quadrado $2=R$ Então $PC=EC=R=2$
 $2=R$

O segmento PE também é um ret, logo também é
lado de uma circunferência

$$DE=R=2$$

Logo, o Δ inscrito é equilateral

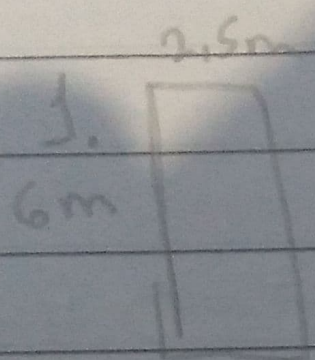
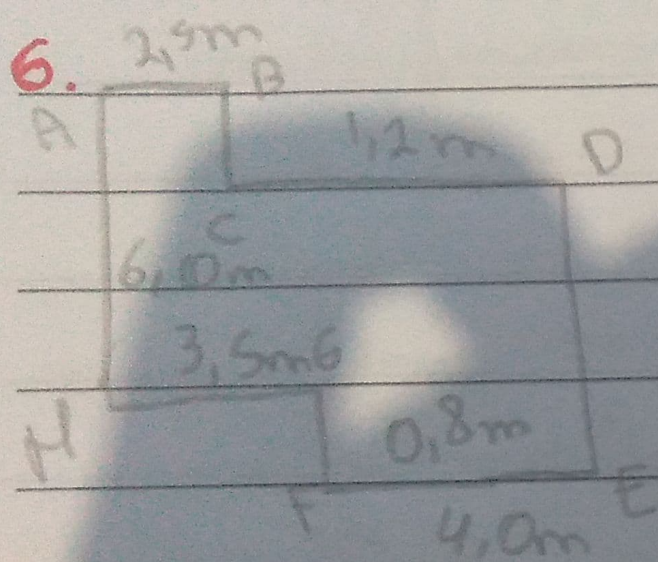
$$\begin{array}{c} 2 \\ \swarrow \quad \searrow \\ \Delta \\ \swarrow \quad \searrow \\ 2 \end{array} \rightarrow A = \frac{l^2 \sqrt{3}}{4}$$

$$A = \frac{2^2 \sqrt{3}}{4}$$

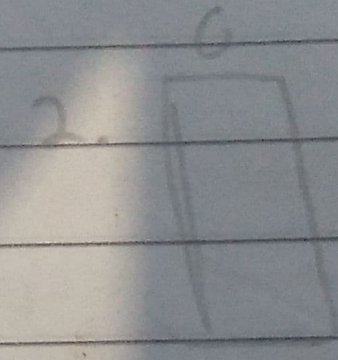
$$A = \frac{4\sqrt{3}}{4} \quad A = \sqrt{3}$$

4

6. 3 retângulos



$$A = 2,5 \cdot 6 = 15 \text{ m}^2$$

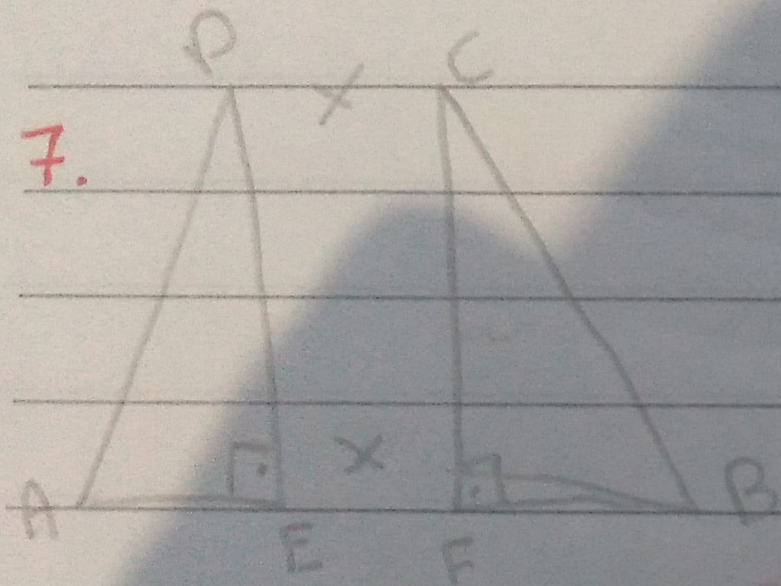


$$A = 1,2 \cdot 6 = 7,2 \text{ m}^2$$

$$A = 4,8 \text{ m}^2$$

$$3. \quad 4,8 + 0,8 = 5,6 \quad l = 4 \rightarrow A = 5,6 \cdot 4 = 22,4 \text{ m}^2$$

7.



$$(DCFE) = b \cdot h = x \cdot h$$

$$(ABCD) = 36 \text{ m}^2 = \frac{(B+b) \cdot h}{2}$$

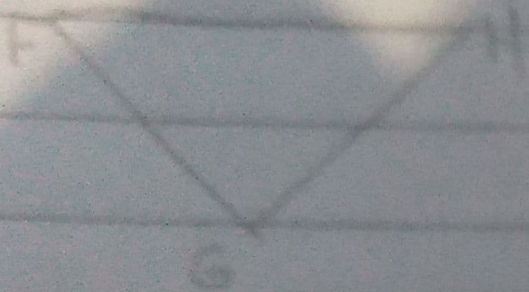
$$(x+2x) \cdot h = 36$$

$$x \cdot h = 72$$

$$(x+2x) \cdot h = 72 = \boxed{24 \text{ m}^2}$$

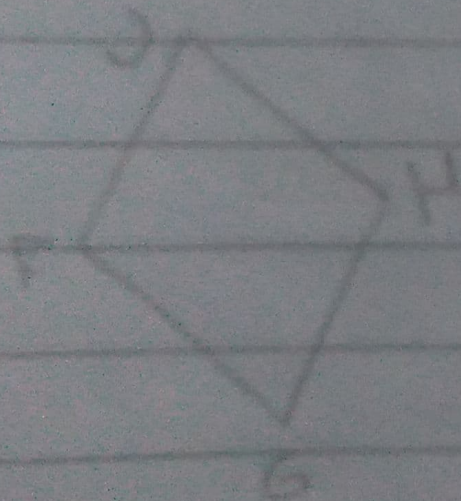
$$3x \cdot h = 72$$

8.



Área do $\Delta FGH = \frac{1}{4}$ da Área do ΔABC

altura de $\Delta FGH = 1$ e $\Delta ABC = 4$



area:

2. área do ΔFGH

área do losango $= \frac{2}{4}$ da área do ΔABC

simplificando $\frac{2}{4} \div \left[\frac{1}{2} \right]$ R: d

9. 2 2 2 2



$$48 - \left(\frac{6 \cdot 6}{2} + \frac{8 \cdot 2}{2} \right)$$

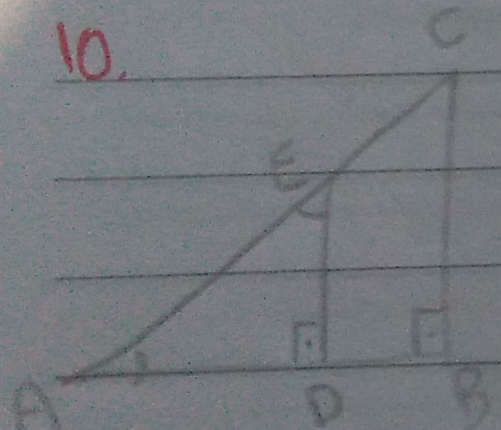
$$48 - (18 + 8)$$

$$48 - 26$$

$$\boxed{22}$$

R: 27

10.



$$\triangle ADE \cong \triangle ABC$$

$$\frac{(AD)^2}{(AB)^2} = \frac{AE}{AC}$$

$$\frac{(AD)^2}{(AB)^2} = \frac{AE}{AC}$$

$$\frac{(AD)^2}{8^2} = \frac{1}{2} \frac{AE}{AC}$$

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

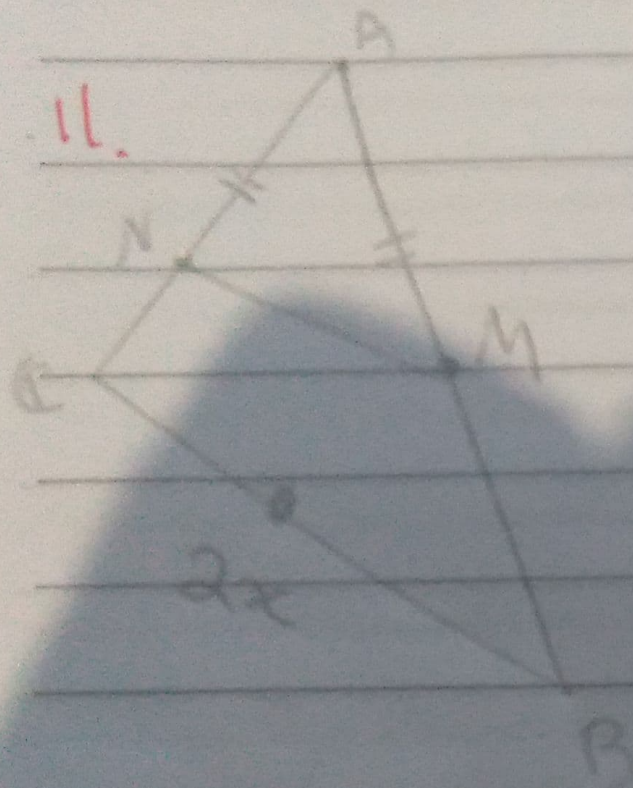
$$64 = \frac{1}{2}$$

$$2AD^2 = 64$$

$$AD^2 = 32$$

$$AD = \sqrt{32} = \sqrt{16 \cdot 2} = 4\sqrt{2}$$

R: 27



$$S_{ABC} = 96 \text{ m}^2$$

MN \parallel base \Rightarrow similar to $\triangle ABC$

$$\frac{S_{AMN}}{S_{ABC}} = k^2 \Rightarrow \frac{S_{AMN}}{96} = \left(\frac{1}{2}\right)^2$$

$$S_{AMN} = \frac{96}{4} = 24 \text{ m}^2$$

$$S_{MBCN} = S_{ABC} - S_{AMN} \Rightarrow S_{MBCN} = 96 - 24$$

$$S_{MBCN} = 72 \text{ m}^2$$