

Lista de Exercícios - Aula 27

dista de Exercícios

1- Área da sala: 36 m^2 / Área de 1 pega: $x^2 \text{ m}^2$ ($\square x$) $\rightarrow 400$ peças

a) Área de cada pega em m^2

$$400x^2 = 36 \quad \rightarrow x^2 = \frac{9}{100} \quad \rightarrow x^2 = 0,09 \text{ m}^2$$

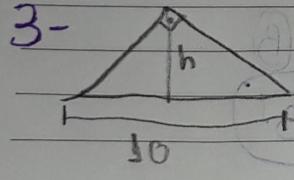
$$x^2 = \frac{36}{400} \quad \rightarrow x = \sqrt{\frac{9}{100}} = \frac{3}{10}$$

b) Perímetro: $(4x \rightarrow x+x+x+x)$

$$x = \sqrt{\frac{9}{100}} \quad \rightarrow x = \frac{3}{10} \quad \rightarrow \text{Perímetro} = 4x = 4 \cdot \frac{3}{10} = 1,2 \text{ m}$$

2- $\square x \rightarrow \square y$ 3. Área $\square x = \text{Área } \square y$

$$2x^2 = y^2 \quad \rightarrow y = \sqrt[2]{2} \cdot \sqrt[2]{x^2} \quad \rightarrow y = \sqrt[2]{2} \cdot x \text{ Alternative (D)}$$

3- 

$$\left\{ \begin{array}{l} A = \frac{b \cdot h}{2} \\ 15 = 10 \cdot h \end{array} \right. \quad \rightarrow 5h = 15 \quad \rightarrow h = \frac{15}{5}$$

$$h = 3 \text{ Alternative (D)}$$

$$4 - \boxed{x-3}$$

$$\text{Ampliando: } \boxed{x-3+5} = \boxed{x-2}$$

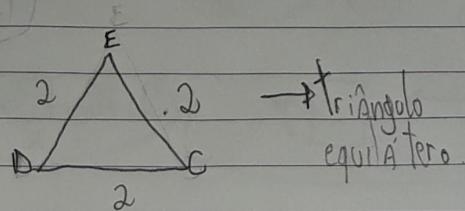
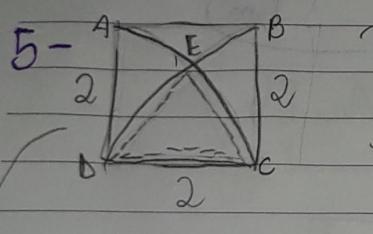
$$\begin{array}{l} \text{Área } \boxed{x-3} = x \cdot (x-3) \\ \text{Área } \boxed{x-2} = (x \cdot (x-3)) + 16 \end{array}$$

$$\begin{aligned} (x+1) \cdot (x-2) &= (x \cdot (x-3)) + 16 \\ x^2 - 2x + x - 2 &= x^2 - 3x + 16 \\ x^2 - x^2 - x + 3x &= 16 + 2 \\ 2x &= 18 \end{aligned}$$

$$\text{Área do } \boxed{\square} \text{ ampliado} \rightarrow (x-2) \cdot (x+1)$$

$$(9-2) \cdot (9+1)$$

$$7 \cdot 10 \rightarrow 70 \text{ m}^2$$



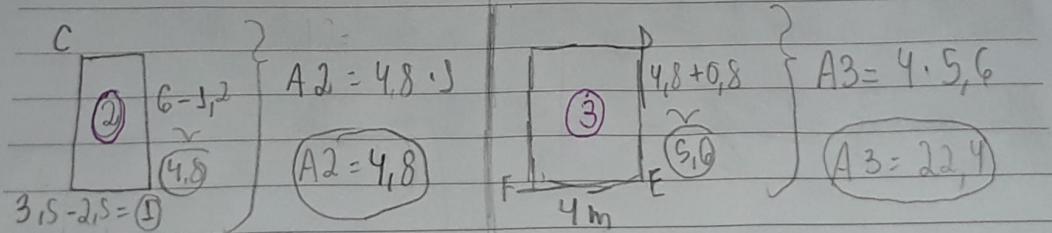
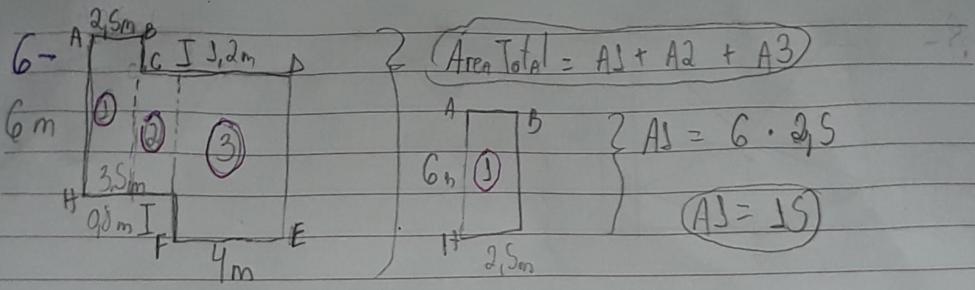
\rightarrow triângulo equilátero.

\rightarrow Os dois arcos têm o raio igual a 2. Como \overline{DE} , \overline{CE} e \overline{CD} são raios dos arcos, eles medem 2.

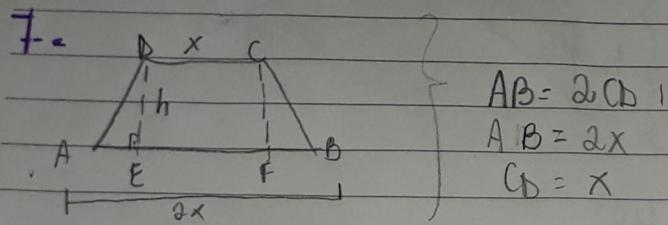
$$\text{Área } \triangle_{DC} \rightarrow A\Delta = \frac{2^2 \cdot \sqrt{3}}{4}$$

Alternativa \textcircled{B}

$$A\Delta = \frac{4 \cdot \sqrt{3}}{4} \rightarrow A = \sqrt{3}$$

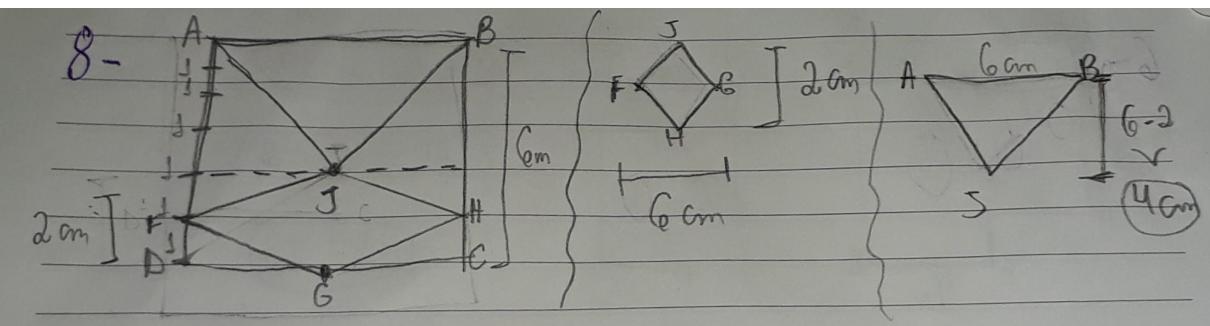


$$\begin{aligned} \text{Area Total} &= A_1 + A_2 + A_3 \\ &= 15 + 4,8 + 22,4 \rightarrow \text{Area Total} = 42,2 \text{ m}^2 \quad \text{Alternativa E} \end{aligned}$$



$$\begin{aligned} \text{Area } \square &= 36 \text{ cm}^2 \\ \frac{(B+b) \cdot h}{2} &= 36 \text{ cm}^2 \\ \frac{(2x+x) \cdot h}{2} &= 36 \text{ cm}^2 \\ x \cdot h &= 12 \cdot 2 \\ x \cdot h &= 24 \text{ cm}^2 \quad \text{Alternativa E} \end{aligned}$$

$$\text{Area } \square = b \cdot h = \text{Area } \square = x \cdot h$$

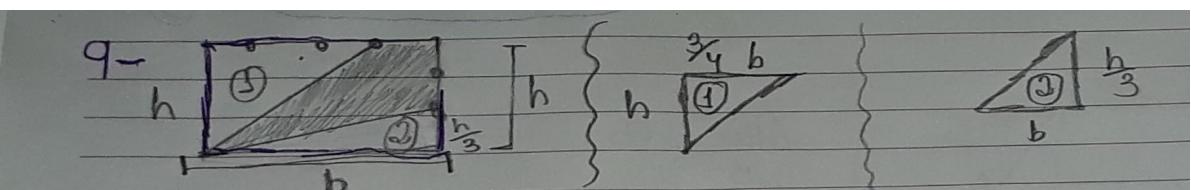


Razão entre a Área do losango $FGHS$ e do triângulo ABJ :

$$\frac{A \text{ Losango}}{A \text{ Triângulo}} \left\{ \frac{6 \cdot 2}{2} \div \frac{6 \cdot 4}{2} \right\} \rightarrow \frac{2}{4} = \frac{1}{2}$$

$\frac{2}{8} \cdot \frac{1}{8 \cdot 4}$

(1) Alternativa (D)



$$\text{Área } \square = 48 / b \cdot h = 48$$

$$\text{Área Quadrilátero} = A \square - A \triangle_1 - A \triangle_2$$

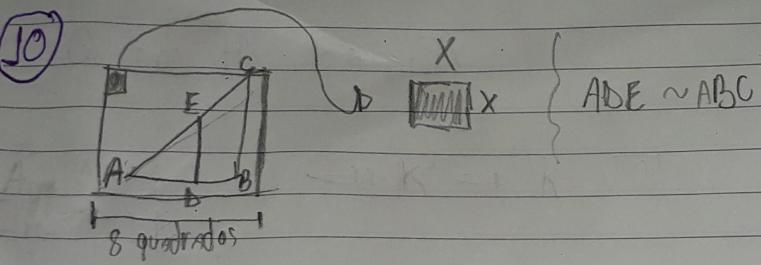
$$\text{Área } Q. = 48 - \frac{3}{9} b \cdot \frac{h}{2} - b \cdot \frac{h}{2} \cdot \frac{1}{2}$$

$$\text{Área } Q = 48 - \frac{3}{8} \cdot 48^6 - \frac{48}{6}$$

$$\text{Área } Q = 48 - 18 - 8$$

$$\text{Área } Q = 22 \text{ Alternativa E}$$

(10)



$$\left(\frac{AD}{AB}\right)^2 = \frac{\text{Área } \triangle ADE}{\text{Área } \triangle ABC}$$

$$\left(\frac{AD}{8}\right)^2 = \frac{1}{2} \cdot \frac{\text{Área } \triangle ABC}{\text{Área } \triangle ABC}$$

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

$$2AD^2 = 64$$

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

$$AD^2 = 32$$

$$AD = \sqrt{32}$$

$$AD = \sqrt{2 \cdot 2^2 \cdot 2}$$

$$32 \quad | \quad 2$$

$$16 \quad | \quad 2$$

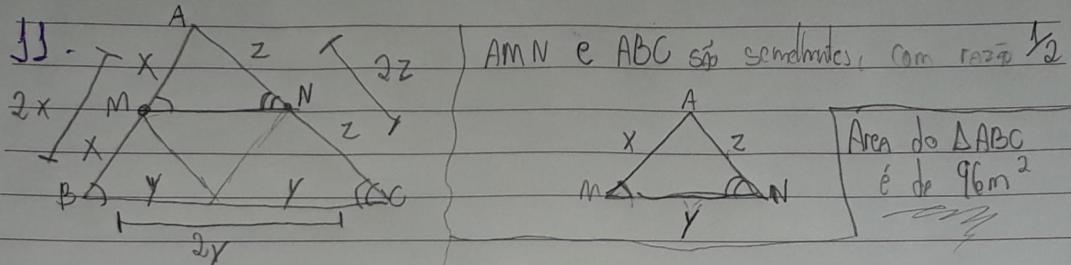
$$8 \quad | \quad 2$$

$$4 \quad | \quad 2$$

$$2 \quad | \quad 2$$

$$1 \quad | \quad 2 \cdot 2 \cdot 2$$

$$AD = \boxed{4\sqrt{2}} \quad \text{Alternativa A}$$



$$\frac{\text{Área } \triangle AMN}{\text{Área } \triangle ABC} = \left(\frac{1}{2}\right)^2$$

$$\rightarrow \text{Área } \triangle AMN = \frac{96}{4}$$

$$\text{Área } \triangle AMN = \frac{1}{4} \cdot \text{Área } \triangle ABC$$

$$\text{Área } \triangle AMN = 24 \text{ m}^2$$

$$\text{Área Quadrilátero } (BMNC) = 96 - 24$$

$$\text{Área Q.} = 72 \text{ m}^2$$