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Prismas/Paralelepípedo Reto Retângulo

Exercícios 1 até 3

01.

$$L = 4.3.X + 2x^2 = 80 \quad \Delta = 12^2 - 4.2.-(80)$$
$$80 = 12x + 2x^2 \quad \Delta = 144 + 320$$
$$2x^2 + 12x - 80 = 0 \quad \Delta = 784$$
$$x_1 = \frac{-12 + 28}{4} = 4 \quad x_2 = \frac{-12 - 28}{4} = -10$$

Resposta 4m //

02.

$$V = \text{Area} \cdot \text{Altura}$$
$$V = 24\sqrt{3} \cdot 2\sqrt{3}$$
$$V = 48\sqrt{3} \text{ cm}^2 //$$

03.

→ Raio 2

→ 6 retângulos
 $2\sqrt{3}$

Area Hexagonal

$$AP = \frac{6 \cdot 2^2 \sqrt{3}}{4}$$
$$AP = 6\sqrt{3}$$

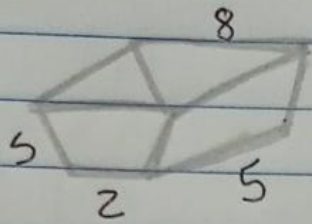
Area lateral

$$AL = 6 \cdot 2\sqrt{3}$$
$$AL = 12\sqrt{3}$$
$$At = 12\sqrt{3} + 2 \cdot 6\sqrt{3}$$
$$At = 12\sqrt{3} + 12\sqrt{3}$$
$$At = 24\sqrt{3} //$$

Resposta B

Exercício 4

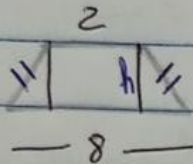
04



Calcular altura

$$h \neq 5$$

3



$$a^2 = b^2 + c^2$$

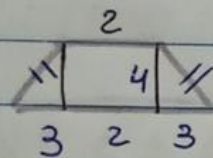
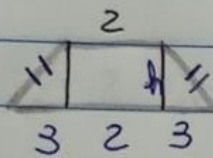
$$5^2 = h^2 + 3^2$$

$$25 = h^2 + 9 = 9V$$

$$h^2 = 25 - 9 = 16$$

$$h = \sqrt{16}$$

$$h = 4m$$



— 8 —

→ Area trapézio

$$At = \frac{(8+2) \cdot 4}{2}$$

$$x = At = 40$$

20

$$At = 20m^2$$

Volume do tanque

$$VP = AB \cdot h$$

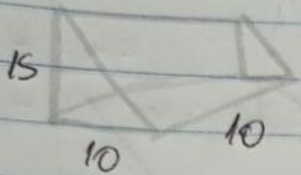
$$VP = 20 \cdot 5$$

$$VP = 100m^3$$

Resposta: D

Exercícios 5 e 6

05.



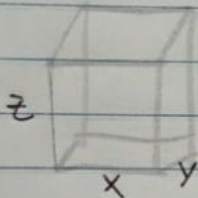
$$AB = \frac{10 \cdot 15}{2}$$

$$VP = 75 \cdot 10$$

$$VP = 750 \text{ cm}^2$$

$$AB = 75 \text{ cm}^2$$

06.



Calculo da Area

$$z = \frac{z \cdot x \cdot y}{z} = x$$

$$4x^2 = 2xy + 2xz + 2yz$$

$$4x^2 = 2(xy + xz + yz)$$

$$2x^2 = xy + xz + yz$$

$$2x^2 = 3xy + 2y^2$$

$$V = x \cdot y \cdot z$$

$$V = x \cdot x \cdot x$$

$$z$$

$$2y^2 + 3xy - 2x^2$$

$$V = \frac{x^3}{2}$$

$$\Delta = 3x^2 - 4 \cdot 2 - 2x^2$$

$$\Delta = 9x^2 + 16x^2 = 25x^2$$

Resposta C

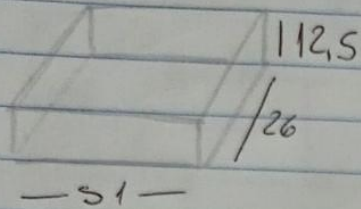
$$y_1 = \frac{-3x - 5x}{4} = -2x \quad y_2 = \frac{-3x - 5}{4} = -2x$$

Resposta C

Segunda lista

Exercícios 1 e 2

01.



Comprimento

largura

Altura

$$51 - 2 \cdot 0,5 = 50 \text{ cm} \quad 26 - 2 \cdot 0,5 = 25 \text{ cm} \quad 112,5 - 0,5 = 112 \text{ cm}$$

$$50/100 = 0,5 \text{ m} \quad 25/100 = 0,25 \text{ m} \quad 112/100 = 1,12$$

$$V = 0,5 \cdot 0,25 \cdot 1,12$$

$$V = 0,14$$

Resposta A

02.

Medida das arestas cubo

Diagonal de cubo

$$A_t = 6 \cdot x^2$$

$$D = x\sqrt{3}$$

$$72 = 6 \cdot x^2$$

$$x^2 = 12$$

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

$$D = 2\sqrt{3} \cdot \sqrt{3}$$

$$D = 2 \cdot 3$$

$$D = 6$$

Resposta B

Exercícios 3 e 4

03.

$$V = a^3$$

$$V = 50^3$$

$$V = 125000 \text{ cm}^3$$

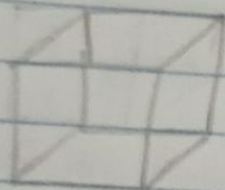
Passar para litros

$$125000 / 1000$$

$$V = 125 \text{ L}$$

Resposta A

04.



1m

$$1 \text{ m}^3 = 1000 \text{ litros}$$

$$1 / 1000 = 0,001 \text{ m}^3$$

Exercício 6

06.

3 retângulos

$h = 16$

$4\sqrt{3}$

$4\sqrt{3}$

$4\sqrt{3}$

$4\sqrt{3}$

$4\sqrt{3}$

$4\sqrt{3}$

$(4\sqrt{3})^2 \cdot \sqrt{3} \cdot h = 4\sqrt{3} \cdot 4\sqrt{3} \cdot 4\sqrt{3}$

$\frac{h}{4} = 4$

$h = 16$

Area de triângulo

$At = \frac{(4\sqrt{3})^2 \cdot \sqrt{3} \cdot 2}{4} + 3 \cdot 4\sqrt{3} \cdot 16$

$At = \frac{16 \cdot 3 \cdot \sqrt{3} \cdot 2}{4} + 192\sqrt{3} = 24\sqrt{3} + 192\sqrt{3}$

$At = 216\sqrt{3} \text{ cm}^2$

Resposta: D