

S T Q Q S S D

V V

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### Tarefa Básica - Cones

$$L = 2\pi r = 20\pi$$

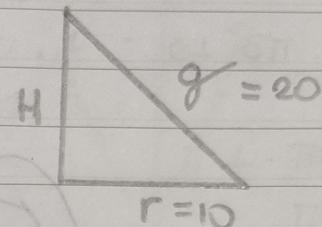
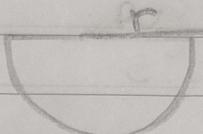
$$r = 10$$

$$10^2 + h^2 = 20^2$$

$$100 + h^2 = 400$$

$$h^2 = 300$$

$$h = 10\sqrt{3} \text{ cm}$$



$$2 - V = \frac{1}{3} \cdot \pi r^2 \cdot h$$

$$r^2 = 16$$

$$r = 4$$

$$g^2 = 4^2 + 12^2$$

$$g^2 = 16 + 144$$

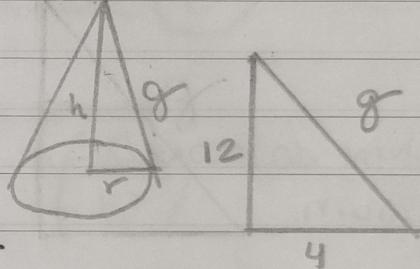
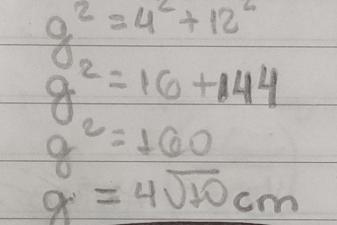
$$g^2 = 160$$

$$g = 4\sqrt{10} \text{ cm}$$

$$64\pi = \frac{1}{3} \cdot \pi r^2 \cdot 12$$

$$64\pi = 48\pi r^2$$

(B)



3-

$$h = r$$

$$\pi r^2 = 36\pi$$

$$V = \frac{1}{3} \cdot \pi r^2 \cdot h$$

$$A_0 = 36\pi$$

$$r^2 = 36$$

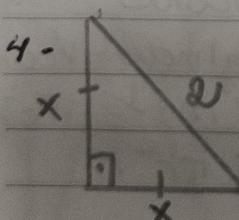
$$r = 6$$

$$V = \frac{1}{3} \cdot 36\pi \cdot 6$$

$$V = 72\pi \text{ cm}^3$$



(A)

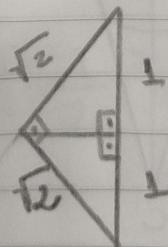


$$2^2 = x^2 + x^2$$

$$4 = 2x^2$$

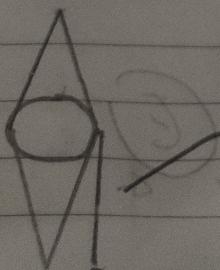
$$2 = x^2$$

$$\sqrt{2} = x$$



$$V = \frac{\pi r^2 \cdot h}{3}$$

$$V = \frac{\pi}{3}$$



$$V = \frac{\pi \cdot 1^2 \cdot 2}{3}$$

$$V = \frac{2\pi}{3} \text{ cm}^3$$

(E)

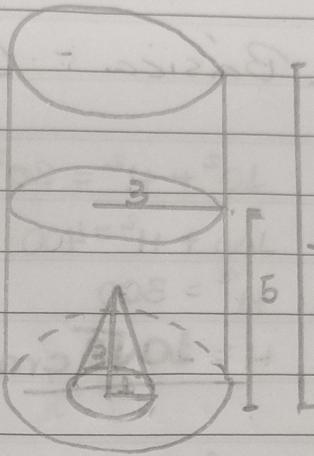
$$5 \cdot V = L \cdot V_{\text{cilindro}} - V_{\text{cone}}$$

$$V = \frac{1}{2} \cdot \pi \cdot 3^2 \cdot 10 - \frac{1}{3} \cdot \pi \cdot 1^2 \cdot 3$$

$$V = 45\pi - \frac{1}{3}\pi$$

$$\underline{\underline{V = 44\pi}}$$

(E)



### 6 - volume do cone

$$V = \frac{1}{3} \cdot A_B \cdot n$$

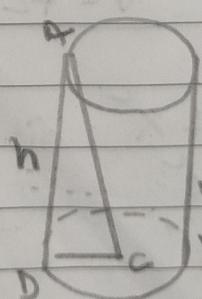
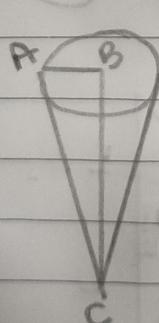
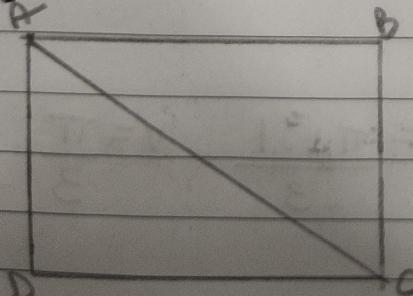
$$\frac{V_P}{V_C} = \frac{AD \cdot \frac{2}{3} \pi}{\frac{1}{3} \cdot AD \cdot \pi} = \underline{\underline{2}}$$

volume do prisma

(A)

$$V = A_B \cdot \frac{2}{3} \cdot n$$

(A)



$$V_{ABC} = V_{\text{cone}}$$

$$V_{ADC} = V_{\text{cilindro}} - V_{\text{cone}}$$

$$V_{ADC} = \pi r^2 \cdot h - \frac{1}{3} \cdot \pi r^2 \cdot h$$

$$V_{ADC} = \frac{2}{3} \pi r^2 \cdot h$$

$$\frac{V_{ABC}}{V_{ADC}} = \frac{\frac{1}{3} \pi r^2 \cdot h}{\frac{2}{3} \pi r^2 \cdot h}$$

$$\rightarrow \frac{V_{ABC}}{V_{ADC}} = \frac{\frac{1}{3} h}{\frac{2}{3} h} = \frac{1}{2}$$

(E)

# Tarefas Básica - Troncos.

1.

$$V = \frac{1}{3} \cdot \pi r^2 \cdot h$$

cada líquido  
ocupará  $12\pi \text{ cm}^3$

$$V = \frac{1}{3} \cdot \pi 3^2 \cdot 8$$

$$V = 24\pi$$

$$\frac{V}{v} = \frac{H^3}{n^3}$$

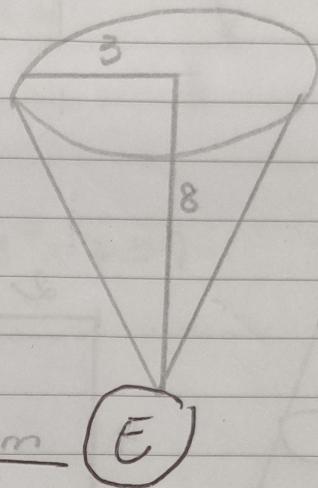
$$\frac{24}{12} = \frac{8^3}{n^3}$$

$$2n^3 = 512$$

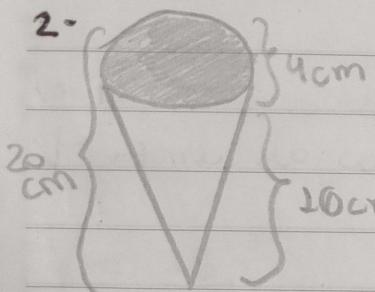
$$n^3 = 256$$

$$n = \sqrt[3]{256}$$

$$n = 4\sqrt[3]{4} \text{ cm}$$



2.



$$\frac{V_{c\text{ menor}}}{V_{c\text{ maior}}} = \left(\frac{16}{20}\right)^3 = \left(\frac{8}{10}\right)^3$$

$$\frac{V_{c\text{ menor}}}{V_{c\text{ maior}}} = \frac{512}{1000}$$

$$V_{espuma} = V_{c\text{ maior}} \% - V_{c\text{ menor}} \%$$

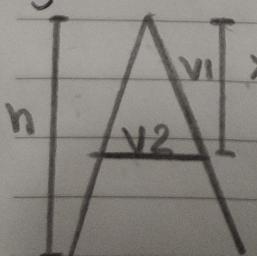
$$V_{espuma} = 100 \% - 51,2 \%$$

$$V_{espuma} = 48,8 \% \approx 50,0 \%$$

$$V_{c\text{ menor}} = 51,2 \%$$

(C)

3.



$$\frac{1}{2} = \left(\frac{x}{n}\right)^3 \rightarrow \frac{1}{2} = \frac{x^3}{n^3} \quad \frac{n^3}{x^3} = 2 \quad x = \frac{n}{\sqrt[3]{2}}$$

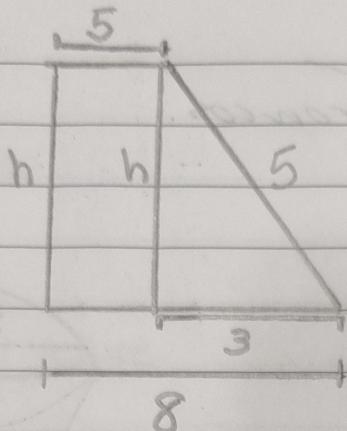
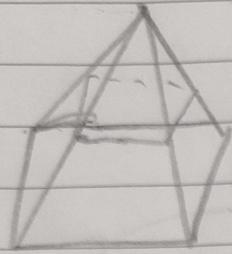
$$x = \frac{\sqrt[3]{n^3}}{\sqrt[3]{2}} \rightarrow x = \frac{n}{\sqrt[3]{2}} \quad x = \frac{n\sqrt[3]{2}}{2}$$

$$\frac{V2 - \frac{1}{2}}{V2}$$

$$x = \frac{n\sqrt[3]{4}}{2}$$

S T Q Q S S D

4-



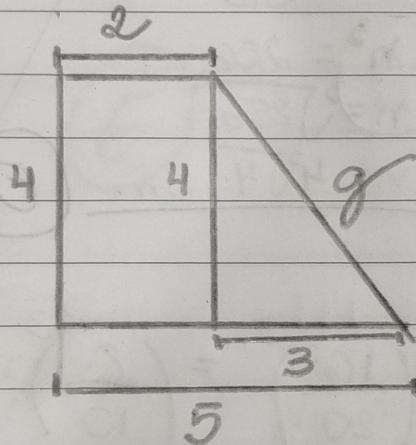
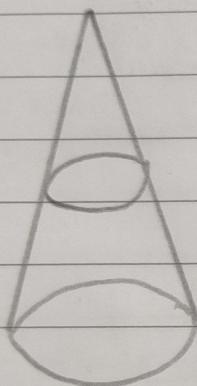
$$5^2 = 3^2 + h^2$$

$$25 - 9 = h^2$$

$$16 = h^2$$

$$\underline{4am = h}$$

5-



$$g^2 = 4^2 + 3^2$$

$$g^2 = 16 + 9$$

$$g^2 = 25$$

$$g = 5$$

$$AL = \pi (R+r) \cdot g$$

$$AT = ABm + Abm + AL$$

$$AL = \pi (5+2) \cdot 5$$

$$AT = \pi r^2 + \pi r^2 + 35\pi$$

$$AL = 35\pi$$

$$AT = \pi 5^2 + \pi 2^2 + 35\pi$$

$$\underline{\underline{AT = 64\pi}}$$

$$V = \frac{\pi h}{3} \cdot (R^2 + r^2 + R \cdot r) \Rightarrow V = \frac{4\pi}{3} \cdot (5^2 + 2^2 + 5 \cdot 2)$$

$$V = \frac{4\pi}{3} \cdot 39$$

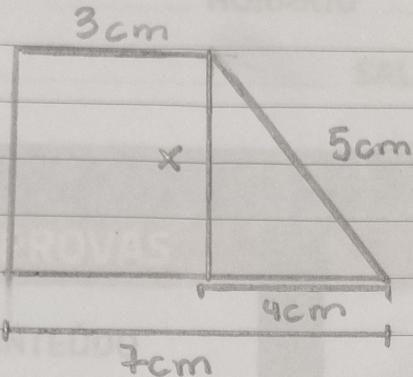
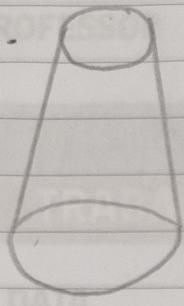
$$V = \frac{156\pi}{3}$$

$$\underline{\underline{V = 52\pi}}$$

MATERIAL

HORÁRIO

6-



$$5^2 = 4^2 + x^2$$

$$25 - 16 = x^2$$

$$9 = x^2$$

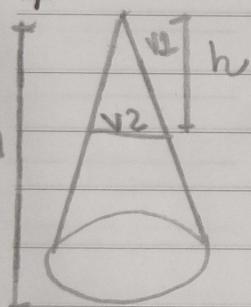
$$3 = x$$

$$V = \frac{\pi \cdot h}{3} \cdot (R^2 + r^2 + R \cdot r) \Rightarrow V = \frac{\pi \cdot 3}{3} \cdot (7^2 + 3^2 + 7 \cdot 3)$$

$$\underline{V = 79\pi \text{ cm}^3}$$

(D)

7-



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

$$\frac{1}{2} = \left(\frac{R}{H}\right)^2 \Rightarrow H^2 = 2R^2 \Rightarrow R^2 = \frac{H^2}{2}$$

$$R = \sqrt[3]{\frac{H^3}{2}} = \frac{H}{\sqrt[3]{2}} \Rightarrow R = \frac{H}{\sqrt[3]{2}} \cdot \frac{\sqrt[3]{2}}{\sqrt[3]{2}} \Rightarrow R = \frac{H \sqrt[3]{4}}{2}$$

(A)