

CTII 317

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

$$V = 24\pi \text{ cm}^3$$

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

$$\frac{24\pi}{\pi} = \frac{8^3}{h^3}$$

$$12\pi h^3 = 8^3$$

$$h^3 = \frac{8^3}{12}$$

$$h^3 = \frac{512}{12}$$

$$h^3 = \frac{128}{3}$$

$$h = \sqrt[3]{\frac{128}{3}} \approx 3,42 \text{ cm}$$

② $V = \left(\frac{16}{20} \right)^3$ $V - 64V = V'$
 $V = \left(\frac{4}{5} \right)^3$ $\frac{125}{125}$
 $V = 64$ $V' = \frac{64V}{125}$
 $V = 125$ $V' = 0,418V$ *Letra C*
 $V = 64V$
 125
 $V = 64V + V'$
 125

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$$⑤ q^2 = 4^2 + (5-2)^2$$

$$q^2 = 4^2 + 3^2$$

$$q^2 = 16 + 9$$

$$q^2 = 25$$

$$q = \sqrt{25}$$

$$q = 5$$

$$A1 = \pi \cdot 5(5+2)$$

$$A1 = 5\pi \cdot 7$$

$$A1 = 35\pi \text{ m}^2$$

$$AB = \pi \cdot 5^2$$

$$AB = 25\pi \text{ m}^2$$

$$Ab = \pi \cdot 2^2$$

$$Ab = 4\pi \text{ m}^2$$

$$At = AB + Ab + A1$$

$$At = 25\pi + 4\pi + 35\pi$$

$$At = 64\pi$$

$$V = \pi \cdot h \cdot (R^2 + R \cdot r + r^2)$$

$$V = \pi \cdot 4 \cdot (25 + 10 + 4)$$

$$V = \pi \cdot 4 \cdot 39$$

$$V = \pi \cdot 4 \cdot 13$$

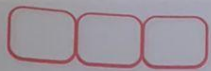
$$V = 52\pi$$

$$⑦ R = r \rightarrow r = Rh$$

$$V_{cg} = \frac{\pi R^2 h}{3}$$



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$$V_{cp} = \pi \left(\frac{R h}{n} \right)^2 h = \frac{\pi R^2 h^3}{3 n^2}$$

$$V + C = V_{cg} - V_{cp} = \frac{\pi R^2 n}{3} - \frac{\pi R^2 h^3}{3 n^2}$$

$$V + C = \frac{\pi R^2 (n^3 - h^3)}{3 n^2}$$

$$h = \frac{\sqrt[3]{n^3} \cdot \sqrt[3]{2^3}}{\sqrt[3]{2^3}} \rightarrow h = \frac{n \sqrt[3]{2}}{2}$$

Letra A

Esfera e suas partes

① C. Pois, como foi dito em aula, a esfera se dá a partir do semi-círculo.

$$\textcircled{2} V = \frac{4}{3} \pi R^3$$

$$V_{nao1} = \frac{4}{3} \pi R^3$$

$$V_{nao1} = \frac{4}{3} \pi$$

$$V_2 = \frac{4}{3} \pi R^3$$

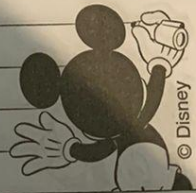
$$\frac{4}{3} \pi R^3 = 1.000.000 \cdot \frac{4}{3} \pi$$

$$R^3 = 10^6$$

$$R = \sqrt[3]{10^6}$$

$$R = 10^2$$

$$R = 100$$



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$$\textcircled{3} V_{\text{esfera}} = \frac{4}{3} \pi R^3 = \frac{4}{3} \pi R^3$$

$$V_{\text{cilindro}} = \pi r^2 h \quad \text{radio} = 2R; \text{altura} = 4R$$

$$" = \pi (2R)^2 \cdot 4R$$

$$" = \pi 4R^2 \cdot 4R$$

$$" = 16\pi R^3$$

$$\frac{4\pi R^3}{3}$$

$$\frac{4\pi R^3}{3} \cdot \frac{1}{16\pi R^3}$$

$$16\pi R^3$$

$$4\pi R^3 \cdot 1$$

$$3 \cdot 16\pi R^3$$

$$4$$

$$3 \cdot 16$$

$$4$$

$$1$$

Letra E

$$48$$

$$12$$

$$\textcircled{4} \frac{4}{3} \pi 1^3 + \frac{4}{3} \pi 2^3 = \pi \cdot r^2 \cdot 3$$

$$9r^2 = 36$$

$$r = 2 \text{ cm}$$

Letra B

$$\textcircled{5} V_{\text{cilindro}} = \pi \cdot 6^2 \cdot 1 = 36\pi$$

$$V_{\text{esfera}} = \frac{4}{3} \pi r^3$$

$$\frac{4}{3} \pi r^3 = 36\pi$$

$$3$$

$$4\pi r^3 = 108\pi$$

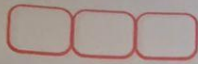
$$r^3 = 27$$

$$r = 3$$

Letra C



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$$⑥ V_{\text{esfera}} = \frac{4}{3} \pi r^3$$

$$288 \pi = \frac{4}{3} \pi r^3$$

$$\div 4 \quad \frac{4}{3} \pi r^3 = 864 \pi$$

$$r^3 = 216$$

$$r = \sqrt[3]{216}$$

$$r = 6$$

diâmetro =aresta do cubo

$$a = 2r$$

$$a = 2 \cdot 6$$

$$a = 12 \text{ cm}$$

Letra E

$$⑦ n^{\circ} \text{ de doces} + V_{\text{panela}}$$

$$= 50 \quad V_{\text{doces}}$$

$$n^{\circ} \text{ de doces} = \frac{16000 \pi}{32 \pi} = 16000 \cdot \frac{3}{32}$$

$$\frac{32 \pi}{3}$$

$$\frac{32 \pi}{3}$$

$$50 \cdot 3 = 150$$

Letra D

Panela

$$V_c = A_b \cdot h$$

$$V_c = \pi r^2 \cdot h$$

$$V_c = \pi \cdot 10^2 \cdot 16$$

$$V_c = \pi \cdot 100 \cdot 16$$

$$V_c = 1600 \pi$$

$$⑧ \text{ Letra D) } 2R = h = 3H$$



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Inscrição e Circunscritão de sólidos

② Superfície cubo = $6a^2$

Área S. cubo = $6a^2$

Raio esfera = $\frac{a\sqrt{2}}{2}$

$S_{\text{esfera}} = 4\pi r^2$

$S_{\text{esfera}} = 4\pi \left(\frac{a\sqrt{2}}{2}\right)^2$

$S_{\text{esfera}} = 4\pi \cdot \frac{a^2}{4}$

$\rightarrow S_{\text{esfera}} = \pi a^2$

$S_{\text{esfera}} = \pi a^2$

$S_{\text{cubo}} = 6a^2$

$S_{\text{esfera}} = \pi$ **Letra A**

$S_{\text{cubo}} = 6$

③ $V_{\text{esfera}} = \frac{4}{3}\pi r^3$; $V_{\text{cubo}} = a \cdot a \cdot a$; $R = \frac{a\sqrt{3}}{2}$

$\frac{4}{3} \cdot \pi \cdot \left(\frac{a\sqrt{3}}{2}\right)^3$

$\frac{\pi \cdot a^3 \sqrt{3}}{2}$

$\frac{4}{3} \cdot \pi \cdot \frac{a^3 \sqrt{3}}{8}$

$\frac{a^3 \sqrt{3} \pi}{2}$

$\frac{4}{3} \cdot \pi \cdot \frac{a^3 \sqrt{3}}{8}$

$\frac{\sqrt{3} \pi}{2}$ **Letra B**

