

# Beatriz Gonçalves Eletricista

## • Cones

$$\textcircled{1} \quad A = \frac{2\pi r}{2} = \frac{40\pi}{2} = \boxed{20\pi}$$

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

$$h^2 = 400 - 100$$

$$h^2 = 300$$

$$h = \sqrt{300} \rightarrow h = \boxed{10\sqrt{3}}$$

$$\textcircled{2} \quad \frac{A_B \cdot 32}{3} = 64\pi$$

$$A_B \cdot 32 = 192\pi$$

$$A_B = 16\pi$$

$$A_B = \pi \cdot r^2$$

$$16\pi = \pi \cdot r^2$$

$$r^2 = 16$$

$$r = \sqrt{16} \rightarrow r = 4$$

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

$$g^2 = 16 + 9$$

$$g = \sqrt{25}$$

$$g = 5$$

$$\textcircled{3} \quad g^2 = r^2 + h^2$$

$$③ g^2 = r^2 + 12^2$$

$$g^2 = r^2 + 144$$

$$g = \sqrt{r^2 + 144}$$

$$\sqrt{r^2 + 144} = 3r$$

$$(\sqrt{r^2 + 144})^2 = (3r)^2$$

$$r^2 + 144 = 9r^2$$

$$8r^2 = 144$$

$$V = \pi \cdot (3\sqrt{2})^2 \cdot \frac{12}{3}$$

$$r^2 = \frac{144}{8}$$

$$V = \pi \cdot 9 \cdot 2 \cdot \frac{12}{3}$$

$$r = \sqrt{18}$$

$$r = \pm 3\sqrt{2}$$

$$V = \pi \cdot 2 \cdot \frac{16}{3}$$

$$V = 32\pi$$

$$\textcircled{5} \quad V = \pi \cdot r^2 \cdot h$$

$$V = \pi \cdot 3^2 \cdot 5$$

$$V = 45\pi$$

Cilindros

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

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

Cone

$$45\pi - \pi = 44\pi \rightarrow \text{resta}$$

\textcircled{6} Volume Cone

$$V_C = \frac{1}{3} \cdot A_B \cdot h$$

Volume Prism

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

$$\frac{V_f = A_B \cdot \frac{2}{3} \cdot h}{A_B \cdot \frac{1}{3} \cdot h} = 2 \rightarrow \boxed{V_f = 2} =$$

$$\textcircled{4} \quad V_{ABD} = \frac{\pi \cdot l^2 \cdot l}{3} \rightarrow \frac{\pi l^3}{3}$$

$$V_{BCD} = \pi \cdot l^3 - \frac{\pi l^3}{3}$$

$$\frac{V_{ABD}}{V_{BCD}} = \frac{\pi \cdot l^3 \cdot 3}{3 \cdot 2 \cdot \pi \cdot l^3} = \frac{1}{2}$$

$$\frac{V_{BCD}}{3} = \frac{2\pi \cdot l^3}{3}$$

• Troncos

$$\textcircled{1} \quad V = \frac{\pi \cdot r^2 \cdot h}{3} \rightarrow \frac{\pi \cdot 3^2 \cdot 8}{3} \rightarrow 24\pi \text{ cm}^3 \rightarrow V = 12\pi \text{ cm}^3$$

$$24\pi = 8^3$$

$$\frac{h^3}{2} = 576 \rightarrow h = \sqrt[3]{256}$$

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

$$h = 2 \cdot 2 \sqrt[3]{3}$$

$$h = 4\sqrt[3]{3}$$

$$\textcircled{2} \quad \frac{\sqrt{V_{\text{líquido}}}}{\sqrt{V_{\text{total}}}} = \left( \frac{16}{20} \right)^3 = \left( \frac{8}{10} \right)^3 = \frac{512}{1000} = \frac{51,2}{100} = 51,2\%$$

⇒ das  $\sqrt{V_{\text{total}}}$

$$\sqrt{V_{\text{espuma}}} + \sqrt{V_{\text{líquido}}} = 100\%$$

$$x + 51,2 = 100$$

$$x = 100 - 51,2$$

$$\sqrt{V_{\text{espuma}}} = 48,8\% \text{ do } \sqrt{V_{\text{total}}}$$