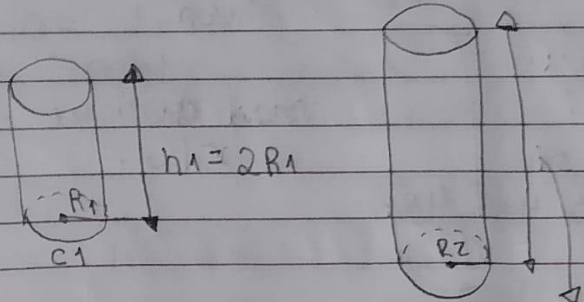


LISTA CILINDROS

① $V_1 = \pi \cdot 100 \cdot \frac{1}{5} \cdot 40$ $V_1 = V_2 \rightarrow 800\pi = \pi \cdot 25 \cdot h$ \heartsuit
 $800 = 25 \cdot h$
 $h = \frac{800}{25} = 32 \text{ cm}$

$V_1 = \pi \cdot 20 \cdot 40$
 $V_1 = 800\pi \text{ cm}^3$

② 
 $h_1 = 2R_1$

$800 = 25h$
 $25h = 800 : 25$
 $h = 32$

$\frac{V_1}{V_2} = \frac{1}{27} \rightarrow \frac{\pi(R_1)^2 \cdot h_1}{\pi(R_2)^2 \cdot h_2} = \frac{1}{27}$ $h_2 = 8 \cdot 2R_2 = 16R_2$
 $= \frac{(R_1)^2 \cdot 2R_1}{(R_2)^2 \cdot 16R_2} = \frac{1}{27}$
 $= \frac{(R_1)^3}{(R_2)^2 \cdot 8} = \frac{1}{27}$
 $= \frac{R_1}{R_2} = \frac{2}{3}$

③ $2\pi \cdot 3r \cdot h = 2\pi \cdot r \cdot h + 2\pi r^2 = \left(\begin{array}{l} \pi \cdot r^2 \cdot h = 16\pi = \\ = h = 16 \end{array} \right) \rightarrow \text{Chamon de (II)}$
 $= 3\pi \cdot r \cdot h = 2\pi \cdot r \cdot h + 2\pi r^2 =$
 $= \pi \cdot r \cdot h = 2\pi \cdot r^2 =$
 $= h = 2 \cdot r \text{ (Chamon de (I))}$

I em II
 $16 = 2r$
 $r^2 =$
 $= 2r^3 = 16$
 $= r = \sqrt[3]{8} = 2$

$\cdot \text{logo} \rightarrow \pi \cdot r^2 \cdot h = 16\pi =$
 $= \pi \cdot 4 \cdot h = 16\pi =$
 $= h = \frac{16}{4} = 4$

$$\begin{aligned} \textcircled{4} \quad V &= \pi \cdot r^2 \cdot h \rightarrow \pi \cdot (r^2 + 12) \cdot 4 = \pi \cdot r^2 \cdot (4 + 12) \\ V &= \pi \cdot r^2 \cdot 4 \quad \pi \cdot (r^2 + 24r + 144) \cdot 4 = \pi \cdot r^2 \cdot 16 \\ &\quad \pi \cdot (4r^2 + 96r + 576) = \pi \cdot 16 \cdot r^2 \end{aligned}$$

Simplificando tudo por π :

$$4r^2 + 96r + 576 = 16r^2$$

$$16r^2 - 4r^2 - 96r - 576 = 0$$

$$12r^2 - 96r - 576 = 0 \quad (:12)$$

$$r^2 - 8r - 48 = 0 \quad \checkmark$$

$$x = \frac{8 \pm 16}{2} = 12$$

$$x = \frac{8 - 16}{2} = -4$$

$$\textcircled{5} \quad R = 20 \text{ cm}$$

$$h = 0,8 \text{ mm}$$

convertendo

$$h = 0,08 \text{ cm}$$

Área da Base:

$$S = \pi \cdot 20^2$$

$$S = 400\pi \text{ cm}^2$$

$$V = S \cdot h$$

$$V = (400\pi) \cdot 0,08$$

$$V = 32\pi$$

$$V = 100,530... \text{ cm}^3$$

$$V \approx 100,5 \text{ cm}^3$$

LISTA PIRÂMIDES

$$\textcircled{1} Ab = b \cdot h$$

$$Ab = x \cdot 2x$$

$$Ab = 2x^2 \text{ cm}^2 \text{ + área da base}$$

$$V = \frac{Ab \cdot h}{3}$$

$$V = 48 \text{ cm}^3$$

$$Ab = 2x^2 \text{ cm}^2$$

$$h = 8 \text{ cm}$$

↓

$$48 = \frac{2x^2 \cdot 8}{3}$$

3

$$16x^2 = 48 \cdot 3$$

$$x^2 = \frac{48 \cdot 3}{16}$$

16

$$x^2 = 3 \cdot 3 = 9$$

$$x = 3$$

tilibra

② Por pitágoras:

$$x^2 = 30^2 + 40^2$$

$$x^2 = 900 + 1600$$

$$x^2 = 2500$$

$$x = \sqrt{2500}$$

$x = 50 \rightarrow$ altura da pirâmide

área da pirâmide

$$b \cdot h = 80 \cdot 50 = 2000$$

$$\frac{2}{2}$$

$$4 \text{ faces} = 4 \cdot 2000 = 8000$$

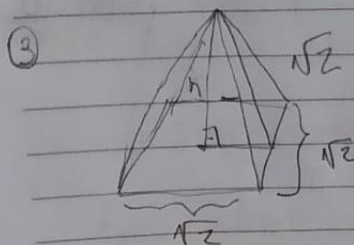
área lateral da pirâmide

área Total

$$8000 + 6400 = 14400$$

área da base quadrado:

$$80 \cdot 80 = 6400$$



$$(\sqrt{2})^2 = h^2 + \left(\frac{\sqrt{2}}{2}\right)^2 \quad \left\{ \begin{array}{l} \text{outra forma:} \\ AT = \frac{\sqrt{2} \cdot \sqrt{2}}{2} \end{array} \right.$$

$$2 = h^2 + 1$$

$$h^2 = 1$$

$$h = 1$$

$$AT = \frac{2}{2} = 1 \text{ cm}$$

$$\textcircled{4} \quad Ab = \frac{6 \cdot a^2 \sqrt{3}}{4}$$

$$h = b \sqrt{3}$$

$$V = \frac{1}{3} \cdot Ab \cdot h$$

$$V = \frac{1}{3} \cdot \frac{6 \cdot a^2 \sqrt{3}}{4} \cdot b \sqrt{3}$$

$$V = \frac{3 \cdot a^2 \cdot b}{2}$$

$$\textcircled{5} \quad V = Ab \cdot h \rightarrow V = \frac{6 \cdot 4^2 \sqrt{3}}{4} \cdot \frac{6 \sqrt{3}}{3}$$

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

$$V = 6 \cdot 4 \cdot 3 \cdot 2$$

$$V = 144 \text{ cm}^3$$

⑥ Área da base da pirâmide

$$A_b = 6 \cdot 12 \sqrt{3} / 4$$

$$A_b = \frac{6 \sqrt{3}}{4}$$

$$A_b = \frac{3 \sqrt{3}}{2} \text{ cm}^2$$

Volume da pirâmide

$$V = \left(\frac{1}{3} \right) \cdot 8 \cdot \frac{3 \sqrt{3}}{2}$$

$$V = 4 \sqrt{3} \text{ cm}^3$$

⑦ Pirâmide

Prisma

Razão

Área da base:

Área da base:

$$A_b = (2 \cdot a)^2 =$$

$$A_b = a^2$$

$$4a^2 \cdot h_1 = a^2 \cdot h_2$$

$$A_b = 4a^2$$

Volume:

3

Volume:

$$V = a^2 \cdot h_2$$

$$= \frac{h_1}{h_2} = \frac{3 \cdot a^2}{4 \cdot a^2} =$$

$$V = \frac{4a^2 \cdot h_1}{3}$$

$$= \frac{3}{4}$$

3

⑧ Área Total

Altura

$$A_T = a^2 \sqrt{3}$$

$$h = a \sqrt{6} / 3$$

$$6 \sqrt{3} = a^2 \sqrt{3}$$

$$h = \sqrt{6} \cdot \sqrt{6} / 3$$

$$a = \sqrt{6}$$

$$h = \sqrt{36} / 3$$

3

$$h = \frac{6}{3} = 2 \text{ cm}$$

3