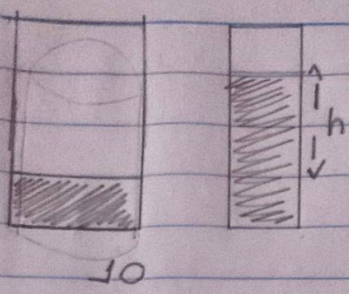
1



$\frac{1}{5}$ de sua capacidade

altura de 40cm

$V = \pi \cdot 10^2 \cdot 40 = 4000\pi \text{ cm}^3$

$V_2 = \frac{1}{5} \cdot 4000$

$\pi \cdot 5^2 \cdot h = 800 \qquad h = \frac{800\pi}{25\pi} = 32$

2

$\frac{V_1}{V_2} = \frac{1}{27}$

$\frac{\pi \cdot (R_1)^2 \cdot 2 : 2 \cdot (R_1)}{\pi \cdot (R_2)^2 \cdot 16 \cdot (R_2) : 2}$

$8 \cdot 2 \cdot (R_2) = 16 (R_2)$

$\frac{1}{27}$

$\frac{(R_1)^3}{(R_2)^3} = \frac{8}{27}$

3

$\sqrt[3]{\frac{(R_1)^3}{(R_2)^3}} = \sqrt[3]{\frac{8}{27}} \qquad \frac{(R_1)}{(R_2)} = \frac{2}{3}$

③

150%

$RII = 150\% \cdot RI$

$\frac{150}{100} = \frac{3}{2} RI$

$2\pi \cdot \frac{3}{2} \cdot (RI) \cdot h = 2\pi \cdot (RI) \cdot h + 2\pi \cdot (RI)^2$

$3\pi \cdot (RI) \cdot h - 2 \cdot \pi \cdot (RI) \cdot h = 2\pi \cdot (RI)^2$

$1\pi \cdot (RI) \cdot h = 2\pi \cdot (RI)^2$

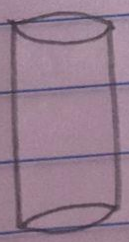
$h = \frac{16}{(RI)^2} = \frac{16}{2^2 = 4}$

$h = \frac{16\pi}{\pi \cdot (RI)^2}$

$\pi \cdot (RI) \cdot \frac{16}{(RI)^2} = 2\pi \cdot (RI)^2 = \frac{16\pi}{RI} = 2\pi \cdot (RI)^2$

$h = \frac{16}{(RI)^2} = \frac{16}{4} = 4$

④



$\pi \cdot R^2 \cdot 16 = \pi (R+12)^2 \cdot 4$

$(R+12)^2 = \frac{\pi \cdot R^2 \cdot 16}{\pi \cdot 4}$

$R^2 + 24R + 144 = 4R^2 \rightarrow R^2 - 8R - 48 = 0$

$12 + -4 = \frac{-(-8)}{1} = 8 = 12$

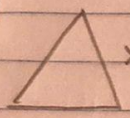
⑤ $V = \hat{\imath}\imath \cdot 20^2 (h + 0{,}08) = \tilde{\imath}\imath \cdot 20^2 \cdot h$

$V = \tilde{\imath}\imath \cdot 400 \cdot \frac{8}{100} = 32\tilde{\imath}\imath$ ↳ $V = 3 \cdot 3{,}14 \cdot 100{,}5\ cm^3$

⑤ $V = \hat{\imath}\imath \cdot 20^2 (h + 0{,}08) = \tilde{\imath}\imath \cdot 20^2 \cdot h$

$V = \tilde{\imath}\imath \cdot 400 \cdot \frac{8}{100} = 32\tilde{\imath}\imath$ ↳ $V = 3 \cdot 3{,}14 \cdot 100{,}5\ cm^3$

— " —

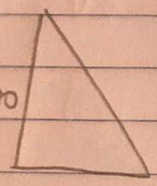
① 

$h = 8$

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

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

$x = 3$

② 

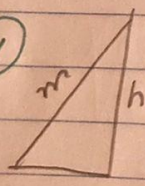
$m^2 = 30^2 + 40^2$

$m^2 = 900 + 1600$

$m = \sqrt{2500} = 50$

$A_T = \frac{4 \cdot 80 \cdot 50}{2} + 80 \cdot 80$

$14400\ mm^2$

④ 

$\frac{12}{2}$

$h^2 = \frac{3}{2} - \frac{2^2}{4:2} \rightarrow h^2 = \frac{2}{2} = 1$

$h = \sqrt{1} = 1$

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

$V = \frac{a^2 \cdot a^2 \cdot 6 \cdot (\sqrt{3})^2}{4 \cdot 2} = \frac{3a^2 \cdot 6}{2}\ cm^3$

⑤ $\frac{1}{3} \cdot 6 \cdot \frac{4 \cdot 4\sqrt{3}}{4} \cdot 6\sqrt{3} = 48 \cdot 3 = 144\ cm^3$

⑥ $\omega = 1$

$\frac{1}{3} \cdot 6 \cdot \frac{1^2\sqrt{3}}{4} \cdot 8 = 2 \cdot 2 \cdot \sqrt{3} = 4\sqrt{3}\ cm^3$

7- $\frac{1}{3} \cdot 2a \cdot 2a \cdot hpi$

$a \cdot a \cdot hpir$

$\frac{hpi}{hpir} = \frac{a^2 \cdot 3}{4 \cdot a^2} = \frac{3}{4}$