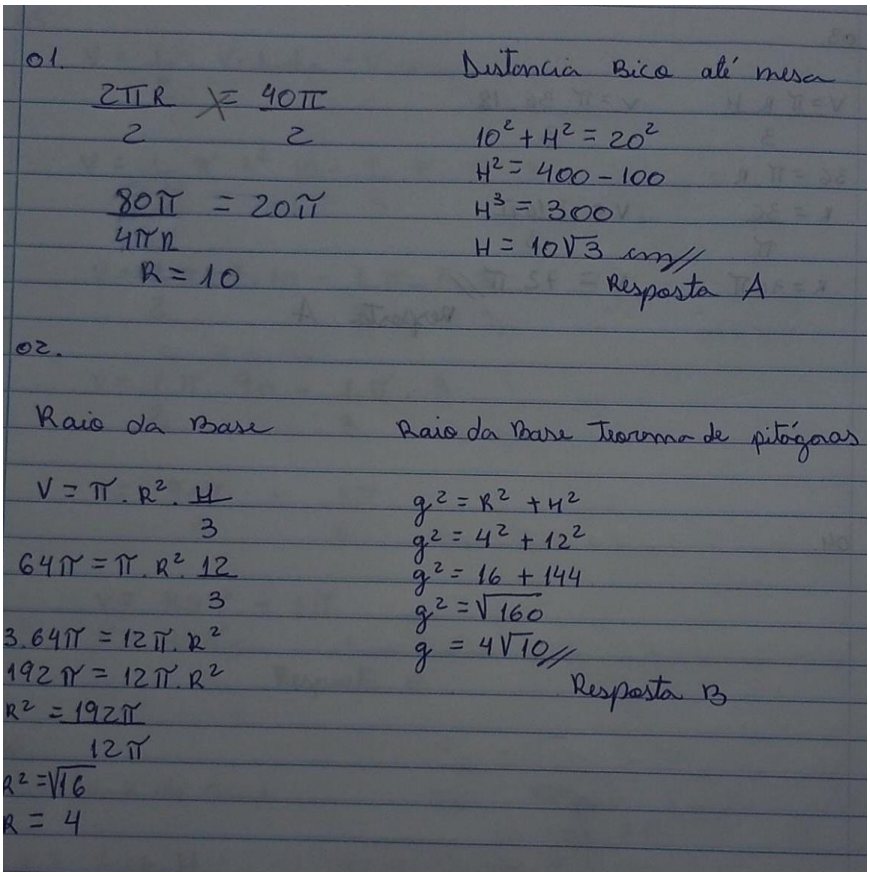
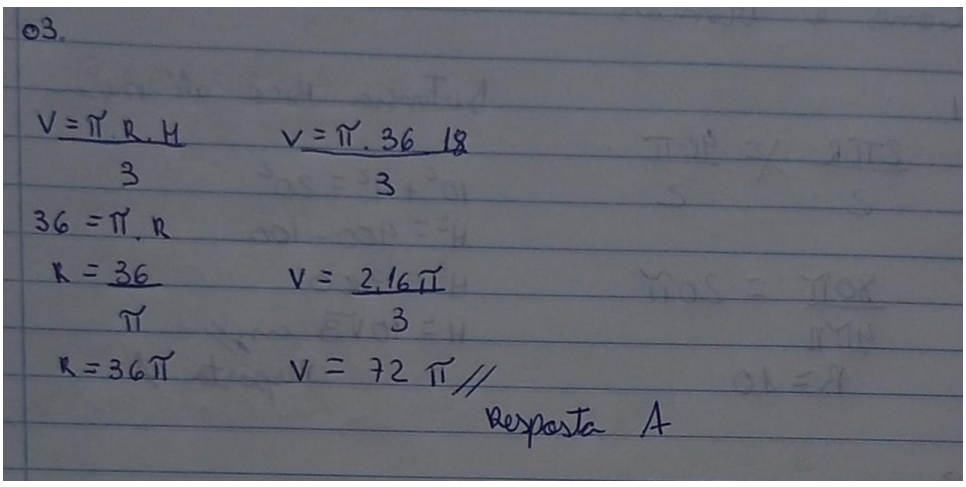
Nome: Mikaela dos Santos Ferreira Pontuário:1890336 CTII-348

Cones e Troncos





Data / /
S T Q Q S S

05.

$V = \frac{1}{2} \cdot V_{cilindro} - V_{cone}$

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

$V = \frac{1}{2} \pi \cdot 9 \cdot 10 - \frac{1}{3} \pi \cdot 1 \cdot 3$

$V = \frac{1}{2} \pi \cdot 90 - \frac{1}{3} \pi \cdot 3$

$V = \frac{90\pi}{2} - \frac{3\pi}{3}$

$V = 45\pi - 1\pi$

$V = 44\pi //$

Resposta E

06.

Volume do cone

$V_1 = \frac{1}{3} A_b \cdot H$

Volume Prisma + 2/3 do cone

$V_2 = A_b \cdot \frac{2}{3} h$

Razão

$\frac{V_1}{V_2} = \frac{A_b \cdot \frac{2}{3} h}{\frac{1}{3} A_b \cdot h}$

$\frac{1}{3} \div \frac{2}{3}$

$\frac{6}{3} = 2 //$

Resposta A

07.

$$V_{ABC} = \frac{\pi 1^2 . 1}{3} = \frac{\pi 1^3}{3}$$

$$V_{BC} = \frac{2\pi 1^3}{3}$$

$$\frac{V_{ABC}}{V_{BC\Delta}} = \frac{\pi 1^3}{3} \cdot \frac{3}{2\pi 1^3} = \frac{1}{2} //$$

Resposta E

01.

$$V_g = \frac{1}{3} \pi . 3 . 3 . 8 = 24\pi \, cm^3$$

$$V_P = \frac{1}{2} . V_g = \frac{1}{2} . 24\pi = 12\pi \, cm^3$$

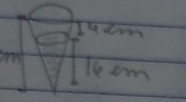
$$\frac{V_P}{V_g} = \left(\frac{x}{8}\right)^3 = \frac{12\pi}{24\pi} = \frac{x^3}{8^3}$$

$$= x^3 = \frac{8 . 8^2}{8} = \sqrt[3]{x^3} = \sqrt[3]{4 . 2^3 2^3}$$

$$x = 4\sqrt[3]{4} \, cm //$$

Resposta E

02.



VL = Vala líquida
VT = Vala total
VE = Vala espuma

$$\frac{V_L}{V_T} = \left(\frac{16}{20}\right)^3$$

$$\frac{V_L}{V_T} = \left(\frac{8}{10}\right)^3$$

$$\frac{V_L}{V_T} = \frac{512}{1000}$$

$$\frac{V_L}{V_T} = \frac{51,2}{100}$$

$$\frac{V_L}{V_T} = 51,2\%$$

$V_L = 51,2\%$ de V_T

$V_E + V_L = 100\%$ de V_T

$V_E = 100\%$ de $V_T - 51,2\%$ de V_T

$V_E = 48,8\%$ de V_T //

Resposta C

03.

$R = \frac{h\,R}{X}$ $\qquad V = Pi \cdot R^2 \cdot X$

$V_T = \pi \cdot R^2 \cdot h - \pi \cdot R^2 \cdot X$

$\pi = \left(\frac{h/R}{X}\right)^2 \cdot h - \pi \cdot R \cdot X$

$V = \frac{h^3\sqrt{4}}{2}$ //

04.

$\left(\frac{B+b}{2}\right) \cdot h = 195\ cm^3$

$A_1 = 4.195$ $\qquad V = \frac{2800}{400}$

$A_1 = 780$

$A_2 = 20.20$ $\qquad V = 4\ cm$ //

$A_2 = 400$

A_t 10.10

$A_t = 100$

$h^2 = 5^2 + 13^2$

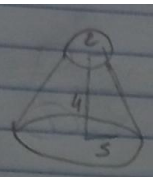
$h^2 + 25 = 169$

$h^2 = 169 - 25$

$h^2 = \sqrt{144}$

$h = 12$

05.



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

$g^2 = 16 + 9$

$g^2 = \sqrt{25}$

$g = 5$

$V = \frac{\pi 4}{3} \cdot (5^2 + 10 + 2^2)$

$V = \frac{4\pi}{3} \cdot (25 + 10 + 4)$

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

$V = \frac{156\pi}{3}$ $\quad V = 52\pi$

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

$AL = 35\pi$

$AB = \pi 5^2 = 25\pi$

$Ab = \pi 2^2 = 4\pi$

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

$A = 64\pi$

06.

Altura tronco pitágoras

$5^2 = 4^2 + h^2$

$h^2 = 25 - 16$

$h^2 = \sqrt{9}$

$h = 3$

Volume do Tronco

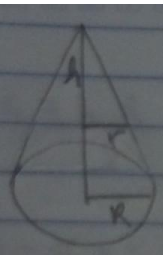
$V = \frac{\pi 3}{3} \cdot (7^2 + 21 + 3^2)$

$V = \pi \cdot 49 + 21 + 9$

$V = 79\pi$

Resposta D

07.



$$\frac{V_2}{V_1} = \frac{1}{2}$$

$$\frac{1}{2} = \left(\frac{h}{H}\right)^3$$

$$\frac{1}{2} = \frac{h^3}{H^3}$$

$$H^3 = 2h^3 \Rightarrow h = \frac{\sqrt[3]{H^3}}{\sqrt[3]{2}}$$

$$h^3 = \frac{H^3}{2}$$

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

$$h = \frac{H\sqrt[3]{4}}{2}$$

// Resposta A