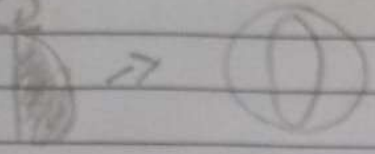
CREATE IT.

Tarefa Básica

1) 360°



Rotação de uma circunferência em torno do diâmetro

alternativa (C)

2)

$V_E = \frac{4\pi r^3}{3}$ → $1000000 \cdot \frac{4\pi}{3} = \frac{4\pi r^3}{3}$

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

$1000000 = r^3$

$r = \sqrt[3]{1000000}$

100 $r = 100$

3)

$V_E = 4\pi R^3$

$V_C = \pi (2R)^2 \cdot R$

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

$\frac{\frac{4\pi R^3}{3}}{\pi 2R^2 \cdot 4R}$ → $\frac{4\pi R^3}{\pi 4R^2 \cdot 12R} =$

$= \frac{4R^3}{48R^3}$ → $\frac{4}{48} \div 4$ → $\frac{1}{12}$

alternativa (E)

CREATE IT.

4)

$V_{E1} = \frac{4\pi r^3}{3} = \frac{4\pi}{3}\ cm^3$

$V_{E2} = \frac{4\pi 2^3}{3} = \frac{32\pi}{3}\ cm^3$

$V_T = \frac{32\pi}{3} + \frac{4\pi}{3} = \frac{36\pi}{3} \Rightarrow 72\pi\ cm^3$

$V_C = \pi r^2 . h$

$72\pi = \pi r^2 . 3$

$r^2 = \frac{72}{3}$

$r = \sqrt{4}$

alternativa (B)

$r = 2\ cm$

5) $V_C = \pi 6^2 . 7$

$V_C = 36\pi\ cm^3$

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

alternativa (C)

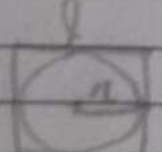
$4\pi r^3 = 108\pi$

$r^3 = 27$

$r = \sqrt[3]{27}$

$r = 3\ cm$

6)



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

$4r^3 = 864$

$r^3 = 216$

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

$r = 6\ cm$

$l = 2r$

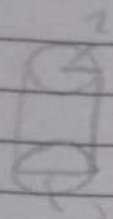
$l = 2 . 6$

$l = 12\ cm$

alternativa (E)

NSK

CREATE IT.

7) 

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

$V_c = 1600$

$V_d = \frac{4\pi 2^3}{3}$

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

$1600\pi = x \cdot \frac{32\pi}{3}$

$4800\pi = 32\pi x$

$32x = 4800$

$x = \frac{4800}{32}$

alternativa (D)

$x = 150$ doces

8) $\frac{4\pi R^3}{3} = \pi R^2 H = \frac{\pi R^2 h}{3}$

$\frac{4\pi R^3}{3} = \pi H = \frac{\pi R}{3}$ → $\frac{2R}{3} = H = \frac{h}{3}$

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

$2R = 3H = h$

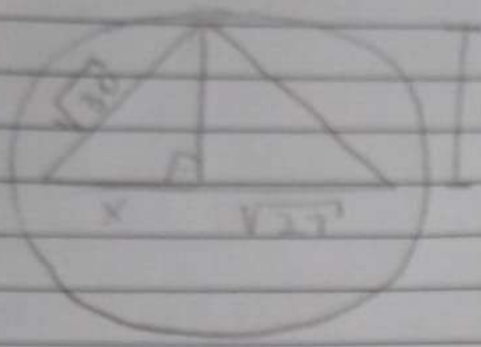
$2R = 3H = h$

alternativa D)

NSK

CREATE IT.

7]



$A_E = 4\pi r^2$

$100\pi = 4\pi r^2$

$4r^2 = 100$

$r = 25$

$r = \sqrt{25}$

$r = 5$ m

generatriz $= \sqrt{30}$ m

$(\sqrt{30})^2 = 3^2 + x^2$

$30 = 9 + x^2$

$x^2 = 27$

$x = \sqrt{27}$

} m

$(\sqrt{30})^2 = h^2 + (\sqrt{3})^2$

$30 = h^2 + 27$

$h^2 = 9$

$h = \sqrt{9}$

$h = 3$ m

2] $A_E = 4\pi r^2$

$A_C = 6\ell^2$

a = aresta

$r = a/2$

$A_E = 4\pi \left(\frac{a}{2}\right)^2$

$A_E = \pi a^2$

$\frac{A_E}{A_C} = \frac{\pi \cancel{a^2}}{6\cancel{a^2}} \rightarrow \frac{\pi}{6}$

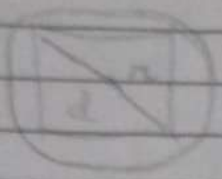
$A_C = 6\ell^2$

$A_C = 6a^2$

alternativa (A)

CREATE IT.

31



$d_c = a\sqrt{3}$

$2r = a\sqrt{3}$

$a = \frac{2r}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$

$a = \frac{2r\sqrt{3}}{3}$

$V_c = a^3$

$V_c = \left(\frac{2r\sqrt{3}}{3}\right)^3$

$V_c = \frac{8r^3 \cdot 3\sqrt{3}}{27}$

$V_c = \frac{24r^3\sqrt{3}}{27}$

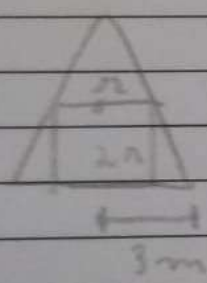
$V_E = \frac{4\pi r^3}{3}$

$\frac{\frac{4\pi r^3}{3}}{\frac{24r^3\sqrt{3}}{27}} \rightarrow \frac{108\pi r^3}{72r^3\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} \rightarrow \frac{108\pi\sqrt{3}}{72 \cdot 3} \rightarrow$

$\rightarrow \frac{108\pi\sqrt{3}}{216} \rightarrow \frac{1\pi\sqrt{3}}{2} = \frac{\sqrt{3}\pi}{2}$

alternativa (B)

41



12m

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

$V_c = \pi r^2 \cdot (2r)$

$V_c = \pi r^2 \cdot (2 \cdot 2)$

$V_c = 4\pi \cdot 4$

$V_c = 16\pi\ m^3$

$16\pi m^3$

$\frac{2r}{3-r} = \frac{12}{3}$

$6r = 36 - 12r$

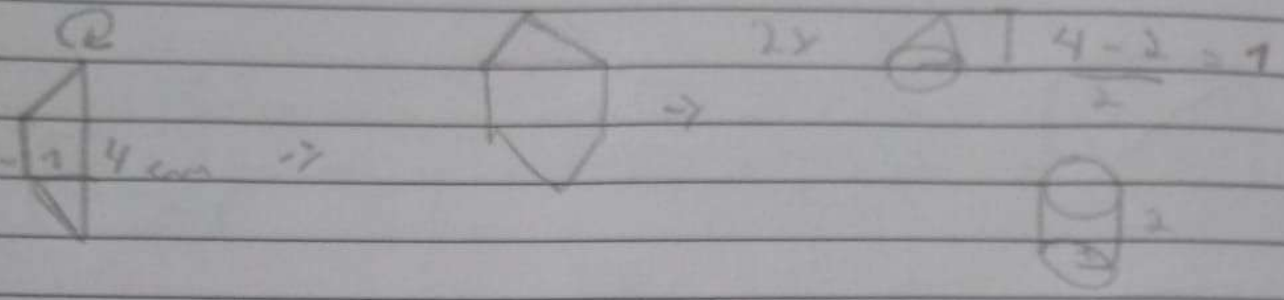
$18r = 36$

$r = 2m$

NSK

CREATE IT.

5)



$V_{cone} = \frac{\pi r^2 \cdot 1}{3} = \frac{\pi}{3} \rightsquigarrow \frac{2\pi}{3}$

$V_{cilindro} = \pi r^2 \cdot 2 = 2\pi$

$V_T = \frac{2\pi}{3} + 2\pi$

$V_T = \frac{2\pi + 6\pi}{3}$

$V_T = \frac{8\pi}{3}\ cm^3$