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Tarefa básica

1) CompS = 2π / 2 > 2πr / 2 = 2πr | g = 2.10
CompC = 2πr 20 / 2 = r = 10cm | g = 20cm

$20^2 = h^2 + 10^2$
$400 = h^2 + 100$
$400 - 100 = h^2$
$h^2 = 300$
$h = \sqrt{300} = 10\sqrt{3}$ cm

letra A

2) ~~64π~~ = (1/3) . ~~π~~ . r^2 . 12
$64 = 12r^2/3$
$r^2 = 64/4$
$r^2 = 16$
$r = \sqrt{16} = 4$cm

$g^2 = 12^2 + 4^2$
$g^2 = 144 + 16$
$g^2 = 160$
$g = \sqrt{160} = 4\sqrt{10}$ cm

letra B

3) A = 36π cm^2
$36\pi = \pi R^2$
$R = \sqrt{36} = 6$cm

V = 216π / 3
V = 72π cm

$V = (1/3) . \pi . 6^2 . 6$

letra A

4) $2L^2 = 4$
$L = \sqrt{2}$ cm
$(\sqrt{2})^2 = 1^2 + x^2$
$x^2 = 2 - 1$
$x = 1$cm

$V = 2 . (1/3) . \pi . 1^2 . 1$
$V = 2\pi / 3$

letra E

data • •

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5) Faremos cilindro - cone

$V = \pi \cdot 3^2 \cdot 5 - (1/3)\ \pi \cdot 1^2 \cdot 3$

$V = 45\pi - (3/3)\pi$

$V = 45\pi - \pi = 44\pi$

letra E

6) $C = (1/3)\ \pi r^2 h$

$P = \pi r^2 (2/3) h$

Razão entre os dois:

$$\frac{\pi r^2 (2/3) h}{(1/3)\pi r^2 h} = \frac{\frac{2}{3}}{\frac{1}{3}} = \frac{6}{3} = 2$$

letra A

7) $V_{cone} = (1/3)\ \pi \cdot x^2 \cdot y$

$V_{cilindro} = \pi \cdot x^2 \cdot y$

$V_{cone} = \pi \cdot x^2 \cdot y - (\pi x^2 \cdot y)/3$

$V_{cone} = (3\pi x^2 y - \pi x^2 y)/3$

$V_{cone} = (2\pi x^2 y)/3$

$$x = \frac{\frac{\pi x^2 y}{3}}{2\pi x^2 y} = \frac{1}{2}$$

letra E

Troncos

1)

$VC = (1/3) \cdot \pi \cdot x^2 \cdot h$

$VC = (1/3) \cdot \pi \cdot 3^2 \cdot 8$

$VC = 72\pi/3 = 24\pi\ cm^3\ (-2)$

letra E

$24\pi/12\pi = 8^3/h^3$

$2 = 512/h^3$

$h^3 = 512/2$

$h = \sqrt[3]{256}$

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

data

2) $V_s/V_c = (16/20)^3$

$V_s = 64/125\ V_c$

$V_e = V_c - V_s$

$V_e = V_c - (64/125).V_c$

$V_e = (125V_c - 64V_c)/125$

$V_e = 61V_c/125$

$V_e = 0,488.V_c \doteq 50\%.V_c$

letra C

3)

4) $5^2 = h^2 + 3^2$

$h^2 = 25 - 9$

$h = \sqrt{16} = 4\,cm$

5) $A_b = \pi.2^2$

$A_b = 4\pi\,m^2$

$A_B = \pi.5^2$

$A_B = 25\pi\,m^2$

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

$g^2 = 16 + 9$

$g = \sqrt{25} = 5\,m$

$A_l = \pi(5+2).5$

$A_l = 35\pi\,m^2$

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

$A_t = 64\pi\,m^2$

$V = \frac{\pi.4}{3}(5^2 + 2^2 + 5.2)$

$V = (\pi.4.39)/3 = 52\pi/3\,m^3$

6) $5^2 = h^2 + 4^2$

$h^2 = 25 - 16$

$h = \sqrt{9} = 3\,cm$

$V = \frac{\pi.3}{3}(7^2 + 3^2 + 7.3)$

$V = \pi(49 + 9 + 21)$

$V = 79\pi\,cm^3$