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S T Q Q S S D

Esferas e Provas Parter - CTII319

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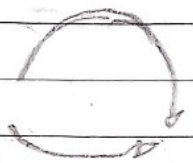
I)

c) Pela Translação de um segmento de reta, mantendo fixa sua direção.



2)

$$V_1 = \frac{4}{3}\pi \cdot 1^3 = \frac{4}{3}\pi$$

$$V_2 = \frac{4}{3}\pi R^3$$

$$\frac{4}{3}\pi R^3 = 1.000.000 \cdot \frac{4}{3}\pi$$

$$R^3 = 10^6$$

$$R = \sqrt[3]{10^6}$$

$$R = 10^2 = 100$$

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3)

$V_E = \frac{4\pi r^2}{3}$

$V_C = \pi r^2 h$

$V_C = \pi 4r^2 4r = 16\pi r^2$

$x = \frac{V_E}{V_C} = \frac{4\pi r^3/3}{16\pi r^3}$

$x = 1/12$

4)

$V = \frac{4}{3} \pi R^3$

$V = \frac{4}{3} \pi 1^3$

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

$V = 4\pi$

$V_2 = \frac{4}{3} \pi R^3$

$V_2 = \frac{4}{3} \pi 2^3$

$V_2 = \frac{4\pi 8}{3}$

$V_2 = \frac{32\pi}{3}$

$V_C = \pi R^2 h$

$12R = \pi R^2 . 3$

$12 = 3R^2$

$R^2 = 4$

$R = \sqrt{4}$

$R = 2$

$V = 4\pi + \frac{32\pi}{3}$

$V = \frac{36}{3}\pi = 12\pi$

spiral

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5)

$V_c = \pi \cdot 6^2 \cdot 1 = 36\pi$

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

$\frac{4}{3} \pi r^3 = 36\pi$

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

$r^3 = 27$

$r = 3$

6)

$V_e = 288\pi \, cm^3$

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

$288\pi = 4\pi r^3 / 3$

$864\pi = 4\pi r^3$

$864 = 4r^3$

$r^3 = 216$

$r = \sqrt[3]{216} = 6 \, cm$

$d = 2r$

$d = 2 \cdot 6 = 12$

$d = 12 \, cm$

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7)

$V = Ab \cdot h$

$V = (10^2) \cdot \pi \cdot 16$

$V = 1600\pi$

$V^1 = \frac{4}{3} \pi 2^3$

$V^1 = \frac{(32\pi)}{3}$

$x = \frac{V}{V^1} = \frac{1600\pi}{32\pi/3}$

$x = 150$