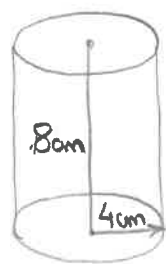


CUERPOS GEOMÉTRICOS

CUERPOS DE REVOLUCIÓN:

21. b)



$$A_{\text{cilindro}} = 2 \cdot A_{\text{base}} + A_{\text{lateral}}$$

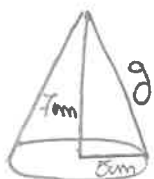
$$A_B = \pi \cdot r^2 = 3\frac{1}{4} \cdot 4^2 = 50'24 \text{ cm}^2$$

$$A_L = 2\pi \cdot r \cdot h = 2 \cdot 3\frac{1}{4} \cdot 4 \cdot 8 = 200'96 \text{ cm}^2$$

$$A_{\text{cilindro}} = 2 \cdot 50'24 + 200'96 \Rightarrow \underline{A_{\text{cilindro}} = 301'44 \text{ cm}^2}$$

$$V_{\text{cilindro}} = A_B \cdot h \Rightarrow V_{\text{cilindro}} = 50'24 \cdot 8 \Rightarrow \underline{V_{\text{cilindro}} = 401'92 \text{ cm}^3}$$

23.



$$g^2 = 7^2 + 5^2 \Rightarrow g = 8'6 \text{ cm}$$

$$V_{\text{cono}} = \frac{A_B \cdot h}{3}$$

$$A_B = \pi \cdot r^2 = 3\frac{1}{4} \cdot 5^2 = 78'5 \text{ cm}^2$$

$$\Rightarrow V_{\text{cono}} = \frac{78'5 \cdot 7}{3} \Rightarrow \underline{V_{\text{cono}} = 183'17 \text{ cm}^3}$$

24. b)



$$g^2 = 12^2 + 9^2 \Rightarrow g = 15 \text{ cm}$$

$$A_{\text{cono}} = A_B + A_L$$

$$A_B = \pi \cdot r^2 = 3\frac{1}{4} \cdot 9^2 = 254'34 \text{ cm}^2$$

$$A_L = \pi \cdot r \cdot g = 3\frac{1}{4} \cdot 9 \cdot 15 = 423'9 \text{ cm}^2$$

$$\underline{A_{\text{cono}} = 678'24 \text{ cm}^2}$$

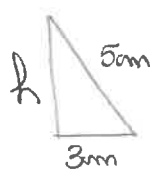
$$V_{\text{cono}} = \frac{A_B \cdot h}{3} \Rightarrow V_c = \frac{254'34 \cdot 12}{3} \Rightarrow \underline{V_c = 1017'37 \text{ cm}^3}$$

25. $d = 6 \text{ cm} \Rightarrow r = 3 \text{ cm}$

$$A_{\text{esfera}} = 4\pi \cdot r^2 \Rightarrow A_{\text{esfera}} = 4 \cdot 3\frac{1}{4} \cdot 3^2 \Rightarrow \underline{A_{\text{esfera}} = 113'04 \text{ cm}^2}$$

$$V_{\text{esfera}} = \frac{4}{3} \pi \cdot r^3 \Rightarrow V_{\text{esfera}} = \frac{4 \cdot 3\frac{1}{4} \cdot 3^3}{3} \Rightarrow \underline{V_{\text{esfera}} = 113'04 \text{ cm}^3}$$

33.a)



$$5^2 = 3^2 + h^2 \Rightarrow h = 4 \text{ cm}$$

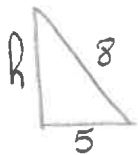
$$V_{\text{cuerpo}} = V_{\text{cono}} + V_{\text{cilindro}}$$

$$V_{\text{cono}} = \frac{A_B \cdot h}{3} = \frac{\pi \cdot r^2 \cdot h}{3} = \frac{3/4 \cdot 3^2 \cdot 4}{3} = 37'68 \text{ cm}^3$$

$$V_{\text{cilindro}} = A_B \cdot h = \pi \cdot r^2 \cdot h = 3/4 \cdot 7^2 \cdot 5 = 769'3 \text{ cm}^3$$

$$V_{\text{cuerpo}} = \underline{806'98 \text{ cm}^3}$$

b)



$$8^2 = 5^2 + h^2 \Rightarrow h = 6'24 \text{ cm}$$

$$V_{\text{cuerpo}} = V_{\text{cono}} + \frac{V_{\text{sfera}}}{2}$$

$$V_{\text{cono}} = \frac{A_B \cdot h}{3} = \frac{\pi \cdot r^2 \cdot h}{3} = \frac{3/4 \cdot 5^2 \cdot 6'24}{3} = 163'28 \text{ cm}^3$$

$$V_{\text{sfera}} = \frac{4}{3} \pi \cdot r^3 = \frac{4 \cdot 3/4 \cdot 5^3}{3} = 523'33 \text{ cm}^3$$

$$V_{\text{cuerpo}} = 163'28 + \frac{523'33}{2} \Rightarrow \underline{V_{\text{cuerpo}} = 424'95 \text{ cm}^3}$$