



1.

$$1.1. V_{cilindro} = A_b \times h = \pi \times 5^2 \times 10 = 250\pi$$

$$V_{esfera} = \frac{4}{3}\pi r^3 = \frac{4}{3}\pi \times 5^3 = \frac{500}{3}\pi$$

$$V_{pedido} = 250\pi - \frac{500}{3}\pi = \frac{750}{3}\pi - \frac{500}{3}\pi = \frac{250}{3}\pi \text{ cm}^3$$

$$1.2. A_{superfície esférica} = 4\pi \times 5^2 = 100\pi \text{ cm}^2$$

$$2. V_{pirâmide} = \frac{1}{3} \times A_b \times h = \frac{1}{3} \times 1,2^2 \times \frac{1}{3} \times 1,7 = 0,272 \text{ m}^3$$

$$V_{paralelepípedo} = A_b \times h = 1,2^2 \times 1,7 = 2,448 \text{ m}^3$$

$$V_{pedido} = 0,272 + 2,448 = 2,72 \text{ m}^3$$

3.

$$3.1. 1,5 \text{ cm}^3$$

$$3.2. 6,4 \text{ cm}^2$$

4.

$$4.1. 22,5 \text{ cm}$$

$$4.2. A_{total do cone} = A_{base} + A_{lateral} = \pi \times 22,5^2 + \frac{2\pi \times 22,5}{2} \times 30 = 506,25\pi + 675\pi = 1181,25\pi$$

5.

5.1. ---

5.2.

$$5.2.1. \sqrt{31} \text{ u. c.}$$

$$5.2.2. 250^9$$

6.

6.1. ---

$$6.2. 210\,000 \text{ mm}^3$$

7.

$$7.1. (18\sqrt{2} + 6) \text{ cm}$$

$$7.2. 12\sqrt{153} \text{ cm}^2$$

$$8. V_{cubo} = 5^3 = 125 \text{ cm}^2$$

$$V_{\text{água figura 1}} = A_b \times h = \pi r^2 \times h = \pi \times 10^2 \times 8 = 2513,27 \text{ cm}^2$$

$$V_{\text{água figura 2}} = V_{\text{água figura 1}} + V_{cubo} = 2513,27 + 125 = 2638,27 \text{ cm}^2$$

$$V_{\text{água figura 2}} = A_b \times x$$

$$\Leftrightarrow V_{\text{água figura 2}} = \pi r^2 \times x$$

$$\Leftrightarrow x = \frac{V_{\text{água figura 2}}}{\pi r^2} = \frac{2638,27}{\pi \times 10^2} = 8,40 \text{ cm}$$