

$$\begin{aligned} \textcircled{1} \quad V_{\text{парал}} &= 6 \cdot 16 \cdot 18 = 1728 \text{ см}^3 \\ V_{\text{куба}} &= 1728 \text{ см}^3; \text{ ребро } a = \sqrt[3]{1728} = 12 \text{ см.} \\ \text{ребро} &= \boxed{12 \text{ см}} \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad V_n &= \frac{1}{3} S_{\text{осн}} \cdot H; \quad S_{\text{осн}} = \frac{1}{2} \cdot 2 \cdot 2 \sin 60^\circ = 2 \cdot \frac{\sqrt{3}}{2} = \sqrt{3} \\ V_{\text{нпр.}} &= \frac{1}{3} \sqrt{3} \cdot \sqrt{3} = \frac{1}{3} \cdot 3 = 1; \quad \boxed{V = 1} \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & \begin{array}{c} \text{--- сторона} \\ \text{--- } x \end{array} \\ & \begin{array}{c} x^2 + x^2 = 4^2 \\ 2x^2 = 16 \\ x^2 = 8 \\ x = \sqrt{8} \text{ --- сторона квадрата,} \\ \text{она явл. диаметром и высотой} \\ \text{цилиндра.} \end{array} \end{aligned}$$

$$V_{\text{ц.}} = S_{\text{осн}} \cdot H = \pi R^2 \cdot H = \frac{\pi (\sqrt{8})^2}{2} \cdot \sqrt{8} = \boxed{2\sqrt{8} \pi \text{ см}^3}$$

$$\begin{aligned} \textcircled{4} \quad R_{\text{конуса}} &= \sqrt{10^2 - 6^2} = \sqrt{64} = 8 \text{ см.} \\ V_{\text{кон}} &= \frac{1}{3} S_{\text{осн}} \cdot H = \frac{1}{3} \pi R^2 \cdot H = \frac{1}{3} \pi 8^2 \cdot 6 = \boxed{128 \pi \text{ см}^3} \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad V_{\text{шара}} &= \frac{4}{3} \pi R^3 \\ V_1 &= \frac{4}{3} \pi \cdot 6^3 = 288 \pi \text{ см}^3 \\ V_2 &= \frac{4}{3} \pi \cdot 8^3 = 628 \frac{2}{3} \text{ см}^3 \\ V_3 &= \frac{4}{3} \pi \cdot 10^3 = 1333 \frac{1}{3} \text{ см}^3 \\ V_{\text{ш.}} &= V_1 + V_2 + V_3 = 2304 \pi \text{ см}^3 \\ \frac{4}{3} \pi R^3 &= 2304 \pi; \quad R^3 = 2304 \cdot \frac{3}{4} = 1728; \quad \boxed{R = 12} \end{aligned}$$