

$$1) \quad V = r^2 \cdot \pi \cdot h$$

$$a) \quad V = (2a)^2 \cdot \pi \cdot 3a = \underline{\underline{12a^3\pi}}$$

$$b) \quad V = \left(\frac{x}{4}\right)^2 \cdot \pi \cdot 3x = \underline{\underline{\frac{3x^3\pi}{16}}}$$

$$2) \quad M = u \cdot h = 2 \cdot r \cdot \pi \cdot h$$

$$a) \quad M = 2 \cdot 2x \cdot \pi \cdot \frac{x}{3} = \underline{\underline{\frac{4x^2\pi}{3}}}$$

$$b) \quad M = 2 \cdot 2,5x \cdot \pi \cdot 5,5x = \underline{\underline{27,5x^2\pi}}$$

$$3) \quad O = 2 \cdot G + M = 2 \cdot r^2 \cdot \pi + 2 \cdot r \cdot \pi \cdot h$$

$$a) \quad O = 2 \cdot (3a)^2 \cdot \pi + 2 \cdot 3a \cdot \pi \cdot \frac{a}{2} = 18a^2\pi + 3a^2\pi = \underline{\underline{21a^2\pi}}$$

$$b) \quad O = 2 \cdot \left(\frac{a}{3}\right)^2 \cdot \pi + 2 \cdot \frac{a}{3} \cdot \pi \cdot 2a = \frac{2a^2\pi}{9} + \frac{4a^2\pi}{3} = \frac{2a^2\pi}{9} + \frac{12a^2\pi}{9} = \underline{\underline{\frac{14a^2\pi}{9}}}$$

$$4) \quad V = r^2 \cdot \pi \cdot h = 282,7\text{cm}^3 = 283\text{ml} = \underline{\underline{2,8\text{dl}}}$$

$$5) \quad h = \frac{V}{G} = \frac{100\text{ml}}{r^2\pi} = \underline{\underline{2,2\text{cm}}}$$

$$6) \quad h_2 = \frac{V}{G_2} = \frac{r_1^2 \cdot \pi \cdot h_1}{r_2^2 \cdot \pi} = \underline{\underline{5,2\text{cm}}}$$

$$7) \quad V_1 = r_1^2 \pi h \quad V_2 = (2 \cdot r_1)^2 \cdot \pi \cdot h = \underline{\underline{4 \cdot r_1^2 \pi h}}$$

$$8) \quad M = O - 2 \cdot r^2 \cdot \pi = 99,45\text{cm}^2$$

$$h = \frac{M}{u} = \frac{M}{2r\pi} = \underline{\underline{5,3\text{cm}}}$$

$$9) \quad V = r^2 \cdot \pi \cdot h = 6^2 \cdot \pi \cdot 24 = 2714,3\text{cm}^3 = \underline{\underline{2,7\text{dm}^3}}$$