

2. Bez

Prismen und Zylinder

Lösungen AB 3

$$1) \quad c = \frac{V}{G} = 0,24dm \quad O = 2 \cdot a \cdot b + 2 \cdot a \cdot c + 2 \cdot b \cdot c = \underline{\underline{23,12dm^2}}$$

$$2) \quad G = \frac{O}{6} = 6,25cm^2 \quad s = \sqrt{G} = 2,5cm \quad V = s^3 = \underline{\underline{15,625cm^3}}$$

$$3) \quad G = \frac{V}{h} = \frac{50}{4} = \underline{\underline{12,5dm^2}}$$

$$4) \quad G = \frac{O}{6} = 49cm^2 \quad s = \sqrt{G} = 7cm \quad V = s^3 = \underline{\underline{343cm^3}}$$

$$5) \quad V_{ausssen} = a_1 \cdot b_1 \cdot c_1 = 20 \cdot 10 \cdot 7 = 1400dm^3$$

$$V_{innen} = a_2 \cdot b_2 \cdot c_2 = 18 \cdot 8 \cdot 6 = 864dm^3$$

$$V_{Stein} = V_{ausssen} - V_{innen} = \underline{\underline{536dm^3}}$$

$$m_{Stein} = V \cdot \sigma = \underline{\underline{1340kg}}$$

$$V_{Wasser} = a_2 \cdot b_2 \cdot c_3 = 18 \cdot 8 \cdot 5 = \underline{\underline{720dm^3}}$$

$$m_{Wasser} = \underline{\underline{720kg}}$$

$$m_{Total} = \underline{\underline{2,06t}}$$

$$6) \quad G = \frac{b \cdot h_b}{2} = \underline{\underline{24cm^2}} \quad M = O - 2 \cdot G = \underline{\underline{288cm^2}} \quad h_p = \frac{M}{u} = \frac{M}{a+b+c} = \underline{\underline{12cm}}$$

$$7) \quad V = \frac{a \cdot h_a}{2} \cdot h_p = \frac{7s \cdot 5s}{2} \cdot 8s = \underline{\underline{140s^3}}$$