

$$\textcircled{1} \quad 3 \text{ dm}^2 = 0,03 \text{ m}^2$$

$$1 \text{ a} = 100 \text{ m}^2$$

$$7 \text{ dm}^3 = 7000 \text{ cm}^3$$

$$2 \text{ l} = 2 \text{ dm}^3$$

$$\textcircled{2} \quad F_g = 8000 \text{ N}$$

$$S = 5 \text{ m}^2$$

$$p = ?$$

$$p = \frac{F_g}{S} = \frac{8000 \text{ N}}{5 \text{ m}^2} = \underline{\underline{1600 \text{ Pa}}}$$

$$\textcircled{3} \quad m = 45 \text{ kg}$$

$$S_1 = 150 \text{ cm}^2 = 0,015 \text{ m}^2$$

$$\text{a) } p = ?$$

$$p = \frac{F}{S} = \frac{450 \text{ N}}{2 \cdot 0,015 \text{ m}^2}$$

$$p = \underline{\underline{15000 \text{ Pa}}}$$

$$\text{b) } p = \underline{\underline{30000 \text{ Pa}}}$$

$$\textcircled{4} \quad h = 370 \text{ m}$$

$$\rho_{\text{z}} = 1,2 \text{ kg/m}^3$$

$$p = ?$$

$$p = \rho_{\text{z}} \cdot h = 12 \text{ N/m}^3 \cdot 370 \text{ m}$$

$$p = \underline{\underline{4440 \text{ Pa}}}$$

$$\textcircled{5} \quad V_{\text{vode}} = 300 \text{ cm}^3$$

$$\text{a) } F_{g \text{ vode}} = ?$$

$$300 \text{ cm}^3 = 300 \text{ ml} \rightarrow 300 \text{ g} \rightarrow \underline{\underline{3 \text{ N}}}$$

$$\text{b) } F_{\text{vazg}} = F_{g \text{ izpodriyene vode}}$$

$$F_{\text{vazg}} = \underline{\underline{3 \text{ N}}}$$

c) Ne,

* ⑥ $h = 30 \text{ m}$
 $S = 2 \text{ m}^2$
 $F = ?$

najprej izračunamo hidrostatični tlak na globini 30 m:

$$p = \rho_{\text{H}_2\text{O}} \cdot h = 10\,000 \text{ N/m}^3 \cdot 30 \text{ m}$$

$$p = \underline{\underline{300\,000 \text{ Pa}}}$$

iz enačbe $p = \frac{F}{S}$ izračunamo F :

$$F = p \cdot S = 300\,000 \text{ Pa} \cdot 2 \text{ m}^2$$

$$F = \underline{\underline{600\,000 \text{ N}}}$$

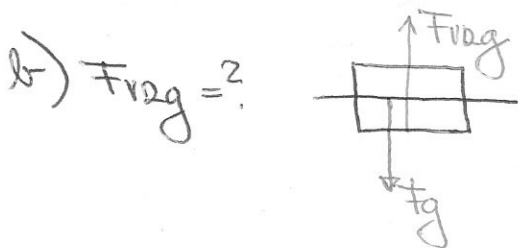
* ⑦ $a = 1 \text{ dm} \Rightarrow V = 1 \text{ dm}^3$
 $\rho_{\text{kocke}} = 0,6 \text{ kg/dm}^3$

a) $F_g = ?$

$$\rho = \frac{F_g}{V} \Rightarrow F_g = \rho_{\text{kocke}} \cdot V$$

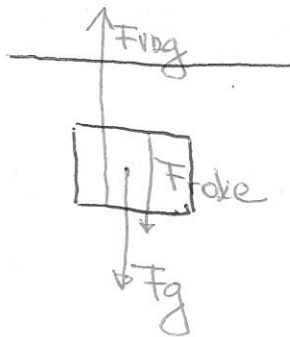
$$F_g = 6 \text{ N/dm}^3 \cdot 1 \text{ dm}^3$$

$$F_g = \underline{\underline{6 \text{ N}}}$$



$$\underline{\underline{F_{\text{vzg}} = F_g = 6 \text{ N}}}$$

c) $F_{\text{troke}} = ?$



izrek o ravnovesju:

$$F_{\text{vzg}} = F_g + F_{\text{troke}} \Rightarrow F_{\text{troke}} = F_{\text{vzg}} - F_g$$

Kocka je potopljena v celoti, zato vzgon ni več 6N. Vzgon izračunamo:

$$F_{\text{vzg}} = \rho_{\text{voda}} \cdot V$$

$$F_{\text{vzg}} = 10 \text{ N/dm}^3 \cdot 1 \text{ dm}^3$$

$$\underline{\underline{F_{\text{vzg}} = 10 \text{ N}}}$$

$$F_{\text{troke}} = 10 \text{ N} - 6 \text{ N}$$

$$\underline{\underline{F_{\text{troke}} = 4 \text{ N}}}$$