

• Vaja
 Kos lesa z gostoto $0,75 \frac{\text{kg}}{\text{dm}^3}$ in maso 15 kg spunkimo v vodo.

a) Kolikšna je prostornina tega lesa?

b) Kolikšen del tega lesa se potopi?

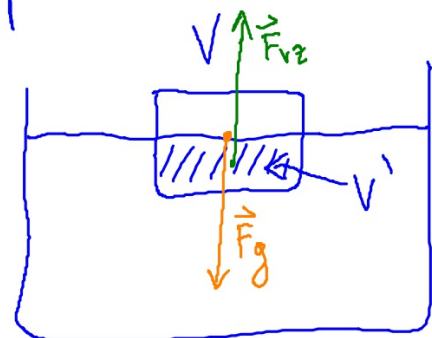
$$a) V = \frac{m}{\rho} = \frac{15 \text{ kg}}{0,75 \frac{\text{kg}}{\text{dm}^3}} = 20 \text{ dm}^3$$

$$b) F_g = 150 \text{ N} \Rightarrow F_{Vz} = 150 \text{ N}$$

$$F_{Vz} = \sigma \cdot V'$$

$$V' = \frac{F_{Vz}}{\sigma} = \frac{150 \text{ N}}{10 \text{ N/dm}^2} = 15 \text{ dm}^3$$

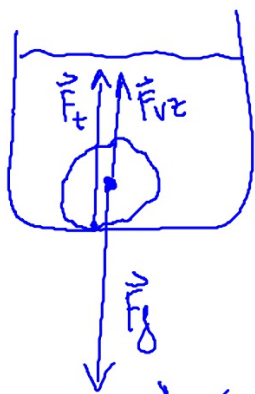
$$\frac{V'}{V} = \frac{15 \text{ dm}^3}{20 \text{ dm}^3} = \underline{\underline{0,75}}$$



$$F_{Vz} = F_g$$

2) Na mornu telita šamen 300N, potopljen v vodi pa 200N.

- a) Kolikšna je prostornina kamna?
 b) Kolikšna je specifična teža kamna?



$$F_g = 300\text{N}$$

$$F_t = 200\text{N}$$

$$F_{vz} =$$

$$F_g = F_t + F_{vz}$$

$$F_{vz} = F_g - F_t$$

$$F_{vz} = 300\text{N} - 200\text{N}$$

$$F_{vz} = 100\text{N}$$

$$F_{vz} = \sigma \cdot V$$

$$V = \frac{F_{vz}}{\sigma}$$

$$V = \frac{100\text{N dm}^3}{10\text{N}}$$

$$b) \sigma_k = \frac{F_g}{V} = \frac{300\text{N}}{10\text{dm}^3} = 30 \frac{\text{N}}{\text{dm}^3}$$

$$a) V = 10\text{dm}^3$$

D.N.

1. Srebrna žlica ima prostornino 4 cm^3 in je potopljena v vodo. Gostota srebra je $10,5 \frac{\text{g}}{\text{cm}^3}$ in gostota vode $1 \frac{\text{g}}{\text{cm}^3}$.

a) Vzgon je _____ N.

b) Kolikšna je "teža" žlice v vodi?

$$a) F_{vz} = \sigma \cdot V'$$

$$F_{vz} = 0,01 \frac{\text{N}}{\text{cm}^3} \cdot 4 \text{ cm}^3$$

$$\underline{F_{vz} = 0,04 \text{ N}}$$

$$b) F_g = \sigma_{Ag} \cdot V$$

$$F_g = 0,105 \frac{\text{N}}{\text{cm}^3} \cdot 4 \text{ cm}^3$$

$$\underline{F_g = 0,42 \text{ N}}$$

$$\sigma_v = 10 \frac{\text{N}}{\text{dm}^3} = 0,01 \frac{\text{N}}{\text{cm}^3}$$

$$\sigma_{Ag} = 0,105 \frac{\text{N}}{\text{cm}^3}$$

Navidezna teža $F_g' = F_g - F_{vz}$

$$F_g' = 0,38 \text{ N}$$