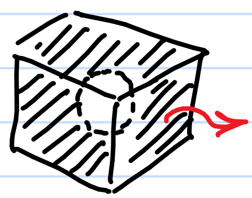
چگالی

$\frac{kg}{m^3}$ $\quad \rho = \frac{m}{V}$ $\quad$ (m ← kg، V ← m^3)

$$\boxed{\frac{kg}{m^3} = \frac{g}{lit}} \underset{\times 10^3}{\overset{\div 10^3}{\rightleftarrows}} \boxed{\frac{g}{cm^3} = \frac{kg}{lit}}$$

حجم مفید و حجم ظاهری

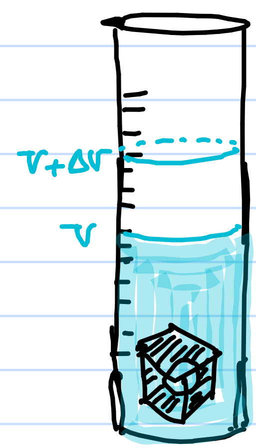


$V = \frac{m}{\rho}$

حجم کل : حجم ظاهری

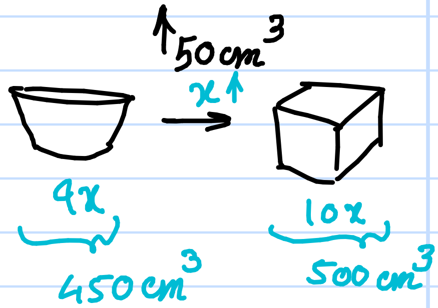
هندسه

از اثر حجم مایع



اگر جسم کاملاً توپر باشد

$V_{ظاهری} = V_{واقعی}$



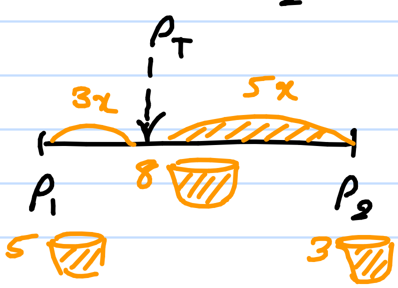
$$V_{ظاهری} - V_{واقعی} = \Delta V_{حفره}$$

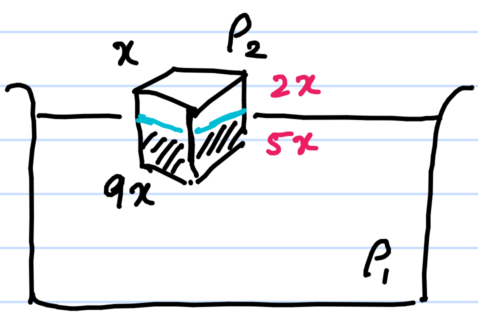
چگالی مخلوط :

$$\rho_T = \frac{m_1 + m_2}{(V_1 + V_2)\left(\frac{100 \mp n}{100}\right)}$$

$$\rho_T = \frac{2\rho_1\rho_2}{\rho_1 + \rho_2} \qquad \left.\begin{matrix}\rho_1 \leftarrow m \\ \rho_2 \leftarrow m\end{matrix}\right\}$$

$$\rho_T = \frac{\rho_1 + \rho_2}{2} \qquad \left.\begin{matrix}\rho_1 \leftarrow V \\ \rho_2 \leftarrow V\end{matrix}\right\}$$

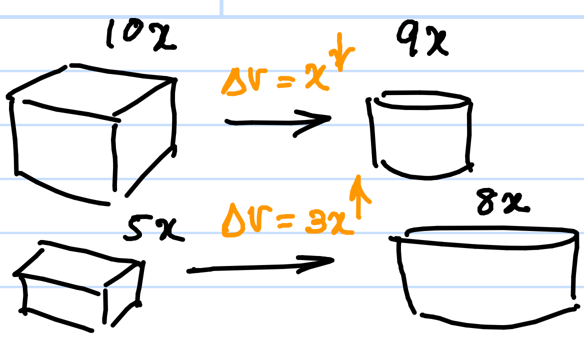




کسر در آب فرورفته $\quad \frac{\rho_2}{\rho_1}$

$$\frac{\rho_2}{\rho_1} = \frac{9}{10}$$

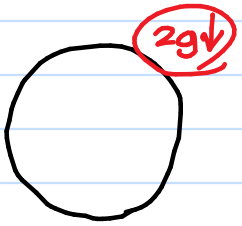
$$\frac{\rho_2}{\rho_1} = \frac{5}{7}$$



$$\frac{\rho_{جامد}}{\rho_{مایع}} = \frac{9}{10}$$

$$\frac{\rho_{جامد}}{\rho_{مایع}} = \frac{8}{5}$$

$$\begin{cases} \rho_1 = 5\ g/cm^3 \\ \rho_2 = 7\ g/cm^3 \end{cases}$$



$$\begin{cases} V = 200\ cm^3 \\ m = 1294\ g \end{cases}$$

$200 \times 7 = 1400\ g$

$1294\ g \downarrow 106\ g$

$35\ cm^3 \times \rho_1$

$147\ cm^3 \times \rho_2$