

① Calculate densities in lbm/ft^3 on the following substances

a) Liquid with density of $995 \text{ kg}/\text{m}^3$

b) a solid with a specific gravity

⇒ a) density = $995 \text{ kg}/\text{m}^3$

$$\Rightarrow \frac{995 \text{ kg}}{\text{m}^3} \times \frac{1 \text{ lbm}}{0,45359 \text{ kg}} \times \frac{0,028317 \text{ m}^3}{1 \text{ ft}^3}$$

$$= \frac{28,16845 \text{ lbm}}{0,45359 \text{ ft}^3}$$

$$= \underline{\underline{62,1 \text{ lbm}/\text{ft}^3}}$$

b) solid with specific gravity of 5,7

$$\Rightarrow \rho = \rho_{\text{H}_2\text{O}} (\text{specific gravity})$$

$$= \frac{62,43 \text{ lbm}}{\text{ft}^3} (5,7)$$

$$= \underline{\underline{355,857 \text{ lbm}/\text{ft}^3}}$$