

**Problema 6.3**

Pct.	Soluție „Șobolanul și cașcavalul”	Punctaj parțial	Punctaj Total
a)	$V = a^3 = (50 \text{ cm})^3 = 125\,000 \text{ cm}^3 = 0,125 \text{ m}^3$ $\rho_0 = \frac{m}{V} = \frac{112,5 \text{ kg}}{0,125 \text{ m}^3} = 900 \frac{\text{kg}}{\text{m}^3}$ $\rho_0 = \mathbf{900 \frac{kg}{m^3}}$	1,0p 1,5p	2,5p
b)	$V_{\text{cascaval}} = \frac{m}{\rho_0} = \frac{112,5 \text{ kg}}{1250 \frac{\text{kg}}{\text{m}^3}} = 0,09 \text{ m}^3 = 90\,000 \text{ cm}^3$ $V_{\text{cavitati}} = V - V_{\text{cascaval}}$ $V_{\text{cavitati}} = 0,125 \text{ m}^3 - 0,09 \text{ m}^3 = 0,035 \text{ m}^3 = 35\,000 \text{ cm}^3$ $N = \frac{V_{\text{cavitati}}}{V_0}$ $N = \frac{35\,000 \text{ cm}^3}{0,100 \text{ cm}^3} = 350\,000$ $N = \mathbf{350\,000}$	1,5p 1,0p 1,0p	4,5p
c)	$m_{\text{saramaura}} = \rho_s \cdot V_{\text{cavitati}} = 1030 \frac{\text{kg}}{\text{m}^3} \cdot 0,035 \text{ m}^3 = 36,05 \text{ kg}$ $m_{\text{CS}} = m + m_{\text{saramaura}} = 112,5 \text{ kg} + 36,05 \text{ kg} = 148,55 \text{ kg}$ $m_{\text{CS}} = \mathbf{148,55 \text{ kg}}$	1,5p 1,5p	3p
			10p