

TOPIC: **DENSITY**

1. Calculate the **density** of each of the following:

a. 250 cm³ of a solution with a mass of 500 g

$$\text{Density} = \frac{\text{Mass}}{\text{Volume}} = \frac{500 \text{ g}}{250 \text{ cm}^3} = \underline{2} \text{ g/cm}^3$$

b. A 6.75 g solid with a volume of 5 cm³

$$= \underline{\hspace{2cm}} = \frac{\text{g}}{\text{cm}^3} = \underline{\hspace{2cm}} \text{ g/cm}^3$$

c. 50.0 g of a gas which occupies a volume of 8 cm³

$$= \underline{\hspace{2cm}} = \frac{\text{g}}{\text{cm}^3} = \underline{\hspace{2cm}} \text{ g/cm}^3$$

2. Calculate the **volume** of each of the following:

a. 26.5 g of a solution with a density of 2 g/cm³

$$= \underline{\hspace{2cm}} = \frac{\text{g}}{\text{g/cm}^3} = \underline{\hspace{2cm}} \text{ cm}^3$$

b. A 3.40 g solid with a density of 10 g/cm³

$$= \underline{\hspace{2cm}} = \frac{\text{g}}{\text{g/cm}^3} = \underline{\hspace{2cm}} \text{ cm}^3$$

3. Calculate the **mass** of each of the following:

a. A solid with a volume of 1.68 cm³ and a density of 9.2 g/cm³

$$\begin{aligned} &= \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} \\ &= \underline{\hspace{2cm}} \text{ g/cm}^3 \times \underline{\hspace{2cm}} \text{ cm}^3 \\ &= \underline{\hspace{2cm}} \text{ g} \end{aligned}$$

b. An 80 cm^3 of a solution with a density of 5.80 g/cm^3

$$= \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}} \text{ g/cm}^3 \times \underline{\hspace{2cm}} \text{ cm}^3$$

$$= \underline{\hspace{2cm}} \text{ g}$$

a. A solid with a density of 4 g/cm^3 and dimensions of $2.5 \text{ cm} \times 2.5 \text{ cm} \times 2.5 \text{ cm}$

$$= \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}} \text{ g/cm}^3 \times \underline{\hspace{2cm}} \text{ cm}^3$$

$$= \underline{\hspace{2cm}} \text{ g}$$