

H.W

1. Mass of density bottle is 35g when empty, 65g when filled with water.

$$1. \text{ Mass of water} = 65 - 35$$

$$= 30\text{g}$$

$$\text{Mass of alcohol} = 54 - 35$$

$$= 24\text{g}$$

$$\boxed{1\text{gm/cm}^3} \quad / \quad \boxed{1\text{cm}^3 = 1\text{ml}}$$

$$\text{Volume of bottle} = 30\text{cm}^3$$

$$\text{Density of alcohol} = \frac{24}{30} \text{ gm/cm}^3$$

$$= 0.8 \text{ gm/cm}^3$$

$$\text{R.D} = \frac{\text{Density of alcohol}}{\text{Density of water}}$$

$$= \frac{0.8 \text{ gm/cm}^3}{1 \text{ gm/cm}^3}$$

$$= 0.8$$

2. It is a bottle which has fixed density. You take a liquid the density bottle and measure its weight and a liquid filled with it and measure the weight. On subtracting ~~it~~ you get the weight you get ~~it~~ mass of liquid and with formula m/v you get the density.

3. Density is amount of molecules packed in a given area. Relative density is the ratio of density of object to a comparable density (mostly water)

4. Relative Density of aluminum 2.7 ~~gm~~ tells that the mass of ~~silver~~

silver is 2.7 times heavier than the equal volume of water.

5.

i. 20 cm^3

ii)
$$\frac{18.8 \text{ gm}}{20.0 \text{ cm}^3} = \frac{4.7}{5.0}$$

+111

6.

$$\begin{aligned} \text{Mass of water} &= 50 - 22 \\ &= 28 \text{ gm} \end{aligned}$$

$$\begin{aligned} \text{Mass of wine} &= 54 - 22 \\ &= 32 \text{ gm} \end{aligned}$$

$$\text{Volume of bottle} = 28 \text{ cm}^3$$

$$\begin{aligned} \text{Density of wine} &= \frac{32}{28} = \frac{8}{7} \\ &= 1.14 \text{ g/cm}^3 \end{aligned}$$

$$\text{R.D} = \frac{1.14 \text{ g/cm}^3}{1 \text{ g/cm}^3}$$

classmate

Date _____

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= 1.14