

Session #1: Homework Solutions

Problem #1

Calculate the molecular weight of each of the substances listed:



Solution

$$\begin{aligned}\text{NH}_4\text{OH}: & \quad 5 \times 1.01 = 5.05 \text{ (H)} \\ & \quad 1 \times 14.01 = 14.01 \text{ (N)} \\ & \quad 1 \times 16.00 = 16.00 \text{ (O)}\end{aligned}$$

$$\text{NH}_4\text{OH} = 35.06 \text{ g/mole}$$

$$\begin{aligned}\text{NaHCO}_3: & \quad 3 \times 16.00 = 48.00 \text{ (O)} \\ & \quad 1 \times 22.99 = 22.99 \text{ (Na)} \\ & \quad 1 \times 1.01 = 1.01 \text{ (H)} \\ & \quad 1 \times 12.01 = 12.01 \text{ (C)}\end{aligned}$$

$$\text{NaHCO}_3 = 84.01 \text{ g/mole}$$

$$\begin{aligned}\text{CH}_3\text{CH}_2\text{OH}: & \quad 2 \times 12.01 = 24.02 \text{ (C)} \\ & \quad 6 \times 1.01 = 6.06 \text{ (H)} \\ & \quad 1 \times 16.00 = \underline{16.00 \text{ (O) }}\end{aligned}$$

$$\text{CH}_3\text{CH}_2\text{OH}: 46.08 \text{ g/mole}$$

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