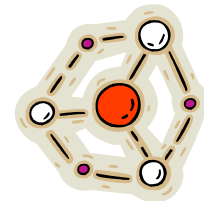


Name _____
Chapter 4.5 Concentrations of Solutions worksheet



1. Indicate the concentration of each ion or molecule present in the following substances:

*Remember: Strong electrolytes are ionic compounds, strong acids and strong bases and they dissociate or ionize almost completely. Weak to non-electrolytes do not readily ionize.

a) 0.25 M CaBr_2

b) 0.25 M CH_3OH

c) 1.0 M NaCl

d) 2.0 M $(\text{NH}_4)_2\text{SO}_4$

2. Indicate the concentration of each ion or molecule present in a mixture of 50.0 mL of 0.20 M KClO_3 and 25.0 mL of 0.20 M Na_2SO_4 (assume additive volumes)

3. Solution A has 3.5 g of KCl in a total volume of 60.0 mL of solution. Solution B is 30.0 mL of 0.500 M CaCl_2 solution. Determine the concentration of chloride ions when the two solutions are combined.

2. What mass of ethanol, $\text{C}_2\text{H}_5\text{OH}$, is required to produce 300. mL of a 0.500 *M* solution?

6. Pure acetic acid, known also as glacial acetic acid, is a liquid with a density of 1.049 g/mL at 25°C. Calculate the molarity of a solution of acetic acid made by dissolving 10.00 mL of glacial acetic acid at 25°C in enough water to make 100.00 mL of solution.