

### Molarity Madness Introductory Problems

1. What are the final molarities of each ion if 57 grams of solid  $\text{Na}_2\text{SO}_4$  is dissolved in 320 mL of water?

$$[\text{Na}^{1+}] = \underline{\hspace{2cm}}$$

$$[\text{SO}_4^{2-}] = \underline{\hspace{2cm}}$$

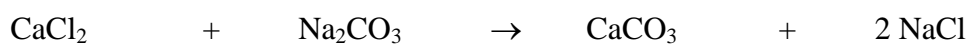
2. What is the final molarity if 75 mL of water is added to a beaker containing 220 mL of 3.0 M KCl?

$$[\text{KCl}] = \underline{\hspace{2cm}}$$

$$[\text{K}^+] = \underline{\hspace{2cm}}$$

$$[\text{Cl}^{1-}] = \underline{\hspace{2cm}}$$

3. What are the final concentrations if 60. mL of 0.50 M  $\text{CaCl}_2$  is mixed with 40. mL of 1.0 M  $\text{Na}_2\text{CO}_3$  ?



$$[\text{Ca}^{2+}] = \underline{\hspace{2cm}}$$

$$[\text{CO}_3^{2-}] = \underline{\hspace{2cm}}$$

$$[\text{Na}^{1+}] = \underline{\hspace{2cm}}$$

$$[\text{Cl}^{1-}] = \underline{\hspace{2cm}}$$