

Name: \_\_\_\_\_ Per \_\_\_\_\_

Unit 8 Review  
*Solutions*

**Solution Concentration and Solution Dilution**

1. Calculate the concentration of a 4.0 L solution that contains 2.4 mol of NaCl.
2. How many moles of magnesium chloride are contained in 500 mL of a 0.40 M solution? What mass of magnesium chloride is present in the solution?
3. 1.2 L of 0.10 M  $\text{CaCl}_2$  solution is diluted to a final volume of 3.0 L. Calculate the final concentration. Determine the mass of  $\text{CaCl}_2$  present in the solution.
4. 2.5 L of 0.80 M potassium chloride solution is diluted to give a solution with a final concentration of 0.50 M. Calculate the final volume of the solution. What volume of water was added to dilute the solution?

**Dissociation**

5. Write dissociation equation for the following compounds.
  - a.  $\text{MgCl}_2$
  - b.  $\text{Ca}(\text{C}_2\text{H}_3\text{O}_2)_2$
6. Write dissociation equations for the following compounds. Calculate the concentration of each ion in solution.
  - a. 0.30 M  $\text{K}_2\text{SO}_4$
  - b.  $2.5 \times 10^{-3}$   $\text{Na}_3\text{PO}_4$

