

## 5 • Reactions in Aqueous Solution

### QUICK CHECK #3

Try these problems. If you can DO them, check the box (). If you CANNOT do them, write some notes TO YOURSELF about what you need to study to succeed at these problems.

- A solution is made by dissolving 22.2 g NaCl in enough water to make 250. mL of solution. What is the **molarity** of the solution. The molar mass of NaCl is 58.45 g/mol.

- Consider a solution in which  $[\text{Al}_2(\text{SO}_4)_3] = 1.3 \text{ M}$ .  $[\text{Al}^{3+}] =$  \_\_\_\_\_  $[\text{SO}_4^{2-}] =$  \_\_\_\_\_

- Beginning with 25.0 mL of 3.0 M HCl, what **volume** of 0.10 M HCl can you make by **dilution**?

- Determine the **oxidation number** (oxidation state) of the underlined element:

Ba <u>Cr</u> O <sub>4</sub>	<u>O</u> <sub>3</sub>	<u>S</u> O <sub>3</sub>	Na <sub>2</sub> <u>C</u> O <sub>3</sub>
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- Consider the reaction:  $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{CO}_3$   
Is this an **oxidation-reduction** reaction? \_\_\_\_\_ Justify your answer.