## 18.3 SOLUBILITY EQUILIBRIUM

# Section Review

## Objectives

- Describe the relationship between the solubility product constant and the solubility of a compound
- Predict whether precipitation will occur when the two salt solutions are mixed

## Vocabulary

- solubility product constant ($K_{sp}$)
- common ion
- common ion effect

## Part A  Completion

*Use this completion exercise to check your understanding of the concepts and terms that are introduced in this section. Each blank can be completed with a term, short phrase, or number.*

The __**1**__ is the equilibrium constant for the equilibrium

between an ionic solid and its ions in solution. The term __**2**__

refers to the lowering of the solubility of a substance by the __**3**__

of a common ion. If the ion-product concentration of two ions in

solution is greater than the $K_{sp}$ of the compound formed from the

two ions, a(n) __**4**__ will form.

1. _____

2. _____

3. _____

4. _____

## Part B  Matching

*Match each description in Column B to the correct term in Column A.*

|  | **Column A** | **Column B** |
|---|---|---|

_____  **5.** solubility product constant ($K_{sp}$)  **a.** an equilibrium constant that can be applied to the solubility of electrolytes

_____  **6.** common ion  **b.** a decrease in the solubility of a substance caused by the addition of a common ion

_____  **7.** common ion effect  **c.** an ion that is common to both salts in a solution

## Part C  Problem

*Answer the following in the space provided.*

**8.** Will a precipitate form when 0.00070 mol $Na_2CO_3$ is mixed with 0.0015 mol $Ba(OH)_2$ in one liter of solution? Assume that these two salts both dissolve completely. Refer to Table 18.2 in your textbook.