Chapter 17- Solubility and Precipitation

17.1 Solubility Equilibria

Differentiate between dissolution and precipitation

What does solubility equilibrium refer to?

Write the solubility equilibrium equation for the dissolution of calcium chloride.

How many ions are produced per formula unit of calcium chloride in solution?

Write the solubility product (equilibrium) expression for the dissolution of calcium chloride?

** Do Practice Problems 1 and 2.*

Differentiate solubility and solubility product.

What information do the following K_{sp} values provide?

a) $K > 1$

b) $K = 1$

c) $K < 1$

** Do Practice Problems 3 to 6.*

17.2 Precipitates

What is a precipitate?

What is the importance of the ion product?

Which direction will the equilibrium position shift for the reactions described below?

a) $Q < K_{sp}$

b) $Q > K_{sp}$

c) $Q = K_{sp}$

What is a precipitation reaction?

List the “Solubility Rules for Ionic Compounds.”

Why do precipitates form in precipitation reactions?

Will silver bromide precipitate if 20.0 mL of 0.010 *M* $AgNO_3$ and 10. mL of 3.0×10^{-4} *M* KBr are mixed? Please show work.

** Do Practice Problems 7 and 8.*

Differentiate between a *complete ionic equation* and *net ionic equation*.

What are spectator ions?

17.3 The Common-ion Effect

What is the common-ion effect?