Name(s): _____

Worksheet: Solubility Equilibria I

1. An experiment is conducted to determine the solubility of magnesium fluoride, and it is found that 0.0080 g of the compound will dissolve in 500.0 mL water. What is K_{sp} for MgF_2?

2. The solubility product constant for silver sulfate is 1.4×10^{-5} at 25°C. What is the solubility (g/100 mL water) of the compound?

3. 25.0 mL of a solution that is 0.0015 M in barium chloride is added to 25.0 mL of a solution that is 0.0010 M in sodium sulfate. Given that $K_{sp} = 1.1 \times 10^{-10}$ for barium sulfate, will precipitation occur or will the solution remain unsaturated? Write the equilibrium expression and provide a calculation to support your answer.