

# Non Sibi High School

Andover's Chem 300: Accelerated/Honors Chemistry

## Chapter 18, Review Quiz 1

**1**

Calculate the molar solubility of lead(II) bromide ( $K_{sp} = 4.0 \times 10^{-5}$ ). Include the solubility equilibrium reaction and  $K_{sp}$  expression in your answer.

**2**

The molar solubility of scandium(III) fluoride is  $1.9 \times 10^{-5}$  M. Calculate the value of  $K_{sp}$  for scandium(III) fluoride. Include the solubility equilibrium reaction and  $K_{sp}$  expression in your answer.

**3**

Predict if precipitation will occur when 14 mL of  $6.5 \times 10^{-5}$  M  $\text{AgNO}_3$  is mixed with 56 mL of  $3.5 \times 10^{-4}$  M  $\text{K}_3\text{PO}_4$ . ( $K_{sp} = 8.9 \times 10^{-17}$  for  $\text{Ag}_3\text{PO}_4$ )

**4**

A metal hydroxide with the formula  $\text{M}(\text{OH})_2$  was mixed with water and stirred until a saturated solution was created. The pH of the solution was found to be 9.88. Calculate the value of  $K_{sp}$  for the metal hydroxide.



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