Ksp and Molar Solubility Worksheet - 01

1. Use the chemical AgCl to describe solubility, molar solubility and solubility product

2. Write balanced equations and solubility product expressions for the following compounds
    a. CuBr

    b. ZnC_2O_4

    c. Ag_2CrO_4

    d. Hg_2Cl_2

    e. $AuCl_3$

    f. $Mn_3(PO_4)_3$

3. Silver Chloride has a larger K_{sp} than silver carbonate (K_{sp} = $1.6x10^{-10}$ and $8.1x10^{-12}$ respectively). Does this mean that AgCl also has a larger molar solubility than Ag_2CO_3? Explain.

4. Calculate the concentration of ions in the following saturated solutions
   a. $[I^-]$ in AgI solutions with $[Ag^+] = 9.1x10^{-9}$
   b. $[Al^{3+}]$ in $Al(OH)_3$ solution with $[OH^-] = 2.9 x10^{-9}$

5. From the solubility data given, calculate the solubility product for the following compounds: a. SrF_2 $7.3x10^{-2}$ g/L
   b. Ag_3PO_4 $6.7x10^{-3}$ g/L

6. The molar solubility of $MnCO_3$ is $4.2x10^{-6}$ M. What is K_{sp} for this compound?

7. If 20.0 mL of 0.10 M $Ba(NO_3)_2$ are added to 50.0 mL of 0.10 M Na_2CO_3, will $BaCO_3$ precipitate? Supply explanation / calculations to support answer.