

****SHOW ALL WORK TO RECEIVE CREDIT****

1. (6 Pts) The solubility product for chromium(III) fluoride is $K_{sp} = 6.6 \times 10^{-11}$. What is the molar solubility of chromium(III) fluoride?
2. (6 Pts) Calculate the silver ion concentration in a saturated solution of silver(I) carbonate ($K_{sp} = 8.1 \times 10^{-12}$).
3. (6 Pts) The solubility of lead(II) iodide is 0.064 g/100 mL at 20°C. What is the solubility product for lead(II) iodide? Molar Masses: Pb 207.2, I 126.9.
4. (7 Pts) Will a precipitate of magnesium fluoride form when 300. mL of 1.1×10^{-3} M $MgCl_2$ are added to 500. mL of 1.2×10^{-3} M NaF? [$K_{sp}(MgF_2) = 6.9 \times 10^{-9}$]. Show calculations to support your answer.