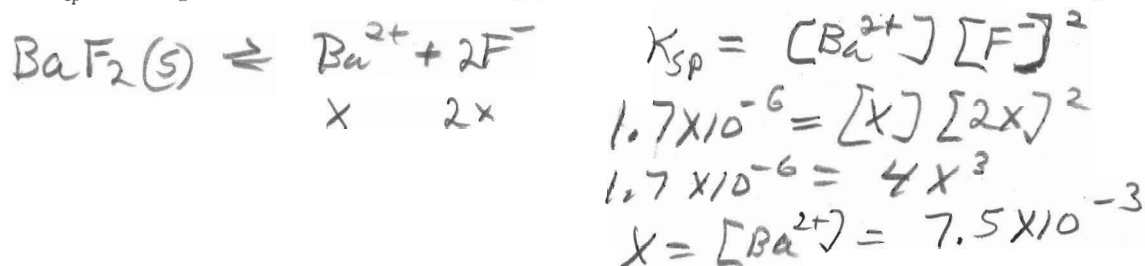


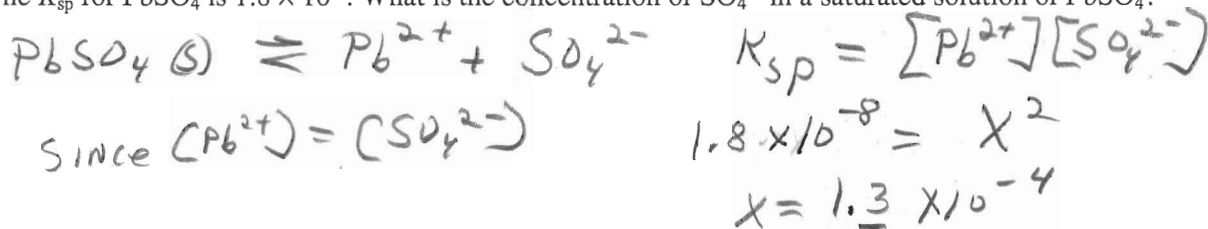
Ksp Worksheet

Name: Key

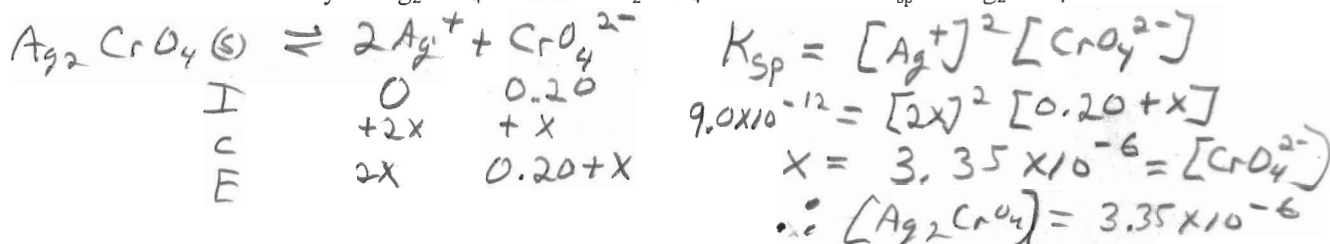
1. The K_{sp} for BaF_2 is 1.7×10^{-6} . What is the concentration of Ba^{2+} in a saturated solution of BaF_2 ?



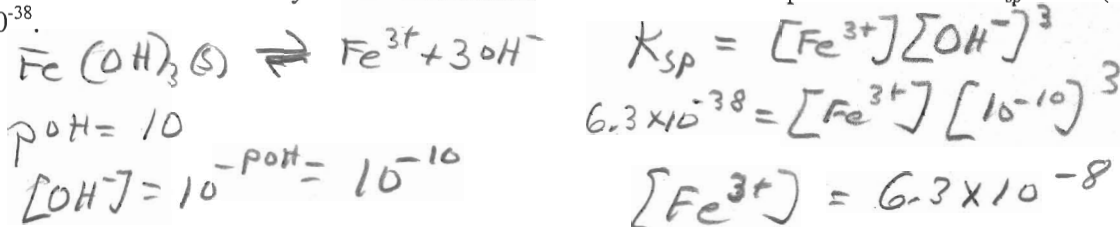
2. The K_{sp} for $PbSO_4$ is 1.8×10^{-8} . What is the concentration of SO_4^{2-} in a saturated solution of $PbSO_4$?



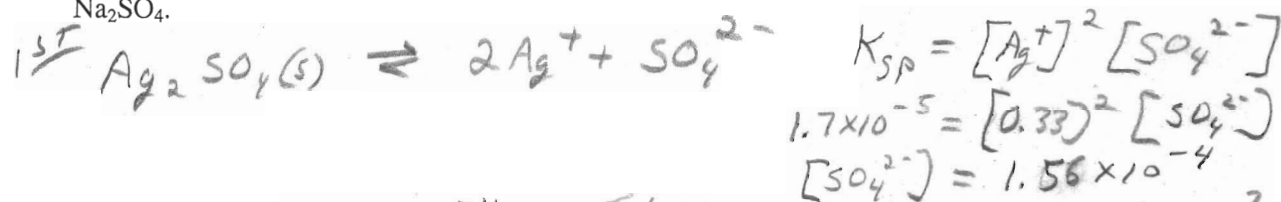
3. What is the molar solubility of Ag_2CrO_4 in 0.20 M K_2CrO_4 ? The value of K_{sp} for Ag_2CrO_4 is 9.0×10^{-12} .



4. What is the molar solubility of Fe^{3+} in a solution that is buffered at a pH of 4.00? The K_{sp} for $Fe(OH)_3$ is 6.3×10^{-38} .



5. What mass of Na_2SO_4 (molar mass = 142.0 g/mol) must be added to 225 mL of 0.33 M Ag^+ to initiate precipitation of Ag_2SO_4 ? The K_{sp} for Ag_2SO_4 is 1.7×10^{-5} . Assume no volume change occurs upon addition of Na_2SO_4 .



then:

$$\frac{225 \text{ mL}}{1000 \text{ mL}} \times \frac{1.56 \times 10^{-4} \text{ mol } SO_4^{2-}}{1 \text{ mol } SO_4^{2-}} \times \frac{1 \text{ mol } Na_2SO_4}{1 \text{ mol } SO_4^{2-}} \times \frac{142.0 \text{ g}}{1 \text{ mol}} = 5.0 \times 10^{-3} \text{ g } Na_2SO_4$$