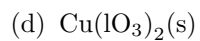
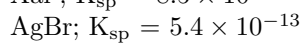
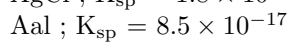
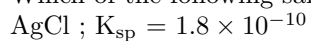


40. Write the EQUILIBRIUM EQUATION for a saturated solution of the following salts AND the corresponding SOLUBILITY PRODUCT EXPRESSIONS.



41. Which of the following salts is the most soluble? Which is the least?



42. A solution in equilibrium with a precipitate of FeCO_3 contains $5 \times 10^{-6} \text{ M Fe}^{2+}$ and $6 \times 10^{-6} \text{ M CO}_3^{2-}$. Calculate K_{sp} for FeCO_3 .

43. What is the concentration of Zn^{2+} ions in a saturated solution made by shaking $\text{ZnS}(\text{s})$ with water?

44. How many grams of $\text{PbSO}_4(\text{s})$ Will dissolve in 5.0 L of water?
47. Calculate the molar solubility of Ag_2CrO_4 .
49. Calculate the solubility of $\text{Fe}(\text{OH})_2$ in grams per litre.
50. A solution in equilibrium with a precipitate of Ag_2S contained $1.6 \times 10^{-16} \text{ M S}^{2-}$ and $2.6 \times 10^{-17} \text{ M Ag}^+$. Calculate the solubility product of Ag_2S .
51. A small piece of the mineral smithsonite, ZnCO_3 , with a mass of 0.000 14 g just barely dissolves in 100.0 mL of water. Calculate K_{sp} for ZnCO_3 .
52. What is the concentration of OH^- in a saturated solution of $\text{Zn}(\text{OH})_2$? $K_{\text{sp}} = 4.1 \times 10^{-17}$ for $\text{Zn}(\text{OH})_2$.
55. The data below was obtained when a student combined various solutions of $\text{Mn}(\text{NO}_3)_2$ and KOH .

Trial	$[\text{Mn}^{2+}]$	$[\text{OH}^-]$
1	$2.1 \times 10^{-5} \text{M}$	$1.0 \times 10^{-4} \text{M}$
2	$7.8 \times 10^{-4} \text{M}$?

What is the value of the $[\text{OH}^-]$ in Trial 2?