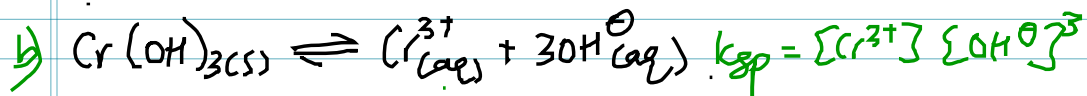
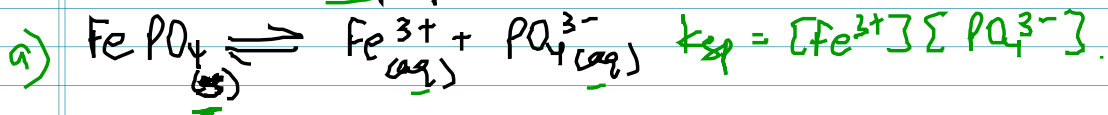
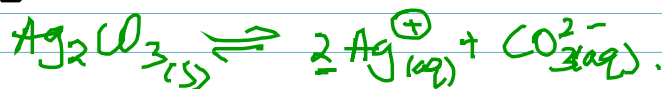


Sapnagupta.K_{sp} ①. K_{sp} expression & Calculation.① Write the K_{sp} for the following:② Calculate the K_{sp} of Ag₂CO₃ of a solution of 32mg in 1L solution.

$$K_{sp} = [\text{Ag}^{+}]^2 [\text{CO}_3^{2-}] \quad \checkmark$$

$$32\text{mg} \times \frac{1\text{g}}{1000\text{mg}} \times \frac{1\text{mol Ag}_2\text{CO}_3}{275.8\text{g Ag}_2\text{CO}_3} \times \frac{1}{1\text{L}} = 1.16 \times 10^{-4}\text{M}$$

$$1.16 \times 10^{-4}\text{M Ag}_2\text{CO}_3 \times \frac{1\text{mol CO}_3^{2-}}{1\text{mol Ag}_2\text{CO}_3} = 1.16 \times 10^{-4}\text{M CO}_3^{2-}$$

$$1.16 \times 10^{-4}\text{M Ag}_2\text{CO}_3 \times \frac{2\text{mol Ag}^{+}}{1\text{mol Ag}_2\text{CO}_3} = 2.3 \times 10^{-4}\text{M Ag}^{+}$$

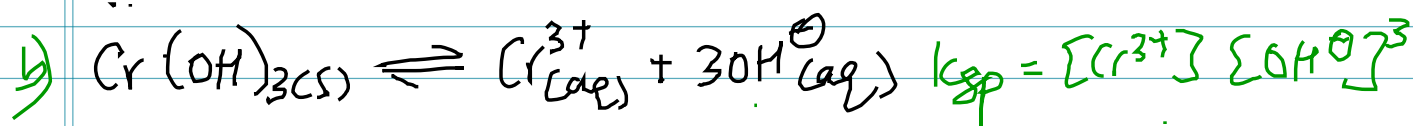
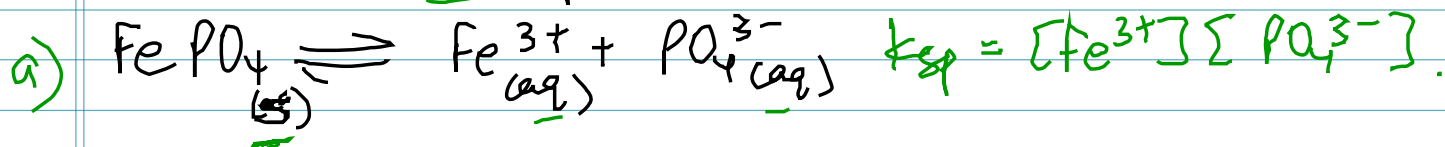
$$K_{sp} = (2.3 \times 10^{-4})^2 (1.16 \times 10^{-4})$$

$$= \boxed{6.3 \times 10^{-12}} \quad \checkmark$$

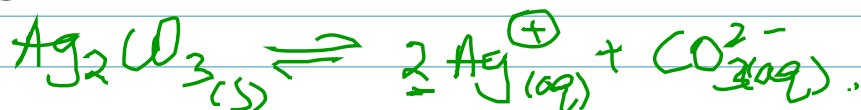
Sapon shifts..

K_{sp} ① K_{sp} expression & Calculation.

① Write the K_{sp} for the following:



② Calculate the K_{sp} of Ag₂CO₃ of a solution of 32mg in 1L solution.



$$K_{sp} = [\text{Ag}^{+}]^2 [\text{CO}_3^{2-}]$$

$$32\text{mg} \times \frac{1\text{g}}{1000\text{mg}} \times \frac{1\text{mol Ag}_2\text{CO}_3}{275.8\text{g Ag}_2\text{CO}_3} \times \frac{1}{1\text{L}} = 1.16 \times 10^{-4}\text{M}$$

$$1.16 \times 10^{-4}\text{M Ag}_2\text{CO}_3 \times \frac{1\text{mol CO}_3^{2-}}{1\text{mol Ag}_2\text{CO}_3} = 1.16 \times 10^{-4}\text{M CO}_3^{2-}$$

$$1.16 \times 10^{-4}\text{M Ag}_2\text{CO}_3 \times \frac{2\text{mol Ag}^{+}}{1\text{mol Ag}_2\text{CO}_3} = 2.3 \times 10^{-4}\text{M Ag}^{+}$$

$$K_{sp} = (2.3 \times 10^{-4})^2 (1.16 \times 10^{-4})$$

$$= \boxed{6.3 \times 10^{-12}}$$