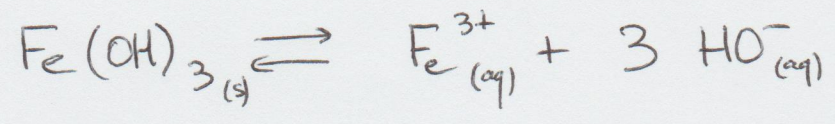


Q1



précipité si $Q_{r,ini} > K_s$

or $Q_{r,ini} = \frac{[\text{Fe}^{3+}]_{ini}}{c^0} \times \left(\frac{[\text{HO}^-]_{ini}}{c^0}\right)^3$

$\rightarrow \frac{c_0}{c^0} \times (10^{\text{pH}-\text{p}K_e})^3 > K_s$

avec $\left\{ \begin{aligned} [\text{HO}^-]_{ini} &= \frac{K_e \cdot c^0}{[\text{H}_3\text{O}^+]_{ini}} = \frac{10^{-\text{p}K_e}}{10^{-\text{pH}}} c^0 \\ &\rightarrow [\text{HO}^-]_{ini} = c^0 \cdot 10^{\text{pH}-\text{p}K_e} \\ \text{et } [\text{Fe}^{3+}]_{ini} &= c_0 \end{aligned} \right.$

$-\log \rightarrow -\log\left(\frac{c_0}{c^0}\right) - 3(\text{pH}-\text{p}K_e) < \text{p}K_s$

$\text{pH} > \frac{1}{3}(\text{p}K_e) - \frac{1}{3}(\text{p}K_s + \log\left(\frac{c_0}{c^0}\right))$

AN pH > 1,7