

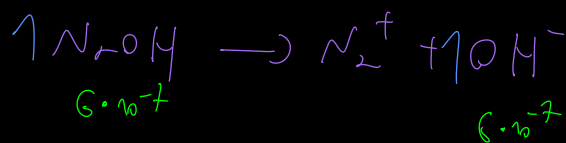
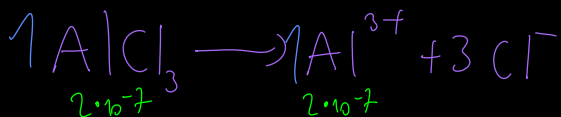
חישוב מסת משקע לפי מסיסויות

$$K_{sp}(Al(OH)_3) = 1.26 \cdot 10^{-33}$$

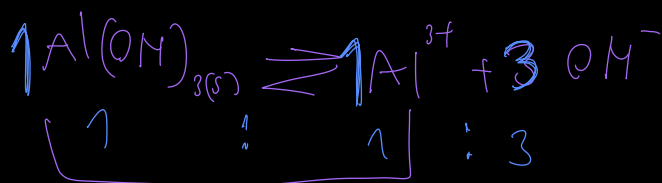
ובתמיסה בנפח 400 מ"ל

$$[AlCl_3] = 2 \cdot 10^{-7} M$$

$$[NaOH] = 6 \cdot 10^{-7} M$$



$$\rightarrow \frac{[OH^-]}{[Al^{3+}]} = \frac{6 \cdot 10^{-7}}{2 \cdot 10^{-7}} = 3 = \frac{3}{1} \leftarrow$$



$$S_{Al} = S_{Al(OH)_3}$$

$$S_{OH} = 3 S_{Al(OH)_3}$$

$$K_{sp} = S_{Al} \cdot (S_{OH})^3 = S_{Al(OH)_3} \cdot (3 S_{Al(OH)_3})^3 = 5.27 S^4 = 27 S^4$$

$$\underline{Al(OH)_3} \quad S = \sqrt[4]{\frac{K_{sp}}{27}} = \sqrt[4]{\frac{1.26 \cdot 10^{-33}}{27}} = 2.61 \cdot 10^{-9} M = S_{Al^{3+}}$$

$$[Al^{3+}]_i - S_{Al^{3+}} = [Al^{3+}]_{(s)} = 2 \cdot 10^{-7} M - 2.61 \cdot 10^{-9} M = \boxed{1.97 \cdot 10^{-7} M}$$

$$n_{Al^{3+}_{(s)}} = 1.97 \cdot 10^{-7} M \cdot 0.4 L = 7.88 \cdot 10^{-8} mol = n_{Al(OH)_3}$$

$$M_w = 78 \frac{gr}{mol}$$

$$m = M_w \cdot n = 78 \frac{gr}{mol} \cdot 7.88 \cdot 10^{-8} mol = 6.15 \cdot 10^{-6} gr$$