Test 2 Equations

Chapter 13

For the reaction $mA + nB \leftrightharpoons xC + yD$

$$Q_c = \frac{[C]^x[D]^y}{[A]^m[B]^n}$$

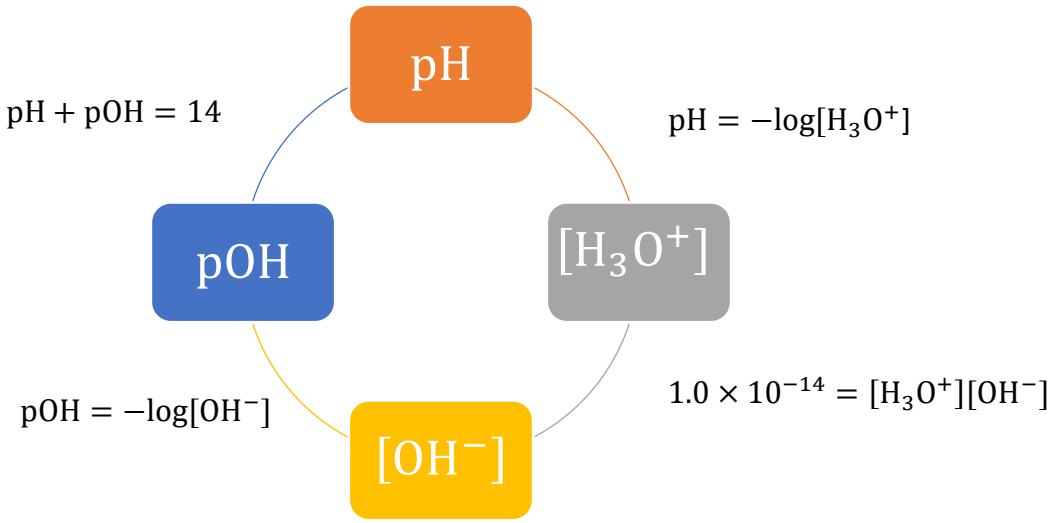
$$K_c = \frac{[C]^x[D]^y}{[A]^m[B]^n}$$

$$K_p = \frac{(P_C)^x(P_D)^y}{(P_A)^m(P_B)^n}$$

$$K_p = K_c(RT)^{\Delta n} \quad *** \text{Here, } R = 0.0821 \frac{\text{L atm}}{\text{mol K}} \text{ and T is in Kelvin}$$

$\Delta n = (\text{sum of coeficients of gaseous products}) - (\text{sum of coeficients of gaseous reactants})$

Chapter 14



For weak acids

$$\% \text{ ionization} = \frac{[H_3O^+]_{eq}}{[HA]_0} \times 100$$

$$1.0 \times 10^{-14} = K_a \times K_b$$

$$pK_a = -\log K_a$$

$$pK_b = -\log K_b$$