$$\mu = \mu^{\ominus} + RTln\frac{P}{P^{\ominus}}$$

$$\mu_A(l) = \mu_A^{\circ}(l) + RTlnX_A$$

$$\Delta T_v = K_e m \qquad K_e = \frac{RM_A\left(T_v^{\circ}\right)^2}{\overline{\Delta H_{izp}}}$$

$$\Delta T_z = K_k m \qquad K_k = \frac{RM_A\left(T_z^{\circ}\right)^2}{\overline{\Delta H_{tal}}}$$

$$\pi = icRT$$

$$v = \frac{1}{\upsilon_i}\frac{dc_i}{dt}$$

$$-\frac{dc}{dt} = k_n c^n$$

$$ln\frac{c}{c_0} = -k_1 t \qquad \tau = \frac{ln2}{k_1}$$

$$c = c_0 - k_0 t \qquad \tau = \frac{c_0}{2k_0}$$

$$\frac{1}{c} = \frac{1}{c_0} + k_2 t \qquad \tau = \frac{1}{c_0 k_2}$$

$$\frac{1}{c^{n-1}} = \frac{1}{c_0^{n-1}} + (n-1)k_n t \qquad \tau = \frac{2^{n-1}-1}{(n-1)k_n c_0^{n-1}}$$

$$k = Ae^{-E_a/RT}$$

$$\Delta G^{\ominus} = -RTlnK_P \qquad \Delta G^{\ominus} = \upsilon_C\mu_C^{\ominus} + \upsilon_D\mu_D^{\ominus} - \upsilon_A\mu_A^{\ominus} - \upsilon_B\mu_B^{\ominus} \qquad K_P = \frac{P_C^{\nu_C}P_D^{\nu_D}}{P_A^{\nu_A}P_B^{\nu_B}}$$

$$K_X = K_P P^{-\Delta\nu} \qquad K_X = \frac{X_C^{\nu_C}X_D^{\nu_D}}{X_A^{\nu_A}X_B^{\nu_B}} \qquad \Delta\upsilon = \upsilon_C + \upsilon_D - \upsilon_A - \upsilon_B$$

$$K_c = K_P(RT)^{-\Delta\nu} \qquad K_c = \frac{c_C^{\nu_C}c_D^{\nu_D}}{c_A^{\nu_A}c_B^{\nu_B}}$$

$$ln\frac{K_P(T_2)}{K_P(T_1)} = -\frac{\overline{\Delta H^{\ominus}}}{R}\left(\frac{1}{T_2} - \frac{1}{T_1}\right)$$