

$$\Delta H_r^0 = \sum (\eta \Delta H_f^0(\text{prod})) - \sum (\eta \Delta H_f^0(\text{react}))$$

$$\Delta H = \Delta U + RT(\Delta n)$$

$$Q = m \cdot C \cdot \Delta T$$

$$\Delta G^0 = -RT \ln(K_p)$$

$$\Delta G = \Delta H - T \Delta S$$

$$\ln(K_p) = -\frac{\Delta H^0}{R} \frac{1}{T} + \text{Cte}$$

$$\ln(K_{p,T_2}) = \frac{\Delta H^0}{R} \left(\frac{1}{T_1} - \frac{1}{T_2} \right) + \ln(K_{p,T_1})$$

$$\Delta S = \frac{Q_{\text{rev}}}{T}$$

$$\Delta S = \frac{\Delta H}{T}$$

$$\ln(p) = -\frac{\Delta H}{R} \frac{1}{T} + \text{Cte}$$

$$\ln(p_2) = -\frac{\Delta H}{R} \left(\frac{1}{T_2} - \frac{1}{T_1} \right) + \ln(p_1)$$

$$v = \frac{k_2[E]_0[S]}{K_M + [S]}$$

$$\ln\left(\frac{k_1}{k_2}\right) = -\frac{E_a}{R} \left(\frac{1}{T_1} - \frac{1}{T_2} \right)$$

$$k = Ae^{-\frac{E_a}{RT}}$$

$$\ln(k) = \ln(A) - \frac{E_a}{RT}$$

$$v = k \cdot [A]^n$$

$$[A] = [A]_0 - k \cdot t$$

$$\ln([A]) = \ln([A]_0) - k \cdot t$$

$$\frac{1}{[A]} = \frac{1}{[A]_0} + k \cdot t$$

$$\log(t) = \log(\text{Cte}) - n \log([A])$$

$$k = \frac{\ln(2)}{t_{1/2}}$$

$$\ln\left(\frac{[A]}{[A]_0}\right) = -k \cdot t \quad \text{ó} \quad \frac{[A]}{[A]_0} = e^{-kt}$$

$$a_i = \gamma_i m_i$$

$$\log(\gamma_i) = -A \cdot z_i^2 \sqrt{I}$$

$$I = \frac{1}{2} \sum z_i^2 \cdot m_i$$

$$K_{b/f} = \frac{M_D R T_0^2}{\Delta H_{v/f}}$$

$$\Delta T = \pm K_{b/f} m$$

$$\pi = cRT$$

$$p_D = p_D^0 \cdot x_D$$

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$$\frac{1}{[A]} = \frac{1}{[A]_0} + k \cdot t$$

$$\text{Log}(t) = \text{Log}(Cte) - n\text{Log}([A])$$

$$k = \frac{\ln(2)}{t_{1/2}}$$

$$\ln\left(\frac{[A]}{[A]_0}\right) = -k \cdot t \quad \text{ó} \quad \frac{[A]}{[A]_0} = e^{-kt}$$

$$\left(p + \frac{a}{\bar{V}^2}\right)(\bar{V} - b) = RT$$

$$\Delta S = C_V \ln\left(\frac{T_2}{T_1}\right) + nR \ln\left(\frac{V_2}{V_1}\right)$$

$$a_i = \gamma_i m_i$$

$$\log(\gamma) = -Az^2\sqrt{I}$$

$$I = \frac{1}{2} \sum z_i^2 \cdot m_i$$

$$K_{b/f} = \frac{M_D R T_0^2}{\Delta H_{v/f}}$$

$$\pi = cRT$$

$$\Delta T = \pm K_{b/f} m$$

$$p_D = p_D^0 \cdot x_D$$

$$W = nRT \ln\left(\frac{V_f}{V_i}\right)$$

$$T_2 = \frac{T_1(\bar{V}_1)^{(\gamma-1)}}{(\bar{V}_2)^{(\gamma-1)}}$$

$$\Delta U = C_V \Delta T$$

$$\Delta H = C_p \Delta T$$