Chemistry 40S

Formulas

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$n = \frac{m}{m_R}$$

$$C = \frac{n}{V}$$

$$n = \frac{\#\ of\ particles}{N_A}$$

$$n = \frac{V}{m_V}$$

$$\Delta H = H_{products} - H_{reactants}$$

$$K_w = \left[H_3O^+\right]\left[OH^-\right]$$

$$pH = -\log\left[H_3O^+\right]$$

$$\left[H_3O^+\right] = 10^{-pH}$$

$$pOH = -\log\left[OH^-\right]$$

$$\left[OH^-\right] = 10^{-pOH}$$

$$pH + pOH = 14.00$$

$$\%\ ionization = \frac{\left[H_3O^+\right]}{\left[HA\right]} \times 100\%$$

$$K_a \cdot K_b = K_w$$

$$E^0_{cell} = E^0_{ox} + E^0_{red}$$

$$Q = I \cdot t$$

$$n_{e^-} = \frac{I \cdot t}{96500}$$

Constants

$$K_w = 1.0 \times 10^{-14}$$

$$N_A = 6.02 \times 10^{23}$$