

## CHM 151 Equation Sheet

$$^{\circ}\text{C} = \frac{5}{9} (^{\circ}\text{F} - 32)$$

$$^{\circ}\text{F} = \frac{9}{5} (^{\circ}\text{C}) + 32$$

mass of electron = 0.000549 amu

mass of proton = 1.00728 amu

mass of neutron = 1.00867 amu

$$c = \lambda\nu$$

$$E = h\nu$$

$$J = \text{kg}\cdot\text{m}^2 / \text{s}^2$$

$$\lambda = h/mv \quad (m = \text{mass}, v = \text{velocity})$$

$$1 \text{ atm} = 760 \text{ torr} = 760 \text{ mmHg} = 101.3 \text{ kPa}$$

$$\text{MM} = \frac{dRT}{P}$$

$$R = 0.08206 \text{ L}\cdot\text{atm}/\text{mol}\cdot\text{K}$$

$$X_A = n_A / (n_A + n_B)$$

$$P_A = X_A P_T$$

$$\Delta E = E_{\text{final}} - E_{\text{initial}}$$

$$\Delta H = H_{\text{final}} - H_{\text{initial}}$$

$$q = m \cdot \text{sp. ht.} \cdot \Delta T$$

$$q = C \cdot \Delta T$$

$$q_{\text{gained}} + q_{\text{lost}} = 0$$

$$\Delta H^{\circ}_{\text{rxn}} = \sum n \Delta H^{\circ}_f (\text{products}) - \sum n \Delta H^{\circ}_f (\text{reactants})$$

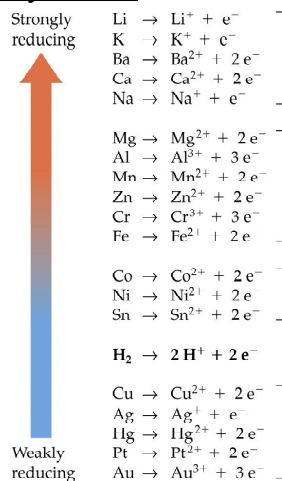
$$\Delta H_T = \Delta H_1 + \Delta H_2 + \dots$$

$$\Delta H^{\circ}_{\text{rxn}} = \sum \text{BE}_{(\text{reactants})} + -(\sum \text{BE}_{(\text{products})})$$

$$\Delta T_b = K_b \cdot m$$

$$\Delta T_f = K_f \cdot m$$

### Activity Series:



### Electronegativity values:

F	4.0
O	3.5
Cl, N	3.0
C, I, S	2.5
H	2.1
B	2.0