Constants		
R = 0.08205783 (L·atm)/(mol·K) = 8.314510 J/(mol·K) or (kPa·dm^3)/(K·mol)		
Ci = 3.700 x 10^{10} disintegrations/s		
c = 3.00 x 10^8 m/s		
1 atm = 1.013 x 10^5 Pa = 760 torr = 760 mm Hg		
F = 9.65 x 10^4 C/mol e^-		
Key formulas and Relationships		
$E = mc^2$		
A = C/s		
PV = nRT		
CV = J		
$t_{1/2} = 0.693/k$		
$t_{1/2} = 1/k[A]_o$		
$\boldsymbol{t_{1/2} = \frac{[A]_0}{2k}}$		
$\ln[A]_t / [A]_o = -kt$		
$\ln[A]_t = -kt + \ln[A]_o$		
$\ln\left[\frac{k_2}{k_1}\right] = \left[\frac{E_a}{R}\right]\left(\frac{1}{T_1} - \frac{1}{T_2}\right)$		
$\boldsymbol{\frac{1}{[A]_t} = kt + \frac{1}{[A]_0}}$		
$\boldsymbol{[A]_t = -kt + [A]_0}$		
$ln(N_t/N_0) = -kt$		
$\boldsymbol{pH = pK_a + \log\left(\frac{conj.base}{acid}\right)}$		
$\Delta G^o = -nFE^o$		
$\boldsymbol{E = E^0 - \frac{RT\ln Q}{nF}}$	$\boldsymbol{E = E^0 - \frac{2.303RT\log Q}{nF}}$	@298K $\boldsymbol{E = E^0 - \frac{0.0592\log Q}{n}}$
@298K $\log K = nE^o/0.0592$		
$\Delta E = q + w$	$w = -P\Delta V$	
$\Delta H^o = \Sigma nH^o_{(products)} - \Sigma nH^o_{(reactants)}$		
$\Delta S^o = \Sigma nS^o_{(products)} - \Sigma nS^o_{(reactants)}$		
$\Delta G^o = \Sigma nG^o_{(products)} - \Sigma nG^o_{(reactants)}$		
$\Delta G^o = \Delta H^o - T\Delta S^o$		
$\Delta G = \Delta G^o + RTlnQ$	$\Delta G = \Delta G^o + 2.303RTlogQ$	
$\Delta G^o = -RTlnK$	$\Delta G^o = -2.303RTlogK$	
