Physics Equations & Constants

$m = \frac{\Delta y}{\Delta x}$	$F_f = \mu F_N$	$P = \frac{W}{t}$
$y = mx + b$	$T = 2\pi\sqrt{\frac{L}{g}}$	$\boldsymbol{MA} = \frac{\boldsymbol{F_r}}{\boldsymbol{F_e}}$
$R^2 = a^2 + b^2$	$F_{\parallel} = mg\sin\theta$	$\boldsymbol{IMA} = \frac{\boldsymbol{d_e}}{\boldsymbol{d_r}}$
SOH, CAH, TOA	$F_{\perp} = mg\cos\theta$	$\boldsymbol{\%eff} = \frac{\boldsymbol{W_o}}{\boldsymbol{W_i}} \times 100$
$v_x = v_0\cos\theta$	$F_c = ma_c$	$K = \frac{1}{2}mv^2$
$v_y = v_0\sin\theta$	$a_c = \frac{v^2}{r}$	$U_g = mgh$
$\bar{v} = \frac{\Delta d}{\Delta t}$	$v = \frac{2\pi r}{T}$	$v = \lambda f$
$\bar{\boldsymbol{a}} = \frac{\Delta \boldsymbol{v}}{\Delta t}$	$\frac{T_A^{\,2}}{r_A^{\,3}} = \frac{T_B^{\,2}}{r_B^{\,3}}$	$f = \frac{1}{T}$
$v = v_0 + at$	$F_g = \frac{Gm_1m_2}{r^2}$	$n_i \sin\theta_i = n_r \sin\theta_r$
$d = v_0t + \frac{1}{2}at^2$	$v = \sqrt{\frac{GM_E}{r}}$	$n = \frac{c}{v}$
$v^2 = v_0^{\,2} + 2ad$	$\boldsymbol{p} = m\boldsymbol{v}$	$\frac{1}{f} = \frac{1}{d_o} + \frac{1}{d_i}$
$\sum F = ma$	$\boldsymbol{F}\Delta t = \Delta\boldsymbol{p}$	$m = \frac{-d_i}{d_o} = \frac{h_i}{h_o}$
$F_g = mg$	$W = Fd$	$f_d = f_s\left(\frac{v + v_d}{v - v_s}\right)$
$g = -9.8\ ^{m}/_{s^2}$	$u = 1.66 \times 10^{-27}$ kg	$N_A = 6.022 \times 10^{23}\ ^{particles}/_{mole}$
$G = 6.67 \times 10^{-11}\ ^{Nm^2}/_{kg^2}$	$c = 3.0 \times 10^{8}\ ^{m}/_{s}$	$v_s = 331\,^{m}/_{s} + (0.6\,^{m}/_{s} \times C^{\circ})$

Table 8-1			
Planetary Data			
Name	Average Radius of Planet (m)	Mass (kg)	Mean Distance from Sun –Orbital radius (m)
Sun	696×10^6	1.99×10^{30}	--
Mercury	2.44×10^6	3.30×10^{23}	5.79×10^{10}
Venus	6.05×10^6	4.87×10^{24}	1.08×10^{11}
Earth	6.38×10^6	5.97×10^{24}	1.50×10^{11}
Mars	3.40×10^6	6.42×10^{23}	2.28×10^{11}
Jupiter	71.5×10^6	1.90×10^{27}	7.78×10^{11}
Saturn	60.3×10^6	5.69×10^{26}	1.43×10^{12}
Uranus	25.6×10^6	8.66×10^{25}	2.87×10^{12}
Neptune	24.8×10^6	1.03×10^{26}	4.50×10^{12}
Dwarf Planet Pluto	1.15×10^6	1.50×10^{22}	5.91×10^{12}
Moon	1.74×10^6	7.16×10^{22}	3.84×10^8 from Earth