MID TERM EQUATIONS

$$V = \frac{\Delta d}{\Delta t}$$

$$d = 1/2\frac{v_f^{\,2} - v_i^{\,2}}{a}$$

$$v_f = \sqrt{2ad + v_i^{\,2}}$$

$$d = 1/2(v_f - v_i)t$$

$$d = v_i t + 1/2at^2$$

$$a = \frac{v_f - v_i}{t}$$

$$F_{net} = ma$$

$$v_f = \sqrt{2gd + v_i^{\,2}}$$

$$d = v_i t + 1/2gt^2$$

$$F_f = \mu F_n$$

$$G = 6.67 \times 10^{-11}\ \mathrm{Nm^2/kg^2}$$

$$a_c = \frac{v^2}{r}$$

$$F_v = \sin\theta(w)$$

$$F_h = \cos\theta(w)$$

$$F_\perp = \cos\theta(w)$$

$$F_\Pi = \sin\theta(w)$$

$$c^2 = a^2 + b^2$$

$$T = 2\pi\sqrt{\frac{l}{g}}$$

$$\left(\frac{T_a}{T_b}\right)^2 = \left(\frac{r_a}{r_b}\right)^3$$

$$g = \frac{F}{m}$$

$$T = 2\pi\sqrt{\frac{r^3}{GM_e}}$$

$$T_p^{\,2} = \left(\frac{4\pi^2}{GM_s}\right) r_{ps}^{\,3}$$

$$F = G\frac{m_1 m_2}{d^2}$$

$$F_c = m\left(\frac{4\pi^2 r}{T^2}\right)$$