$\sin\theta = \frac{opp}{hyp}$ $\cos\theta = \frac{adj}{hyp}$ $\tan\theta = \frac{opp}{adj}$ $hyp^2 = adj^2 + opp^2$ $\sin^2\theta + \cos^2\theta = 1$

$\sin 2\theta = 2\sin\theta\cos\theta$ If $ax^2 + bx + c = 0$, then $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$. $slope = \frac{\Delta y}{\Delta x}$ $g = 9.80\frac{m}{\sec^2}$

$\vec{v}_{ave} = \frac{\Delta\vec{x}}{\Delta t}$ $\vec{a}_{ave} = \frac{\Delta\vec{v}}{\Delta t}$ $\vec{x} = \vec{v}_o t + \frac{1}{2}\vec{a}t^2$ $\vec{v} = \vec{v}_o + \vec{a}t$ $v^2 = v_o{}^2 \pm 2ax$ $\vec{x} = \frac{1}{2}(\vec{v} + \vec{v}_o)t$

$t_1 = \sqrt{\frac{2h}{g}}$ $R_1 = v_0\sqrt{\frac{2h}{g}}$ $t_2 = \frac{2v_o\sin\theta}{g}$ $R_2 = \frac{v_o{}^2\sin 2\theta}{g}$ $y(\max) = \frac{(v_o\sin\theta)^2}{2g}$

$\Sigma\vec{F} = m\vec{a}$ $F = \frac{Gm_1m_2}{R^2}$ $G = 6.67x10^{-11}\frac{Nm^2}{kg^2}$ $\vec{F}_g = m\vec{g}$ $F_{fk} = \mu_k F_N$ $F_{fs} \le \mu_s F_N$

$v = \frac{2\pi R}{T}$ $a_c = \frac{v^2}{R}$ $W = (F\cos\theta)s$ $K.E. = \frac{1}{2}mv^2$ $P.E._g = mgy$

$P = \frac{\Delta E}{\Delta t} = \frac{W}{\Delta t} = Fv_{ave}$ $\vec{p} = m\vec{v}$ $x = \theta R$ $v_T = v = \omega R$ $a_T = \alpha R$

$\vec{\omega}_{ave} = \frac{\Delta\vec{\theta}}{\Delta t}$ $\vec{\alpha}_{ave} = \frac{\Delta\vec{\omega}}{\Delta t}$ $\vec{\theta} = \vec{\omega}_o t + \frac{1}{2}\vec{\alpha}t^2$ $\vec{\omega} = \vec{\omega}_o + \vec{\alpha}t$ $\omega^2 = \omega_o{}^2 \pm 2\alpha\theta$ $\vec{\theta} = \frac{1}{2}(\vec{\omega} + \vec{\omega}_o)t$

$\tau = Fl$ $\Sigma\vec{\tau} = I\vec{\alpha}$ $W_R = \pm\tau\Delta\theta$ $K.E._R = \frac{1}{2}I\omega^2$ $L = I\omega$