Physics Formula Sheet

$\vec{v_{av}} = \left(\frac{\vec{v_1}+\vec{v_2}}{2}\right)$ $\quad \vec{v}_2 = \vec{v}_1 + \vec{a}\Delta t$ $\quad \vec{\Delta d} = \left(\frac{\vec{v}_1+\vec{v}_2}{2}\right)\Delta t$ $\quad \vec{\Delta d} = \vec{v_1}\Delta t + \frac{1}{2}\vec{a}\Delta t^2$

$\vec{\Delta d} = \vec{v_2}\Delta t - \frac{1}{2}\vec{a}\Delta t^2$ $\quad \vec{v_2}^{\,2} = \vec{v_1}^{\,2} + 2\vec{a}\vec{\Delta d}$ $\quad \Delta t = \frac{2v_1 sin\theta}{g}$ $\quad \Delta d_x = \frac{v_1^2 sin2\theta}{g}$

$\vec{v_{og}} = \vec{v_{om}} + \vec{v_{mg}}$ $\quad F_g = mg$ $\quad F_g = \frac{Gm_1m_2}{r^2}$ $\quad T = 2\pi\sqrt{\frac{L}{g}}$