Made by Will Dacey

Equation Sheet

Chapter 2

$\vec{V} = \frac{\Delta \vec{X}}{\Delta t}$ $\quad \vec{a} = \frac{\Delta V}{t} = \frac{V_f - V_0}{\Delta t}$

$\Delta \vec{x} = \vec{V}_0 \Delta t + \frac{1}{2}\Delta t^2 a$ $\quad \vec{V}_f^{\,2} = \vec{V}_0^{\,2} + 2\vec{a}\Delta\vec{x}$

$\Delta \vec{x} = \left[\frac{V_f^2 - V_0^2}{2\vec{a}}\right]$

Ch 3. (Free Fall)

$\Delta \vec{y} = V_{0y} \Delta t + \frac{1}{2} g \Delta t^2$ $\quad V_{fy}^2 = V_{0y}^2 + 2g\Delta t$

Ch 4 (Newtons Laws)

$\sum \vec{F} = m\vec{a}$ $\quad W = mg$

$V = \frac{2\pi r}{T}$ $\quad F_g = G\frac{m M_e}{r^2}$

$f_s \propto F_N$

$f_s^{max} = \mu_s F_N$ $\quad f_k = \mu_k F_N$

Chapter 5 (Uniform Centripetal Motion)

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

Ch. 6 (Work and Energy)

$W_{ork} = F \Delta x \cos\theta$

$W_{net} = \frac{1}{2} m V_f^2 - \frac{1}{2} m V_0^2$

$W_{net} = \Delta KE$

$PE_g = mgh$

$PE = KE$

$\downarrow$

$V = \sqrt{2gh}$