Possibly useful relations:

$\vec{A} = A_x\hat{i} + A_y\hat{j} + A_z\hat{k}$ $\qquad |\vec{A}| = \sqrt{A_x^2 + A_y^2 + A_z^2}$

$\vec{v}_{\text{avg}} = \frac{\Delta\vec{r}}{\Delta t}$ $\qquad \vec{v}(t) = \frac{d\vec{r}}{dt}$ $\qquad \vec{a}_{\text{avg}} = \frac{\Delta\vec{v}}{\Delta t}$

$\vec{a}(t) = \frac{d\vec{v}}{dt}$ $\qquad \vec{v_f} = \vec{v_i} + \vec{a}t$ $\qquad v_{\text{avg}} = \frac{v_i + v_f}{2}$

$x_f = x_i + v_i t + \frac{1}{2}at^2$ $\qquad \vec{r}_f = \vec{r}_i + \vec{v}_i t + \frac{1}{2}\vec{a}t^2$ $\qquad x_f = x_i + v_{\text{avg}}t$

$v_f^2 = v_i^2 + 2a\Delta x$ $\qquad a_c = \frac{v^2}{r}$

$v = \frac{2\pi r}{T}$ $\qquad v = r\omega$ $\qquad \omega = \frac{2\pi}{T}$

$\vec{v}_{AB} = \vec{v}_{AC} + \vec{v}_{CB}$ $\qquad \Sigma\vec{F} = m\vec{a}$ $\qquad \vec{F}_{AB} = -\vec{F}_{BA}$

$\vec{W} = m\vec{g}$ $\qquad f_S \leq \mu_S N$ $\qquad f_K = \mu_K N$

$W = F\Delta x$ $\qquad W = \vec{F}\cdot\Delta\vec{r}$ $\qquad W = \int\vec{F}\cdot d\vec{r}$

$W = \Delta K$ $\qquad K = \frac{1}{2}mv^2$ $\qquad \Delta U = -W$

$\vec{A}\cdot\vec{B} = AB\cos\theta = A_xB_x + A_yB_y + A_zB_z$ $\qquad F_x = -\frac{dU}{dx}$

$F = -kx$

$U = mgy + U_0$ $\qquad U = \frac{1}{2}kx^2 + U_0$ $\qquad K_i + U_i = K_f + U_f$

$\Delta U + \Delta K + \Delta E_{\text{int}} = W^{\text{ext}}$ $\qquad \Delta E_{\text{int}} = f_K d$ $\qquad E_{\text{total}}^{\text{isolated}} = \text{const.}$

$P = \frac{dE}{dt}$ $\qquad P = \frac{dW}{dt}$ $\qquad P = \vec{F}\cdot\vec{v}$

$\vec{p} = m\vec{v}$ $\qquad \vec{F} = \frac{d\vec{p}}{dt}$ $\qquad \vec{p}_{\text{total}} = \text{const.}$

$\vec{I} = \Delta\vec{p} = \int\vec{F}dt = \vec{F}_{\text{av}}\Delta t$ $\qquad \vec{r}_{\text{cm}} = \frac{1}{M}\Sigma\vec{r}_i m_i$ $\qquad \vec{r}_{\text{cm}} = \frac{1}{M}\int\vec{r}dm$

$\Sigma\vec{F}_{\text{ext}} = M\vec{a}_{\text{cm}}$ $\qquad M\vec{v}_{\text{cm}} = \vec{p}_{\text{total}}$

(over)

$s = r\theta$	$v = r\omega$	$a_T = r\alpha$
$\omega = \frac{d\theta}{dt}$	$\alpha = \frac{d\omega}{dt}$	
$\theta_f = \theta_i + \omega_i t + \frac{1}{2}\alpha t^2$	$\omega_f = \omega_i + \alpha t$	$\omega_f^2 = \omega_i^2 + 2\alpha\Delta\theta$
$\theta_f = \theta_i + \omega_{\text{avg}} t$	$\tau = Fr\sin\phi = Fd$	$\Sigma\tau_{\text{ext}} = I\alpha$
$\vec{\tau} = \vec{r} \times \vec{F}$	$\|\vec{A} \times \vec{B}\| = AB\sin\theta$	
$I = \Sigma m_i r_i^2$	$I = \int r^2 dm$	$I = I_{\text{cm}} + MD^2$
$\vec{L} = \vec{r} \times \vec{p}$	$\vec{L} = I\vec{\omega}$	
$K_{\text{rot}} = \frac{1}{2} I_{\text{cm}}\omega^2$	$v_{\text{cm}} = R\omega$	$a_{\text{cm}} = R\alpha$
$W = \int \tau d\theta$	$P = \tau\omega$	$\vec{L}_{\text{total}} = \text{constant}$
$\Sigma\vec{\tau} = \frac{d\vec{L}}{dt}$	$\Sigma\vec{F}_{\text{ext}} = 0$	$\Sigma\vec{\tau}_{\text{ext}} = 0$
$\vec{F}_{12} = -\frac{Gm_1m_2}{r_{12}^2}\ \hat{r}_{12}$	$T^2 = (\frac{4\pi^2}{GM})R^3$	$U(r) = -\frac{Gm_1m_2}{r} + U_0$

$\cos\theta = \text{adjacent/hypo.}$ $\quad\sin\theta = \text{opposite/hypo.}$

$\tan\theta = \frac{\sin\theta}{\cos\theta}$ $\quad x = \frac{-b\pm\sqrt{b^2-4ac}}{2a}$

$g = 9.8\ \text{m/s}^2$ downward

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