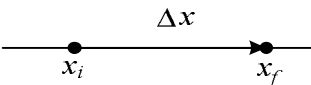


Formula Sheet (3rd Midterm)

Formulas	Variables	Variables continued & Constants	Picture (Visualization)
example $\Delta x \equiv x_f - x_i$	Δx : displacement x_f : final position	x_i : initial position	
$\Delta\theta = \theta_f - \theta_i$			
$\omega = \frac{\Delta\theta}{\Delta t}$			
$\alpha = \frac{\Delta\omega}{\Delta t}$			
$v_t = r\omega$			
$a_t = r\alpha$ $a_c = \frac{v^2}{r}$ $a_t = r\omega^2$ $a = \sqrt{a_t^2 + a_c^2}$			
$\omega = \omega_i + \alpha t$			
$\Delta\theta = \omega_i t + \frac{1}{2}\alpha t^2$			
$\omega^2 = \omega_i^2 + 2\alpha\Delta\theta$			
$F_c = m\frac{v^2}{r}$			
$ GPE = G\frac{Mm}{r}$			
$\tau = rF \sin \theta$			
$\sum \tau = I\alpha$			
$I = MR^2$			
$I = \frac{1}{2}MR^2$			
$I = \frac{2}{5}MR^2$			
$I = \frac{2}{3}MR^2$			

$I = \frac{1}{12}MR^2$			
$I = \frac{1}{3}MR^2$			
$KE_r = \frac{1}{2}I\omega^2$			
$L = I\omega$			
$I_f\omega_f = I_i\omega_i$			
$\frac{F}{A} = Y \frac{\Delta L}{L_0}$			
$\frac{F}{A} = S \frac{\Delta x}{h}$			
$\rho \equiv \frac{M}{V}$			
$P \equiv \frac{F}{A}$			
$P = P_0 + \rho gh$			
$A_1v_1 = A_2v_2$			
$P_1 + \frac{1}{2}\rho v_1^2 + \rho gy_1$ $= P_2 + \frac{1}{2}\rho v_2^2 + \rho gy_2$			
$F = \eta \frac{Av}{d}$			
$\frac{\Delta V}{\Delta t} = \frac{\pi R^4(P_1 - P_2)}{8\eta L}$			
$RN = \frac{\rho vd}{\eta}$			