

Values of Rotational Inertia I
 Thin hoop mr^2
 Solid cylinder $\frac{1}{2}mr^2$
 Hollow cylinder $\frac{1}{2}m(r_1^2 + r_2^2)$
 Sphere $\frac{2}{5}mr^2$
 A sphere is the fastest object

Equilibrium Probs

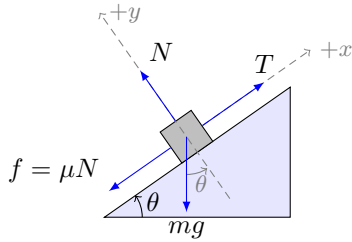
$$F_{up} = F_{down}$$

$$F_{left} = F_{right}$$

$$\tau_{CW} = \tau_{CCW}$$

Choose pivot point
 at unknown force

Free body diagrams!



$$N = mg \cos \theta$$

$$T - mg \sin \theta - f = ma$$

$$T - mg \sin \theta - \mu mg \cos \theta = ma$$