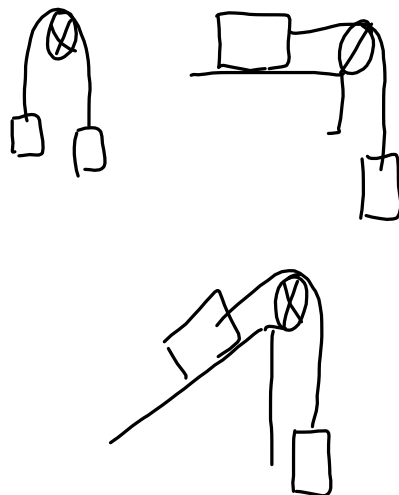


TEST10-2 Connected Masses

- draw FBD
- set up an Fnet expression for each mass ( $\vec{F}_{\text{net}} = m\vec{a}$ )
- solve system of equations (a and T)

10-3 Static Equilibrium + Torque

- 2 conditions
  - $\rightarrow F_{\text{net}} = 0$
  - $\rightarrow \tau_{\text{net}} = 0 \Rightarrow \sum \tau_{\text{ccw}} = \sum \tau_{\text{cw}}$
- FBD are essential!
- Torque:  $\tau = r_{\perp} F$   
 $\tau = r F \sin \theta$

10-4 2D Collisions

- Law of Conservation of Momentum  $(\vec{p} = m\vec{v})$   
 $\vec{p}_{\text{total}} = \vec{p}'_{\text{total}}$

① x-y chart  $\Rightarrow$  BEFORE/AFTER

② momentum vector addition diagram

- Elastic collisions  $\Rightarrow$  KE is conserved.