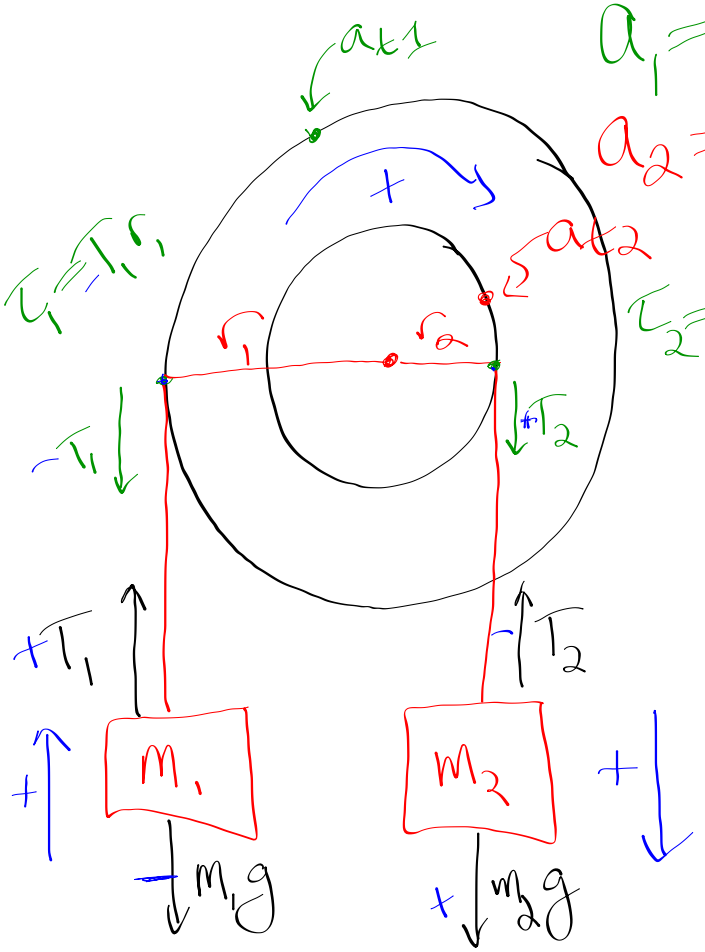


$a_1 = a_{t1}$ $\quad a_2 = a_{t2}$ $\quad \alpha = \frac{a_t}{r}$ $\quad \Sigma \tau = I\alpha$

$a_{t1} = \alpha \cdot r_1$ $\quad a_{t2} = \alpha \cdot r_2$

Inputs: r_1, m_1, r_2, m_2

$\Sigma F_1 = m_1 a_{t1}$

$-m_1 g + T_1 = m_1 a_{t1}$

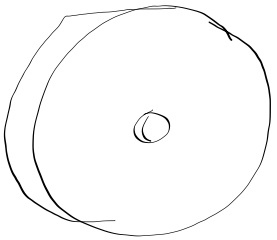
$T_1 = m_1 a_{t1} + m_1 g$

$\Sigma F_2 = m_2 a_{t2}$

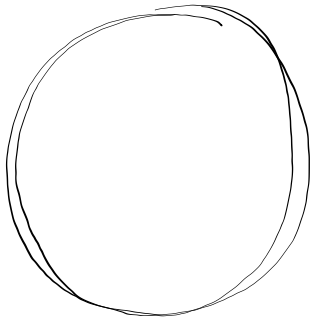
$m_2 g + -T_2 = m_2 a_{t2}$

$T_2 = m_2 g - m_2 a_{t2}$

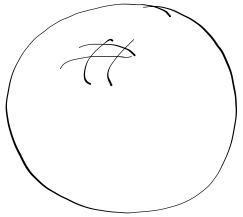
a = + if wheel is accelerating clockwise



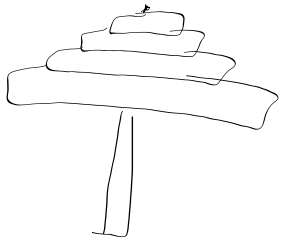
Disk: $I = \frac{1}{2}mr^2$



Hoop/
Point mass: $I = mr^2$



Sphere: $I = \frac{2}{5}mr^2$



Atwood: ~~$I = ???$~~

$\Sigma\tau = I \cdot \alpha$

$I = \frac{\Sigma\tau}{\alpha}$ ← measure
↳ measure