

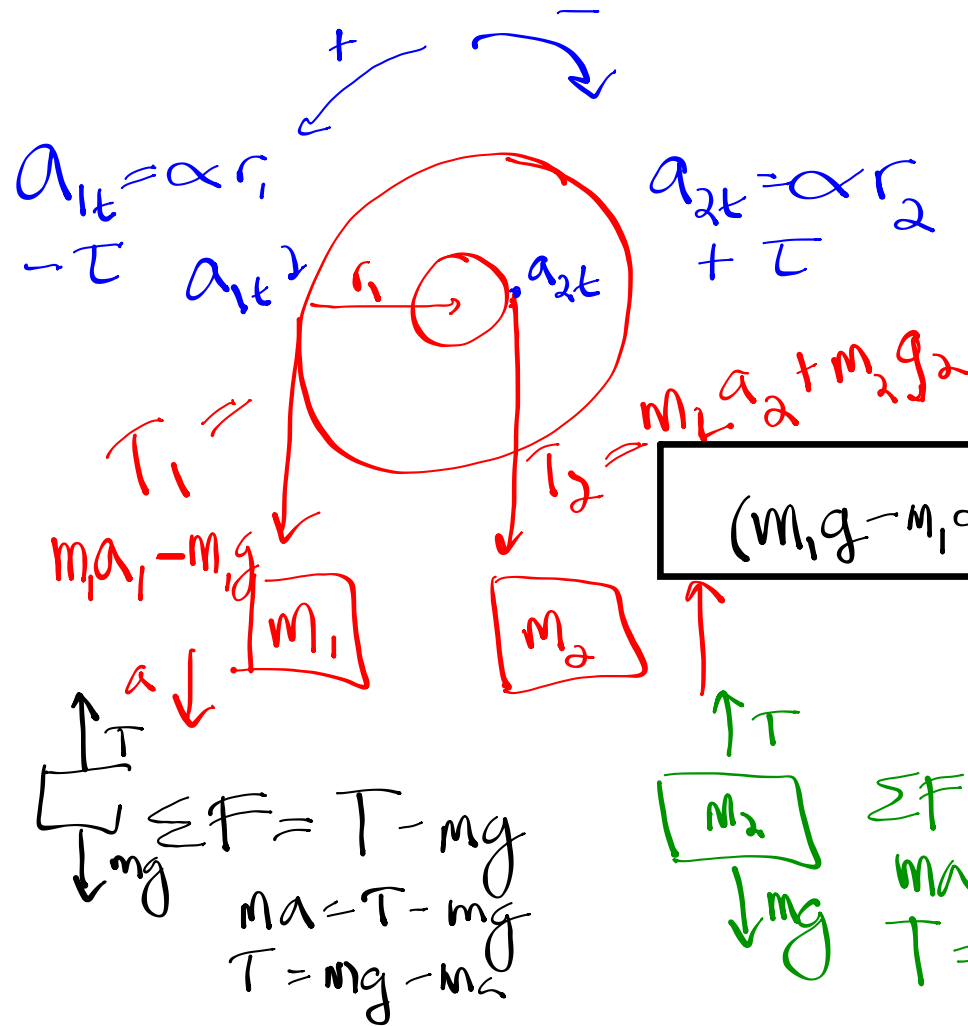
$$\alpha = \frac{a_t}{r}$$

$$\alpha = \frac{a_{t1}}{r_1}$$

$$a_1 = a_{t1} = \boxed{\alpha r_1}$$

$$a_2 = a_{t2} = \boxed{\alpha r_2}$$

$$\alpha = \frac{a_{t1}}{r_1} = \frac{a_{t2}}{r_2}$$



$$\sum \tau = I\alpha$$

$$T_1 r_1 - T_2 r_2 = I\alpha$$

$$(m_1 g - m_1 a_1) r_1 - (m_2 a_2 + m_2 g) r_2 = I\alpha$$

$$(m_1 g - m_1 \alpha r_1) r_1 - (m_2 \alpha r_2 + m_2 g) r_2 = I\alpha$$

if: $g = +9.8 \text{ m/s}^2$

$\alpha = +$
(counter-clockwise)