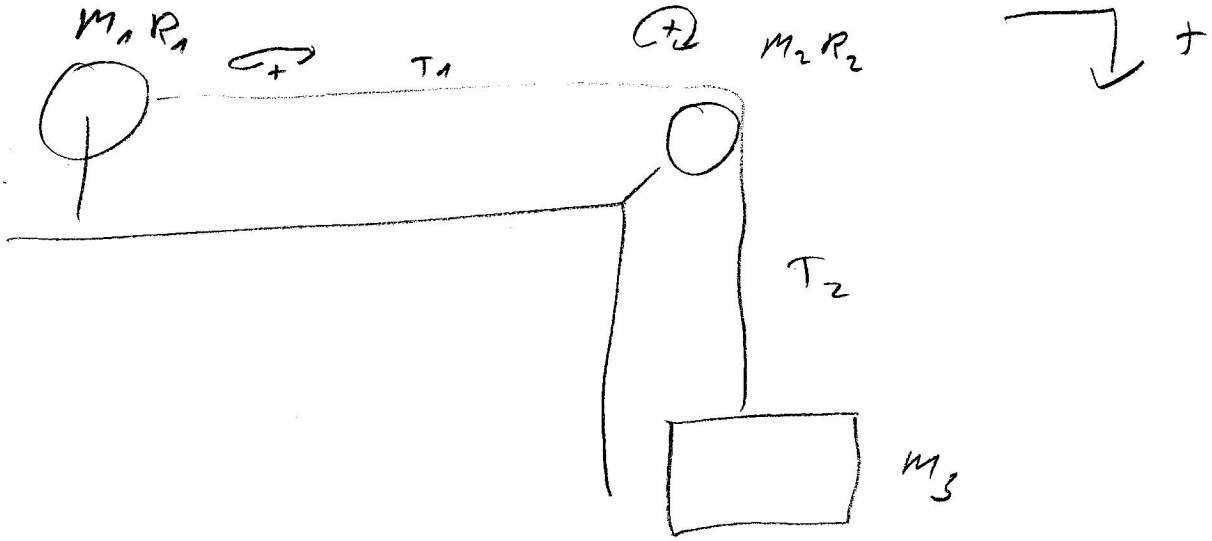
e_22_4_022



$$m_3 g - T_2 = m_3 a$$

$$T_2 R_2 - T_1 R_1 = I_2 \alpha_2 = \frac{1}{2} m_2 R_2^2 \cdot \frac{a}{R_2}$$

$$T_1 R_1 = I_1 \alpha_1 = \frac{2}{5} m_1 R_1^2 \cdot \frac{a}{R_1}$$

$$a = \frac{g m_3}{0.6 m_1 + 0.5 m_2 + m_3}$$

$$\alpha_1 = \frac{a}{R_1}$$

$$\alpha_2 = \frac{a}{R_2}$$

$$T_1 = \frac{4 g m_1 m_3}{4 m_1 + 5 m_2 + 10 m_3}$$

$$T_2 = \frac{(4 g m_1 + 5 g m_2) m_3}{4 m_1 + 5 m_2 + 10 m_3}$$