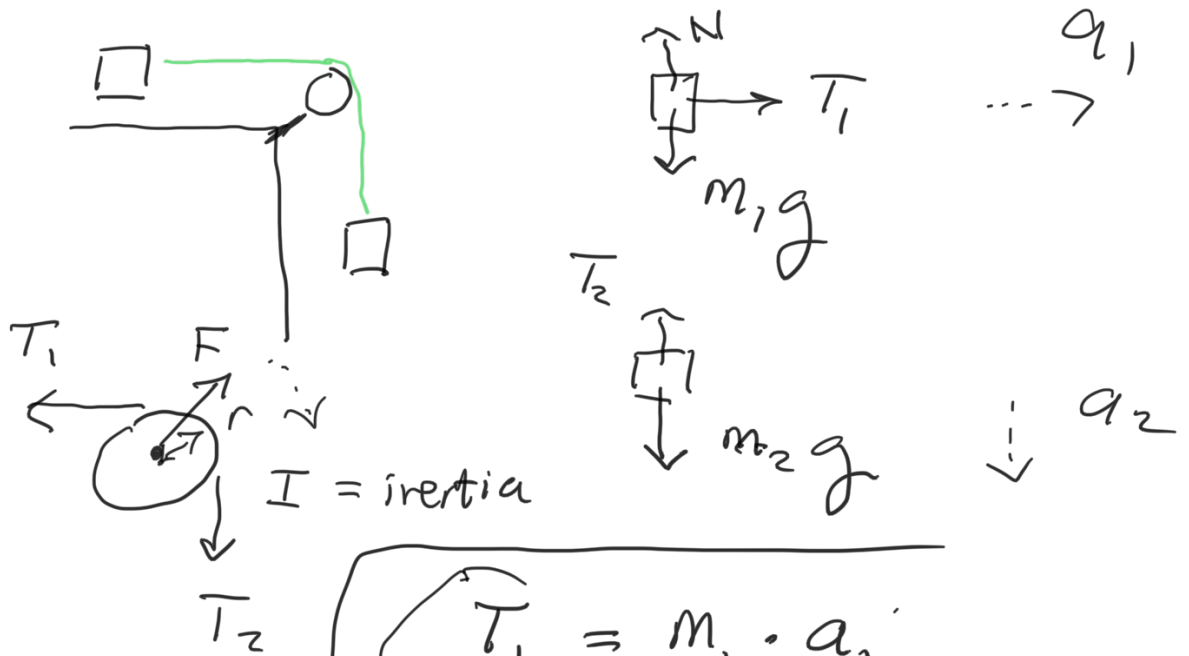


Problem rotation 65



$$\begin{aligned}
 T_1 &= m_1 \cdot a_1 \\
 m_2 g - T_2 &= m_2 a_2 \\
 r T_2 - r T_1 &= I \alpha \\
 a_1 &= a_2 \\
 a_1 &= r \alpha \\
 I &= \frac{1}{2} M r^2
 \end{aligned}$$

Solve.