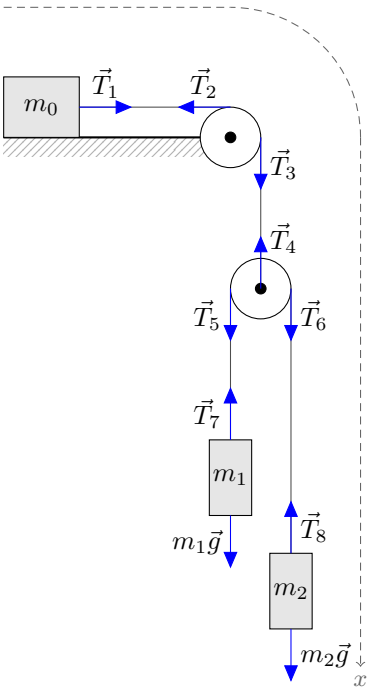

$$T_1 = T_2$$

$$T_3 = T_4$$

$$T_5 = T_6 = T_7 = T_8 (= T)$$

II-й закон для невесомых блоков:

$$0 = \vec{T}_3 + \vec{T}_2$$

$$0 = \vec{T}_4 + \vec{T}_5 + \vec{T}_6$$

Отсюда

$$T_3 = T_2$$

$$-\vec{T}_4 = \vec{T}_5 + \vec{T}_6$$

II-й закон для грузов:

$$m_0 a_{0x} = 2T$$

$$m_1 a_{1x} = m_1 a_0 + m_1 a'_{1x} = m_1 g - T$$

$$m_2 a_{2x} = m_2 a_0 + m_2 a'_{2x} = m_2 g - T$$

Из нерастяжимости нитей

$$a'_{2x} = -a'_{1x}$$

Тогда

$$m_1 a'_{1x} = m_1 g - T - m_1 \frac{2T}{m_0}$$

$$-m_2 a'_{1x} = m_2 g - T - m_2 \frac{2T}{m_0}$$

$$-\frac{m_1}{m_2} = \frac{m_0 m_1 g - T m_0 - m_1 2T}{m_0 m_2 g - T m_0 - m_2 2T}$$

$$m_0 m_1 m_2 g - m_0 m_1 T - m_1 m_2 2T = -m_0 m_1 m_2 g + m_0 m_2 T + m_1 m_2 2T$$

$$T = g \frac{2 m_0 m_1 m_2}{4 m_1 m_2 + m_0 m_1 + m_0 m_2}$$

$$a_{1x} = g - \frac{T}{m_1} = \frac{m_0 (m_1 - m_2) + 4 m_1 m_2}{m_0 (m_1 + m_2) + 4 m_1 m_2}$$