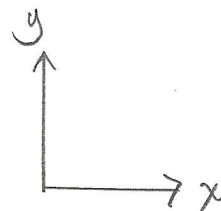
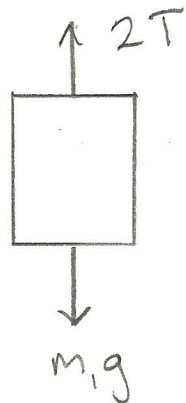


MASS 1

$$\Sigma F_y = 2T - m_1 g = m_1 a_1$$



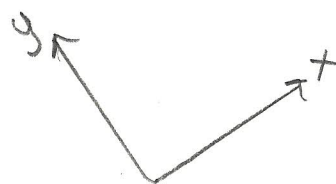
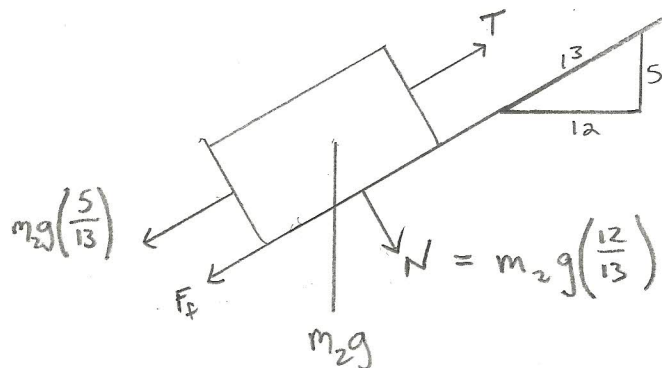
$$g = 9.81 \frac{m}{s^2}$$

$$F_f = \mu N$$

$$g = 9.81 \frac{m}{s^2}$$

$$\mu = 0.19$$

MASS 2



$$\Sigma F_x = T - m_2 g \left(\frac{5}{13} \right) - F_f = m_2 a_2$$

$$\Sigma F_y = N - m_2 g \left(\frac{12}{13} \right)$$

l = Total length of cable

Differentiate for acceleration

$$2S_1 + S_2 = l$$

$$2V_1 + V_2 = 0$$

$$2a_1 + a_2 = 0 \rightarrow a_2 = -2a_1$$

