$\mu_k = 0$

Tarea 1.-

$m_1 = 4.2\,kg \quad m_2 = 2.3\,kg$

$\mu_k = 0.47$

$$a_x = \frac{m_1 g \operatorname{sen}\theta}{m_1 + m_2} + \frac{m_2 g \mu_k}{m_1 + m_2}$$

$$a_x = \frac{(4.2)\operatorname{sen}27}{4.2+2.3} + \frac{2.3(9.81)(0)}{4.2+2.3}$$

a) $\rightarrow a_x = 0.29\ m/s^2$

$T = m_2 a_x + f_k$

$f_k = U\mu_k$

$f_k = m_2 g \mu_k \rightarrow f_k = (2.3)(9.81)(0.47) = f_k = 10.60$

$$a_x = \frac{(4.2)\operatorname{sen}27}{4.2+2.3} + \frac{2.3(9.81)(0.47)}{4.2+2.3} = a_x = 1.92\ m/s^2$$

b) $T = (2.3)(1.92)(10.60) \rightarrow T = 46.80\ N$

Tarea 2.-

$$a_y = \frac{[(m_3+m_4)-(m_1+m_2)]g}{m_1+m_2+m_3+m_4}$$

$$a_y = \frac{[(8+10)-(5+3)](9.81)}{5+3+8+10}$$

$a_y = 3.77\ m/s^2$