Fecha

4.43 Datos

$m_1 = 4\,kg$

$m_2 = 6\,kg$

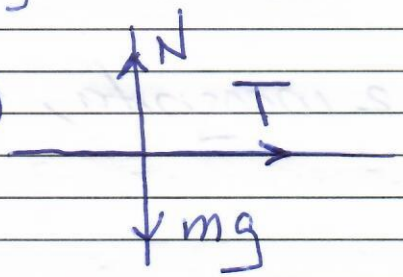
$a = 2.5\ m/s^2$

T - ?

F - ?

a) La caja tiene una aceleración de $2.5\ m/s^2$, el sistema es ligado, la cuerda es inextensible y sin masa.

b)

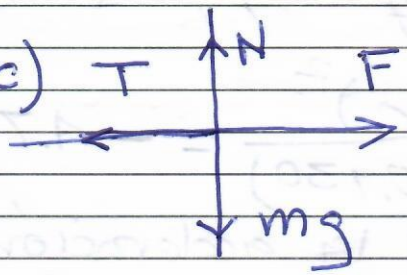



$$\Sigma \vec{F}_x = m \cdot \vec{a}$$

$$T = m \cdot a$$

$$T = (4\,kg)(2.5\ m/s^2) = 10N$$

c)




$$\Sigma \vec{F}_x = m\vec{a}$$

$$F - T = ma$$

$$F = ma + T$$

$$F = (6\,kg)(2.5) + 10N$$

$$\boxed{F = 25N}$$