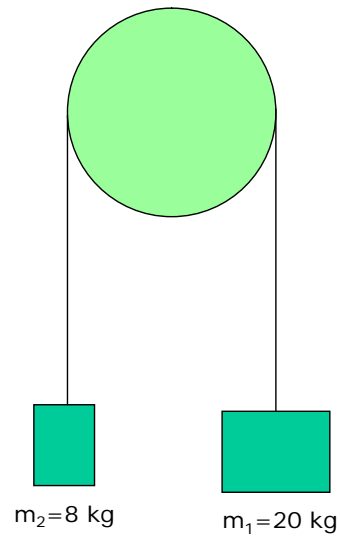


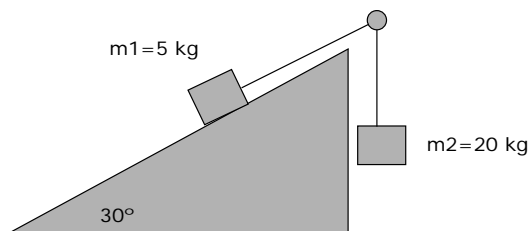
Dynamics: Exercises

1. Determine the acceleration and the tensions



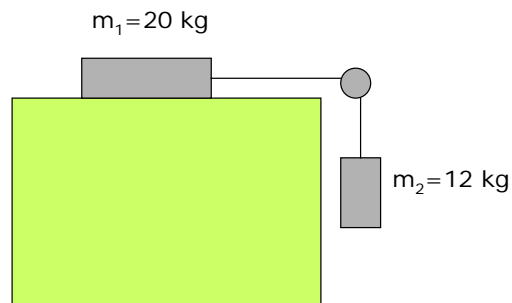
$$a = 4.29 \text{ m/s}^2$$
$$T_1 = T_2 = 114.2 \text{ N}$$

2. Determine the acceleration of the system and the value of the tensions. The coefficient of friction is $\mu = 0,2$



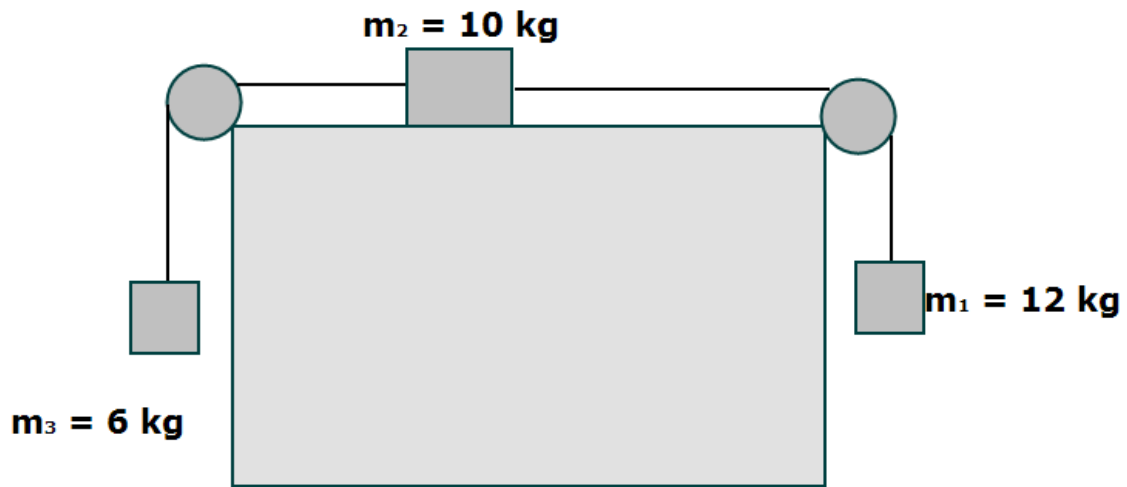
$$a = 6.65 \text{ m/s}^2$$
$$T_1 = T_2 = 67 \text{ N}$$

3. Determine the acceleration and the tensions. The coefficient of friction is 0.5.



$$a = 0.625 \text{ m/s}^2$$
$$T_1 = T_2 = 112.5 \text{ N}$$

4. Calculate the acceleration of the system and the tensions



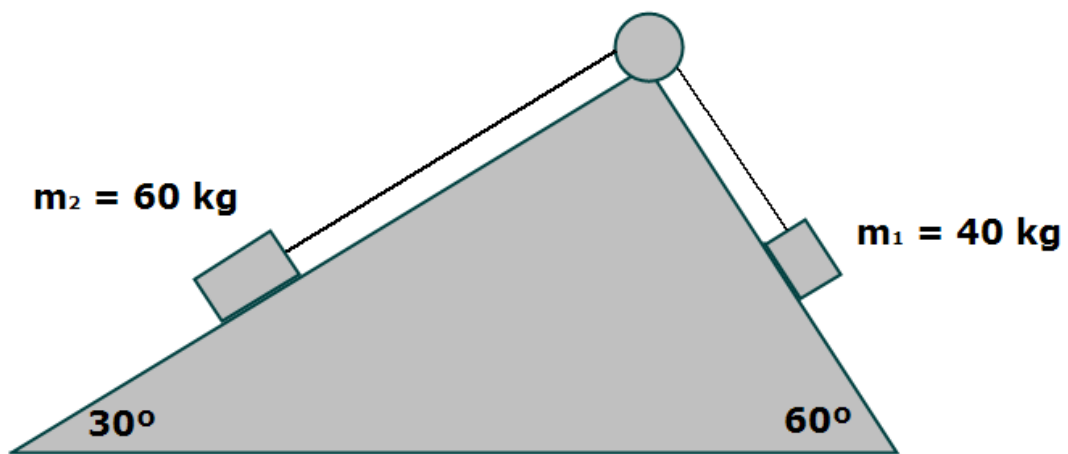
$\mu = 0.1$

$$a = 1.79 \text{ m/s}^2$$

$$T_1 = T_2 = 98.5 \text{ N}$$

$$T_3 = T_4 = 70.7 \text{ N}$$

5. Calculate the acceleration and the tensions



$\mu = 0.05$

$$a = 0.104 \text{ m/s}^2$$

$$T_1 = T_2 = 332.2 \text{ N}$$