

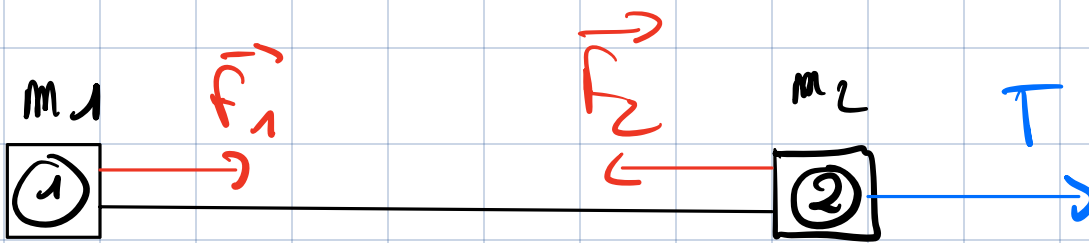
$m_1$  et  $m_2$

$$\begin{cases} m_1 a_{m_1} = F_1 \\ m_2 a_{m_2} = -F_2 \\ (m_1 + m_2) a_{T} = T \end{cases}$$

$$\begin{aligned} a_{m_1} &= a_{m_2} \\ &= a_T \end{aligned}$$

$$\frac{F_1}{m_1} = a_{m_1} \quad \frac{-F_2}{m_2}$$

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Fil inextensible de longueur  $L$  cste

$$\vec{F}_1 = F_{1x} \hat{x}$$

$$\vec{F}_2 = F_{2x} \hat{x}$$

$$\vec{T} = T_x \hat{x} \quad (T_x > 0)$$

Système ① :  $m_1 \ddot{x}_1 = F_{1x}$   
 ② :  $m_2 \ddot{x}_2 = F_{2x} + T_x$   
 ①+② :  $(m_1 + m_2) \ddot{x}_G = T_x$

$$\ddot{x}_1 = \ddot{x}_2 = \ddot{x}_G \equiv \ddot{x}$$

$$\Rightarrow \ddot{x} = \frac{T_x}{m_1 + m_2}$$

$$\Rightarrow F_{1x} = \frac{m_1}{m_1 + m_2} T_x$$

$$\Rightarrow F_{2x} = \frac{m_2}{m_1 + m_2} T_x - T_x$$

$$= \frac{-m_1}{m_1 + m_2} T_x$$

$$= -F_{1x}$$