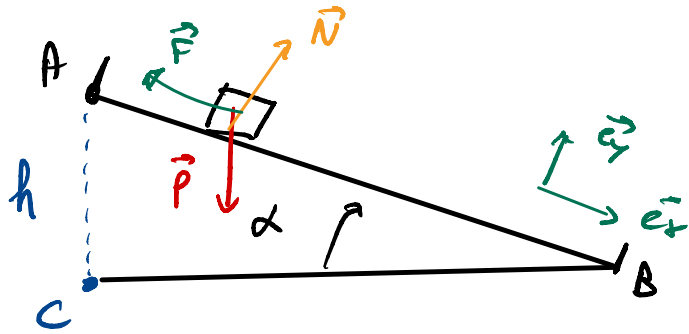


TD 15 - Exercice 1.



sys : mobile de masse m , suppose ponctuel.

ref : la tourerie, suppose galiléenne.

- BALÉ:
- poids $\vec{P} = m\vec{g}$
 - frottements $\vec{F} = -F\vec{e}_x$
 - R^e du support $\vec{N} = N\vec{e}_y$

notons d_{AB} la distance de AB telle que

$$\vec{AB} = d_{AB} \vec{e}_x$$

$$\begin{aligned} W_{AB}(\vec{P}) &= m\vec{g} \cdot \vec{AB} = m\vec{g} \cdot (\vec{AC} + \vec{CB}) \\ &= mgh + 0 \end{aligned}$$

$\leftarrow \text{car } \vec{g} \perp \vec{CB}$

$$W_{AB}(\vec{P}) = mgh \sin \alpha$$

$$W_{AB}(\vec{N}) = \vec{N} \cdot \vec{AB} = 0 \quad \text{car } \vec{N} \perp \vec{AB}$$

$$W_{AB}(\vec{F}) = \vec{F} \cdot \vec{AB}$$

$$W_{AB}(\vec{F}) = -F d_{AB}$$

