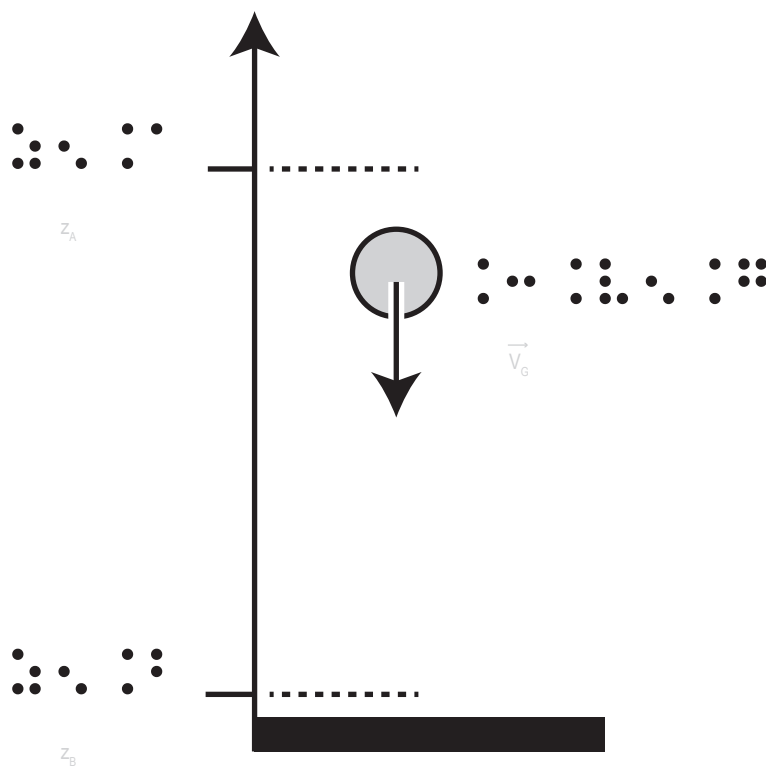


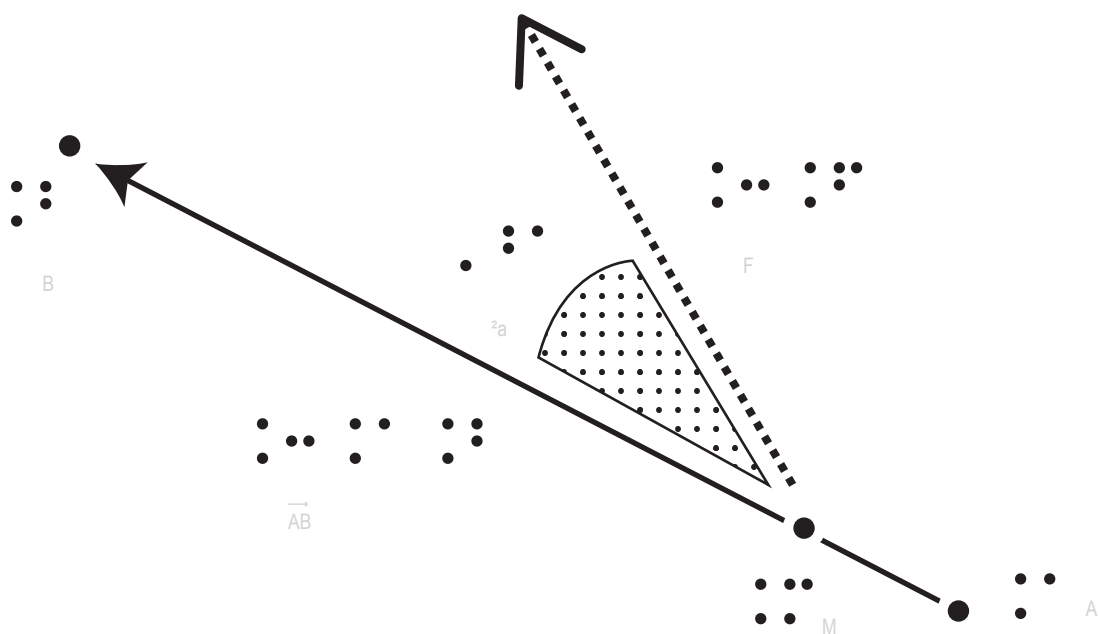
Aspects énergétiques des phénomènes mécaniques



les énergies

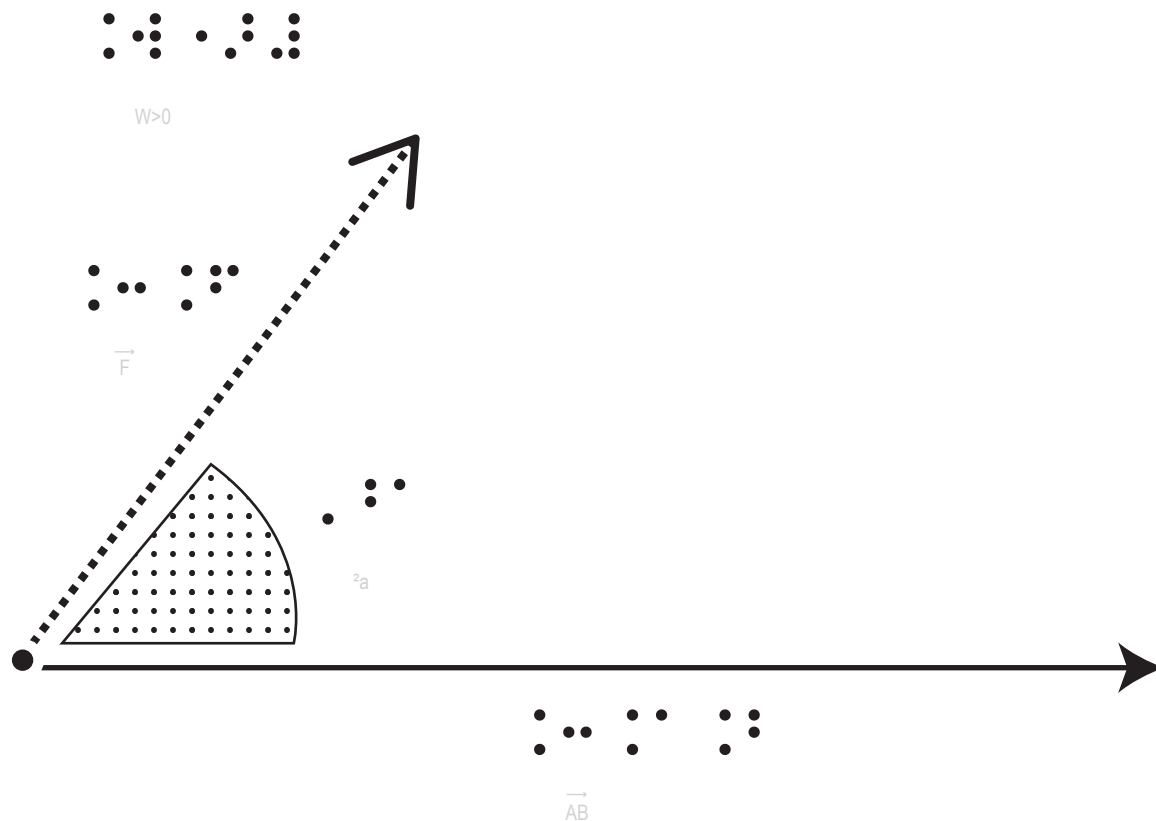


Définition d'une force

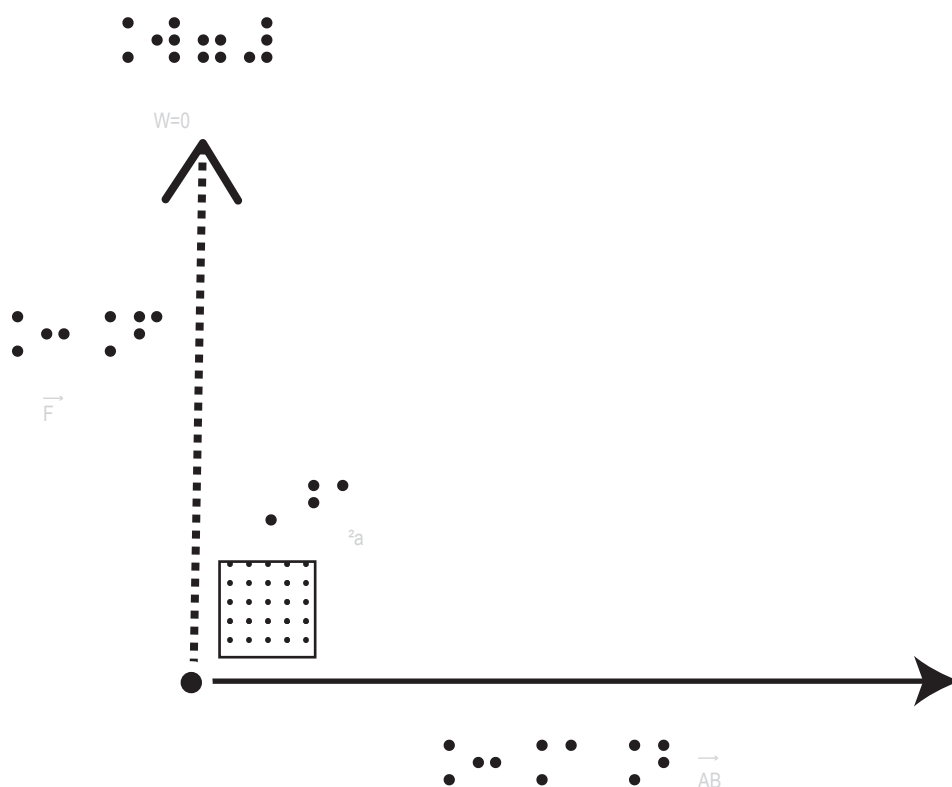




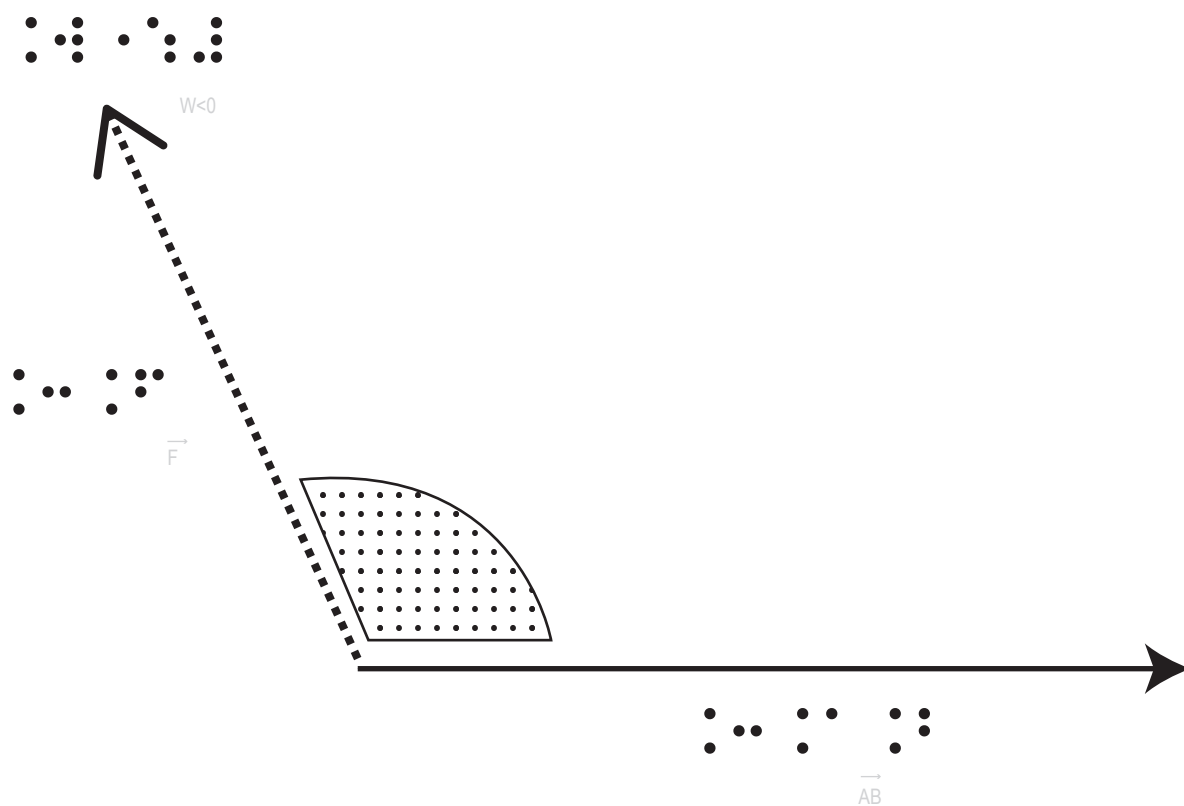
La force favorise le déplacement



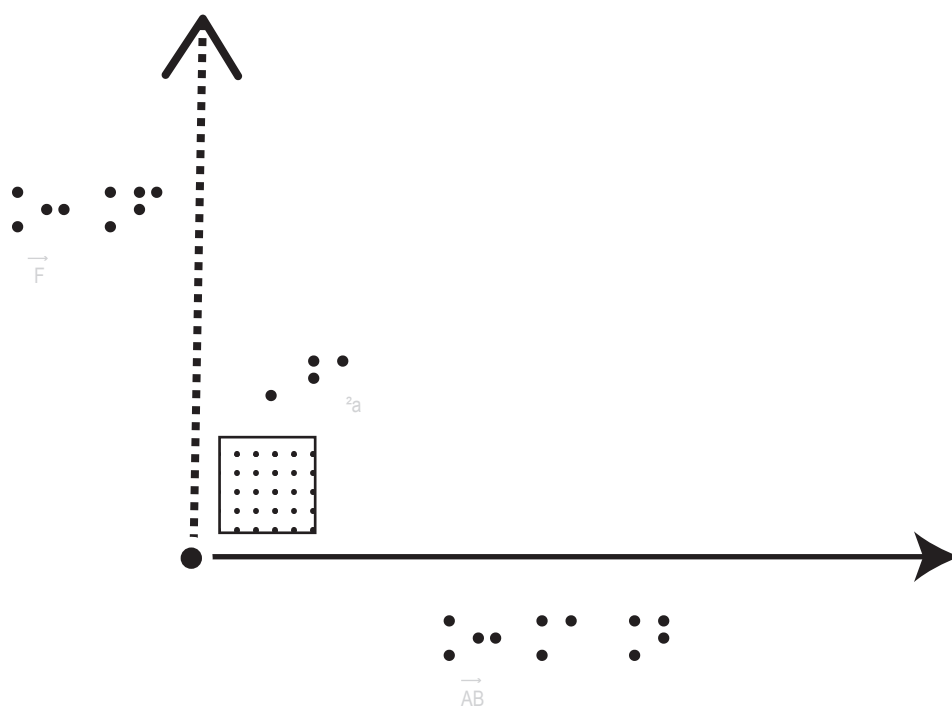
La force n'agit pas sur le déplacement



La force s'oppose au déplacement



Réaction du sol



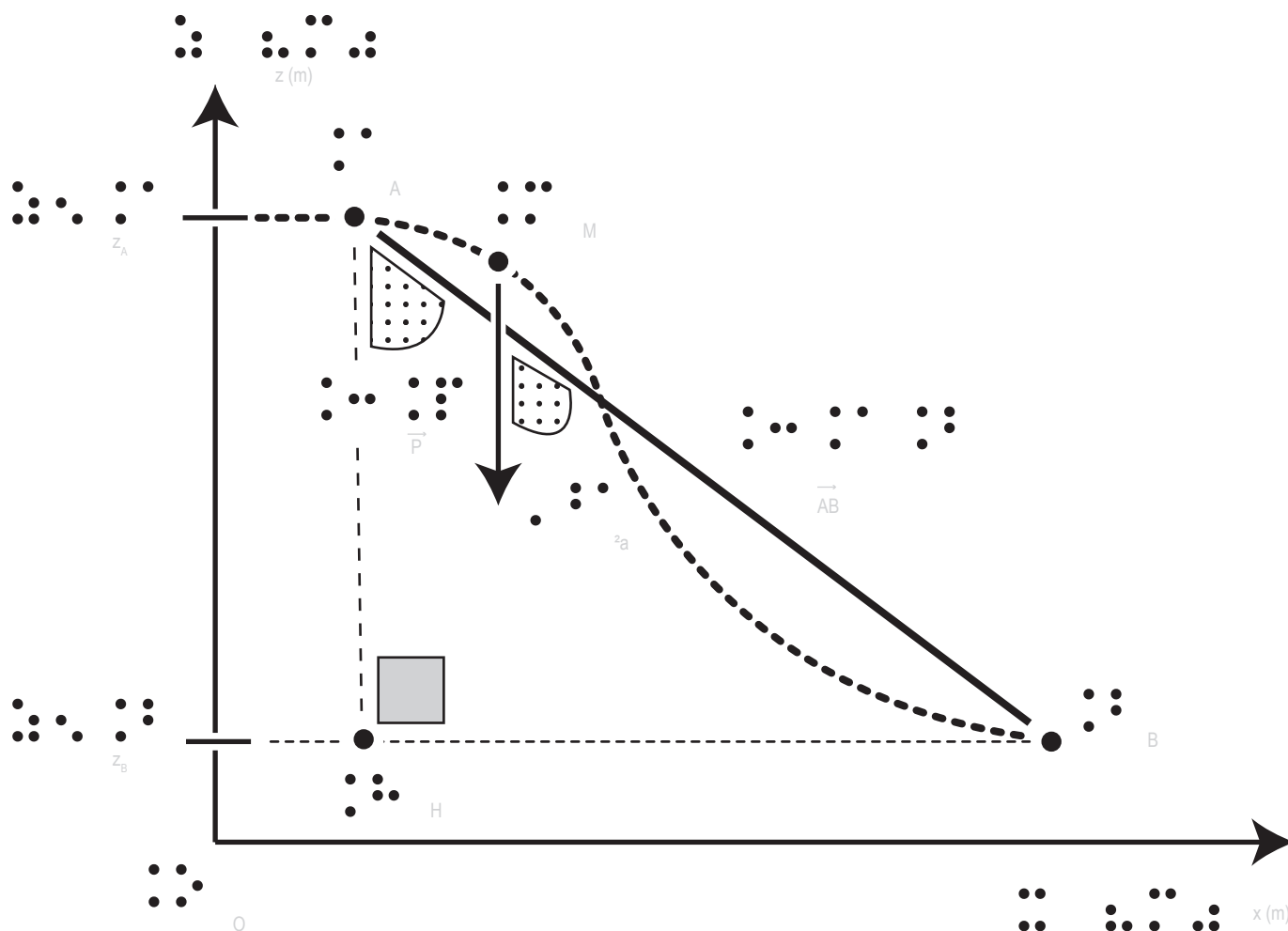
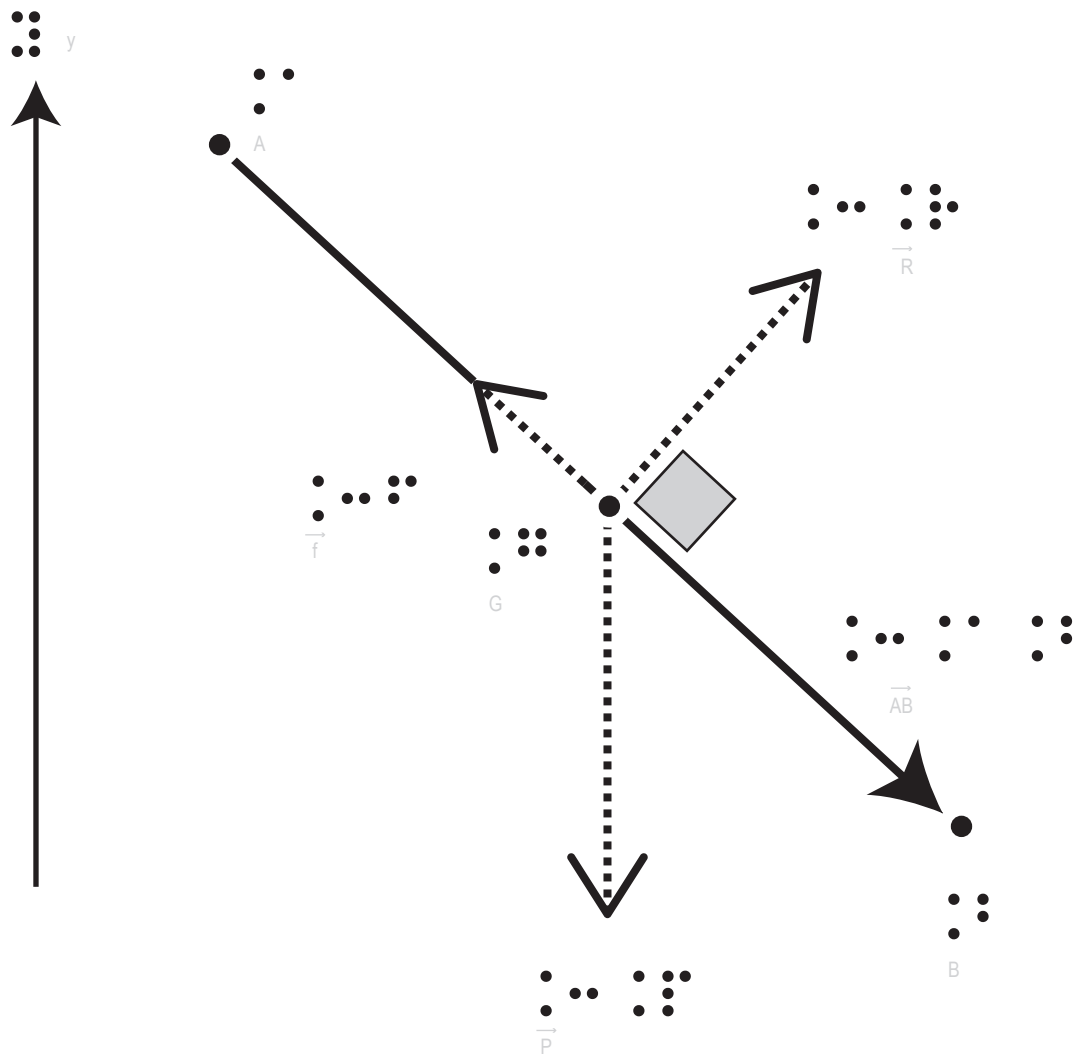
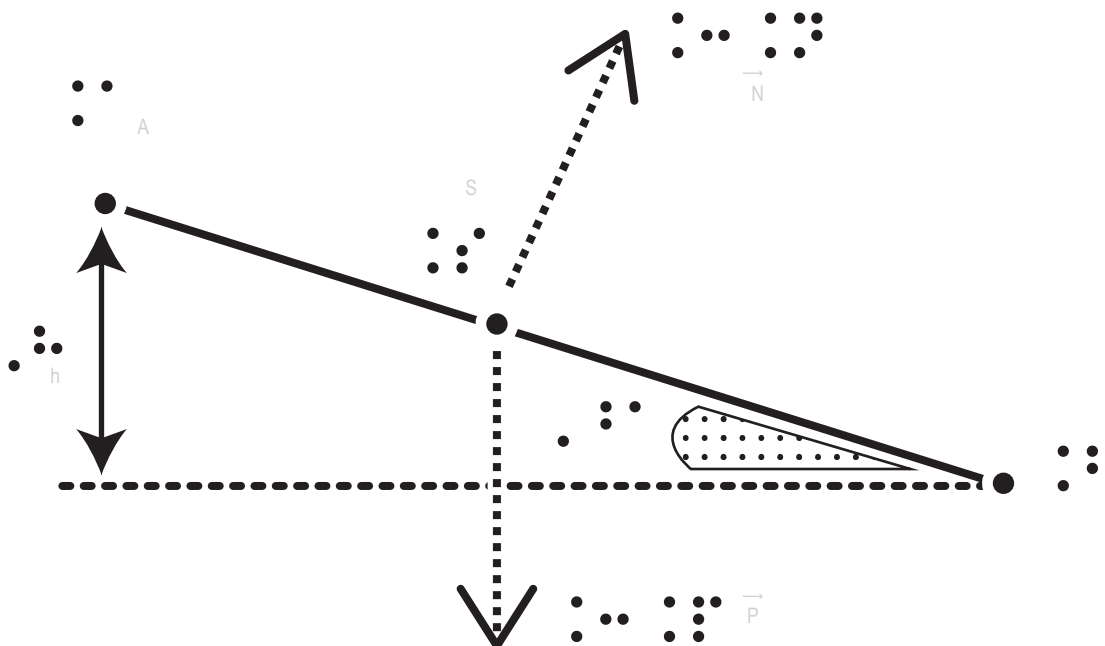




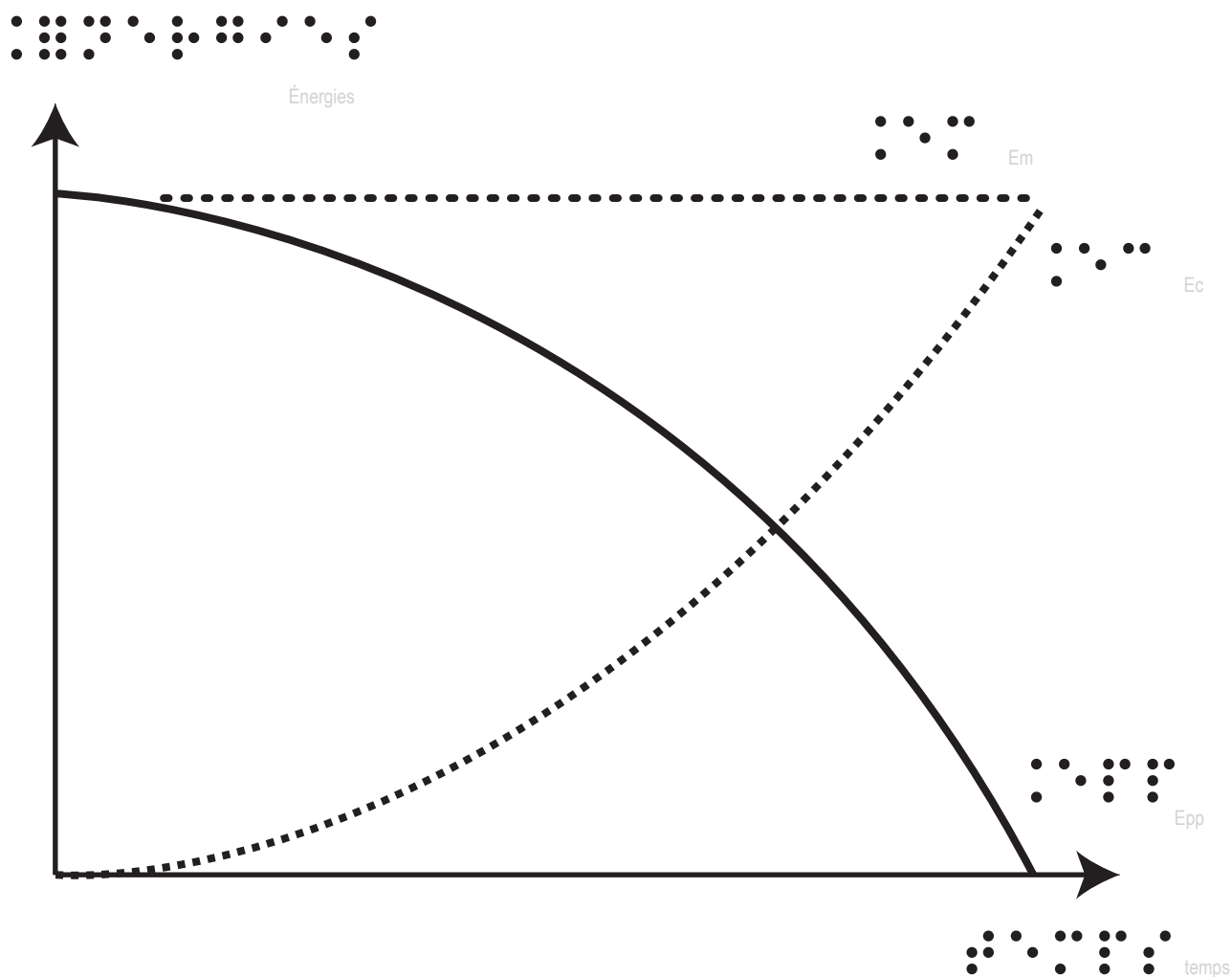
Schéma du bilan des forces



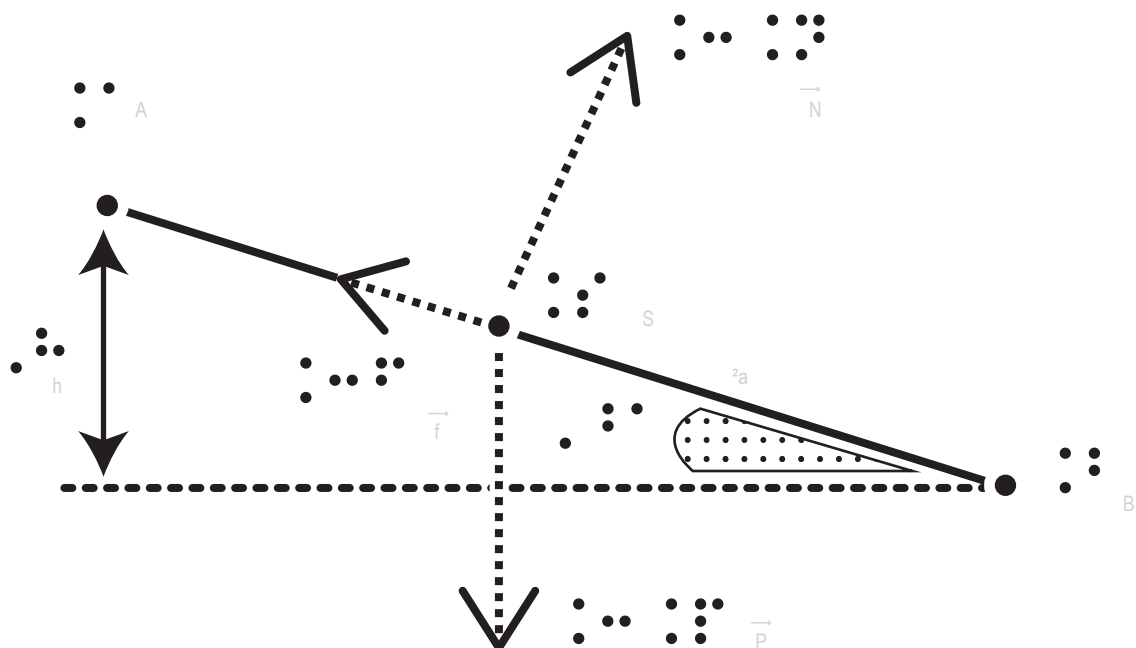
Bilan des forces sans de frottement



Bilan énergétique sans force de frottement



Bilan des forces avec forces de frottement



$\frac{1}{2}mv^2 + mgh + \int \vec{F}_f \cdot d\vec{s} = \text{constante}$

Bilan énergétique avec force de frottement

$\frac{1}{2}mv^2 + mgh + \int \vec{F}_f \cdot d\vec{s} = \text{constante}$

