

Énergie cinétique
 $E_c = \frac{1}{2} m \cdot v^2$

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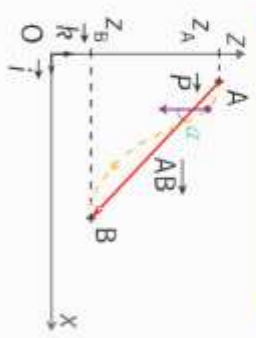
Énergie potentielle de pesanteur
 $E_{pp} = m \cdot g \cdot z$

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Énergie mécanique
 $E_m = E_c + E_{pp}$

Énergie totale
 $E_{totale} = E_m + E_{thermique}$

Énergie thermique

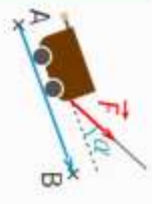


Variation ΔE_m
 $\Delta E_m = \Delta E_c + \Delta E_{pp}$

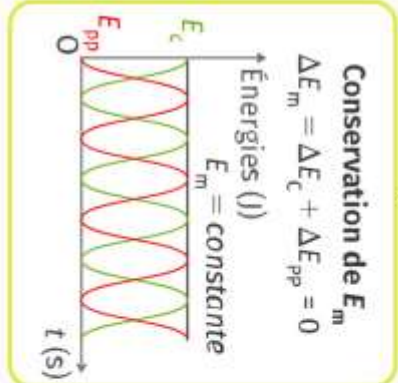
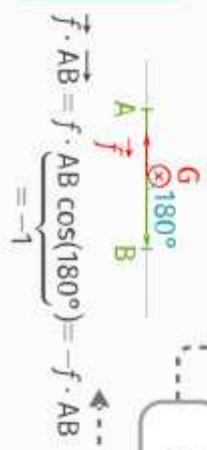
Théorème de l'énergie cinétique
 $\Delta E_c = \Sigma W(\vec{F})$

Travail du poids
 $W_{AB}(\vec{F}) = m \cdot g \cdot (z_A - z_B)$

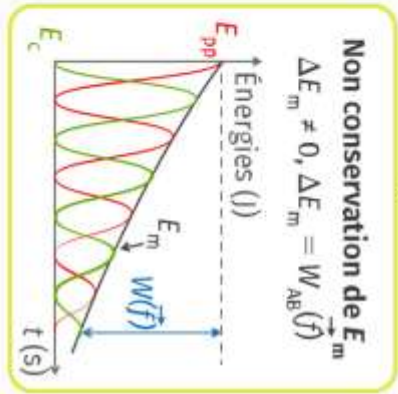
Travail d'une force
 $W_{AB}(\vec{F}) = \vec{F} \cdot \vec{AB}$
 $W_{AB}(F) = F \cdot AB \cdot \cos(\alpha)$



Travail d'une force de frottement
 $W_{AB}(f) = -f \cdot AB$



Force conservative



Force non conservative