

# Energy conversion efficiency, Calorimetry: cheat sheet

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## FORMULAE

$$E_{kin} = \frac{1}{2}mv^2$$

$$E_{pot} = mgh$$

$$\eta \text{ (r)} = \frac{E_{useful}}{E_{consumed}}$$

$$P \text{ [W]} = \frac{Energy \text{ [J]}}{duration \text{ [s]}}$$

$$Q = C \text{ [J/kg/}^\circ\text{C]} m\Delta T$$

## REFERENCE UNITS

Energy  $E$  in Joules [J]

mass  $m$  in kilograms [kg]

speed  $v$  in meters/seconds [m/s]

height  $h$  in meters [m]

$\Delta T = T_{final} - T_{initial}$  in [°C]