## Kinetic energy

Any object of mass $m$ moving with speed $v$ has kinetic energy K:

## $K=\frac{m v^{2}}{2}$

Unit of energy is Joule (J)

$$
1 \mathrm{~J}=1 \frac{\mathrm{~kg} \cdot \mathrm{~m}^{2}}{\mathrm{~s}^{2}}
$$

## Homework 13

## Problem.

A 10 kg stone is in free fall. What is its' kinetic energy 1, 2, 3, 4, 5 seconds after it started falling from rest? Make a plot of energy versus time.


