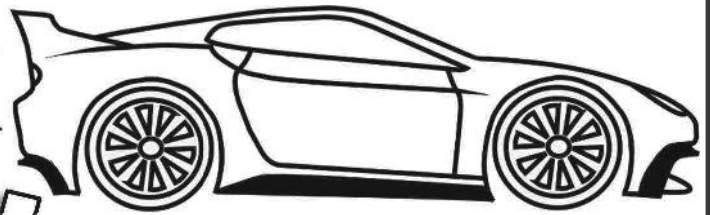


Kinetic Energy



The energy possessed by moving objects.

The word kinetic comes from the Greek word kinema which means "motion".

equation

$$E_k = \frac{1}{2}mv^2$$

The kinetic energy is equal to one half of the mass multiplied by the square of the speed.

SCALAR

units

Energy is measured in _____.

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

practice

Which has the higher kinetic energy: a 195 g bird flying at 17 m/s or a 2.7 kg cat walking at 1.2 m/s?

Work-Energy Principle

$$W = \Delta E_k$$

The work done on an object is equal to its change in kinetic energy

A 0.165 kg hockey puck initially at rest is pushed by a constant horizontal force of 4.5 N. Determine the hockey puck's speed after it has moved 3.0 m.

hint

challenge



Name: _____