

Energy Practice Problems

$$KE = \frac{m \times v^2}{2} \quad PE = w \times h \quad w = m \times g$$

Find the Kinetic Energy of:

- 1) a 7 kg bowling ball traveling at 2 m/s.
- 2) a 60 kg skater traveling at 3 m/s.
- 3) a 500 kg rollercoaster train traveling at 11 m/s.
- 4) a 2000 kg car traveling at 5.4 m/s.
- 5) a 20 g marble traveling at 0.5 m/s.

Find the Potential Energy of:

- 6) a 100 N boulder on top of a 50 m cliff.
- 7) a 588 N skater on top of a 30 m ramp.
- 8) a 4900 N rollercoaster train on top of an 80 m drop.
- 9) a 2000 kg car on top of a 20 m hill.
- 10) a 20 g marble on top of a 0.8 m desk.

Mass = kg
Weight = N
height = m

KE = J (Joules)

PE = J

g (gravity) = $9.8 \frac{m}{s^2}$