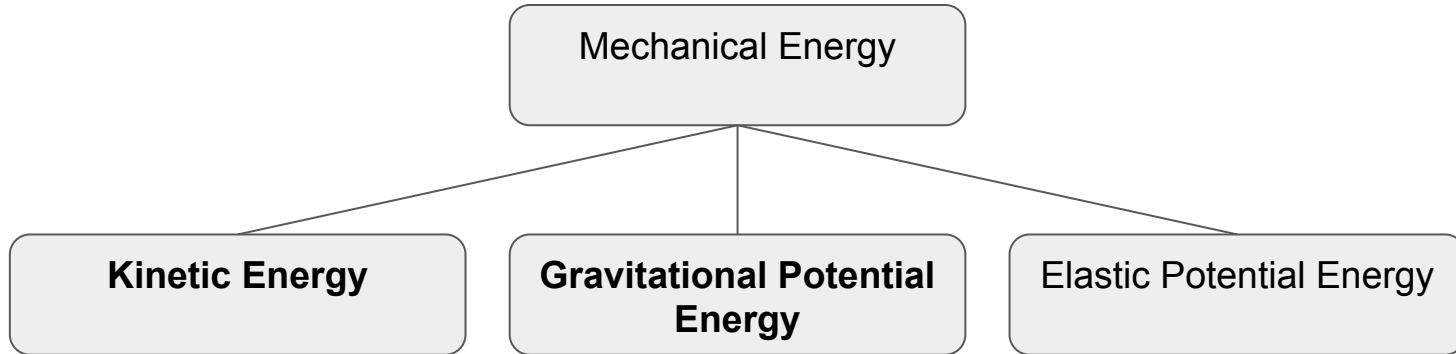


Marble Coaster and Conservation of Energy

Mechanical Energy

Mechanical energy is the ability to do work.

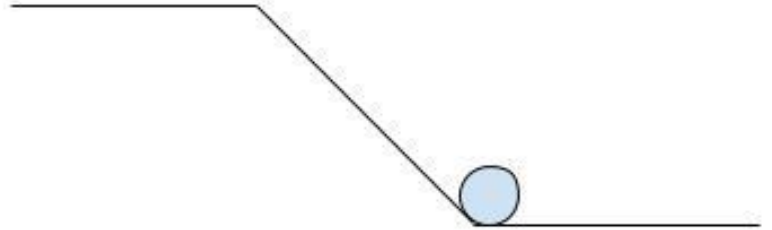


Kinetic Energy

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

m = mass

v = velocity



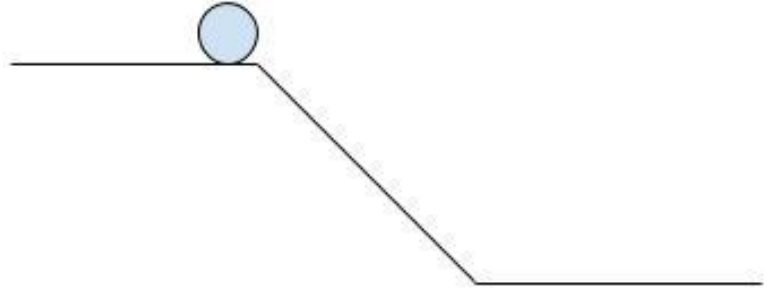
Gravitational Potential

$$PE = mgh$$

m = mass

g = acceleration due to gravity

h = height



Total Mechanical Energy (TME)

$$\text{TME} = \text{PE} + \text{KE}$$

Conservation of Energy

$$KE_i + PE_i + W = KE_f + PE_f$$