Gravitational Potential Energy

Name: _____   Date: _____

> Energy stored in an object due to its height above a reference point in an area where the force of gravity can act on it to make it fall.

Derivation of the formula:

Video Tutorial

http://youtu.be/-FoSNv4HorA

SPH3U   Work, Energy, and Power

Examples

1. Calculate the gravitational energy stored in an 11 kg cat that is 5.6 m up a tree.

2. Calculate the mass of an object that is 2.3 m above the ground and is known to have 400 J of gravitational energy stored in it.

3. A wrecking ball with a mass of 1000kg is used to demolish a building. The ball needs to be lifted from the ground to a height such that it has 147,000J of energy stored in it due to gravity. How high must it be lifted.

4. Calculate the work done to lift an 8 kg balling ball from 0.30 m above the ground to 0.78 m.

Examples