

Ballistic Pendulum PreLab

Name: _____ **Lab Section:** _____

Date: _____

PreLab Activity (10 points) – Complete prior to your lab session & hand in at the START of lab.

- A. Conservation of energy is one of the basic laws of Physics that governs everything from atoms to clusters of galaxies.

This lab will look at 2 of the categories of energy:

1. Gravitational potential energy is based on the position of an object relative to a reference point.
2. Kinetic energy is the energy of motion—any object moving at some velocity has kinetic energy

- B. Go to the following website and review the material & examples:

<http://www.physicsclassroom.com/Class/energy/u5l1b.cfm>

- C. Now you try some questions (based on the information from the website above)

1. A 4.5 kg cart is pulled at constant speed along an inclined plane to a height of 1.3 meters above the ground. What is the potential energy of the cart at this height?

2. Ignoring all sources of friction, what would be the cart's final speed at the bottom of the incline if it was released from rest at the height of 1.3 meters?

END OF PRELAB – HAND IN AT THE BEGINNING OF YOUR LAB SESSION TO GET CREDIT