Ballistic Pendulum Lab – Part I

Objective: To find the average velocity of a ballistic pendulum’s four different firing positions.

Background: A ballistic pendulum is commonly found at firing ranges to find the magnitude of the velocity of a bullet fired horizontally. In our experiment, we will use an apparatus that fires a ball via a compressed spring. We will be finding the initial velocities of three different balls of different masses at each of the four firing positions.



Angle Measure

Pendulum Arm

Air Pocket “catcher”   
(press here before firing)

Masses

Level

Legs   
(to make it level)

Four Initial firing positions

This will be a *full* *lab report*. Consider the following questions for your conclusion:

* How does the initial firing position affect velocity? Does this agree with what we know?
* How does the mass affect velocity? Does this agree with what we know?

These are in *addition* to what is included in a lab report. Reference your lab report rubric (also available on wikispace) for help.