Name: _____ Date: _____

Acceleration of a Falling Object Lab

Objective:

Introduction: The motion of a falling object will be investigated in this experiment. The object will start from rest and time and displacement will be measured. The final velocity of the object will be calculated using a kinematic equation:

_____

A velocity vs. time graph will be constructed. The slope of this graph will be equal to the _____ of the object.

Materials: List the materials you used to collect data here. (Do not include pencil, calculator, iPad, etc.)

Diagram of experimental setup: Draw a picture of your setup here. Label each part of it.

Procedure:

Data:

Analysis:

Questions:

1. Show an example calculation of how you found the final velocity for the time 0.3 seconds. Show All Work.

2. Sketch the shape of the graph you made in DataAnalysis below. No numbers.

3. What was the slope of the line according to DataAnalysis?

4. What is the acceleration of your falling object?

5. % error = $\frac{\text{experimental value – accepted value}}{\text{accepted value}} * 100\%$

Conclusion: Always restate the objective and address it. Provide support from your data. Provide at least 2 sources of error. (Sources of error do not include "rounding error", "calculated wrong", "measured wrong", or other things that are mistakes on your part. They are things that cannot be helped due to the equipment you used or the procedure itself.)