Name: Date: Period:

Pendulum Lab Report Guidelines

Pre-Lab

1. Recall the difference between independent, dependent, and control variables.

2. Brainstorm a list of factors that might affect the period of a pendulum.

3. Identify each of the following (there may be more than one).

Independent Variables	Dependent Variables	Control Variables

Lab Report

All of the your answers from here on should go in the word document.

Purpose: Write one sentence explaining what you are trying to figure out in this lab. Make sure your purpose includes all of your independent and dependent variables

Hypotheses: Predict what the relationship will be between each of your independent variables and your dependent variable (*i.e. directly proportional, inversely proportional, unrelated).* Make sure to explain why you think each of these relationships will hold.

Example: mass and period will be (choose one: directly proportional, inversely proportional, unrelated).

Procedure: Make a brief list of the steps you follow in the lab.

- Make a list of all three experiments that you will perform.
- Explain how, specifically, you will be measuring the dependent variable.
- Explain how many values of each independent variable there will be.

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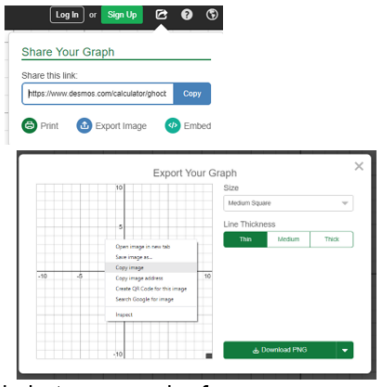
Data: Show all data tables for each of your experiments.

- Be sure that each data table has a descriptive title.
- Be sure that each data table lists the variables you are holding constant and their values
- Make sure all units are labeled. (It is OK to label the units in the table headings instead of in each individual cell
- You'll probably have a total of **three** data tables in your report (one for each independent variable)
- Each data table should have 5 different rows (one for each value of the independent variable)

Also include a Desmos graph for each variable

1. Go to `www.desmos.com/calculator` to graph your data.
2. Make a separate graph for *each* expeiment.
3. Graph your independent variable on the x-axis and dependent variable on the y-axis
4. Use the "wrench icon" to give your graph axis labels.
5. Make sure to zoom your graph in such a way that your data fills the page *and* that you can see zero on each axis.
6. Copy the share link (top image to the right).
7. Also, click "Export image." Right click the graph and then click "Copy image" (bottom image to the right). Paste into your data table.



Results: All you need are three sentences for this section: one for each experiment. Your results should describe the relationship between each of your independent variables and your dependent variable (*i.e. directly proportional, inversely proportional, unrelated).*

Example: Mass and period were unrelated.

Conclusion and Discussion: Answer the following questions in paragraph form.

- What was the purpose of the lab?
- How did you go about accomplishing the purpose?
- What did you find (*i.e.* what affected the period of the pendulum and how did it affect it)?
- What errors came up in this lab and how could you correct them in the future?