Name: Date: Period:

Spring Lab

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).

Hypothesis #1:

Explanation #1:

Hypothesis #2:

Explanation #2:

Hypothesis #3:

Explanation #3:

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.

Data

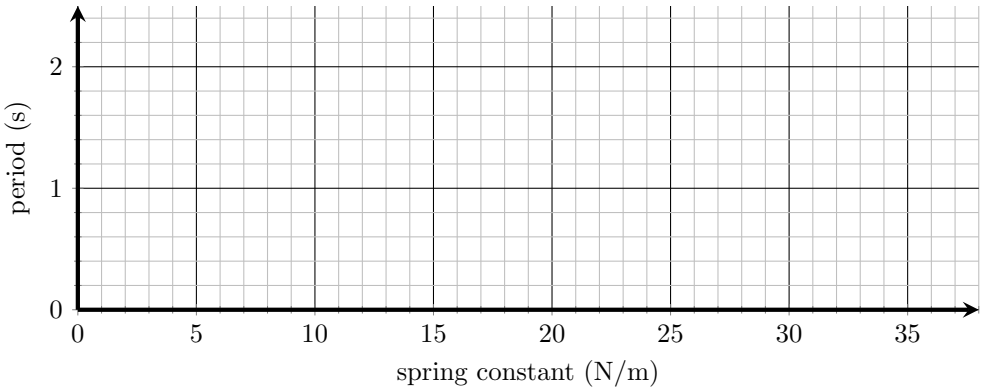
Show all data tables for each of your experiments.

- 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)

Hints:

1. When testing *spring constant*, use 150 grams at an amplitude of 5 cm
2. When testing *amplitude* use one of the narrow springs (7.5 N/m or 2.5 N/m). Pick a mass that gets an appropriate amount of extension out of the spring without going overboard.
3. When testing *mass*, make sure to think ahead about which spring and weights to use so that you don't over-stretch the spring.

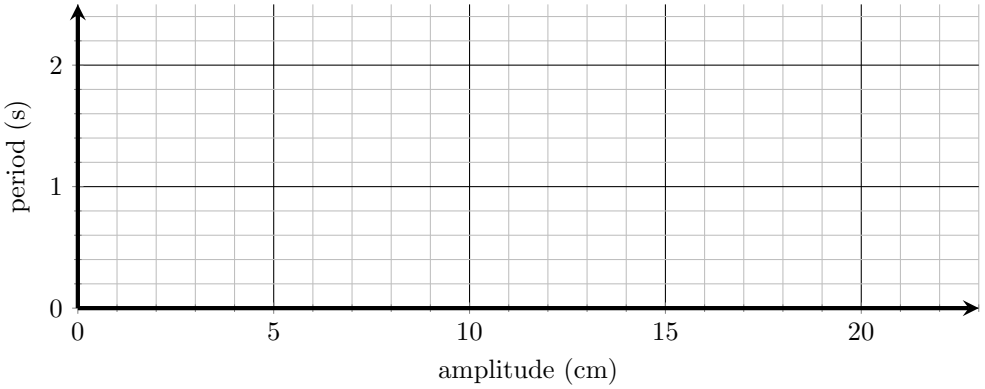
Experiment#1: Spring Constant vs. Period					
Constant Variables:					
	Trial #1	Trial #2	Trial #3	Average	



Experiment#2: Amplitude vs. Period

Constant Variables:

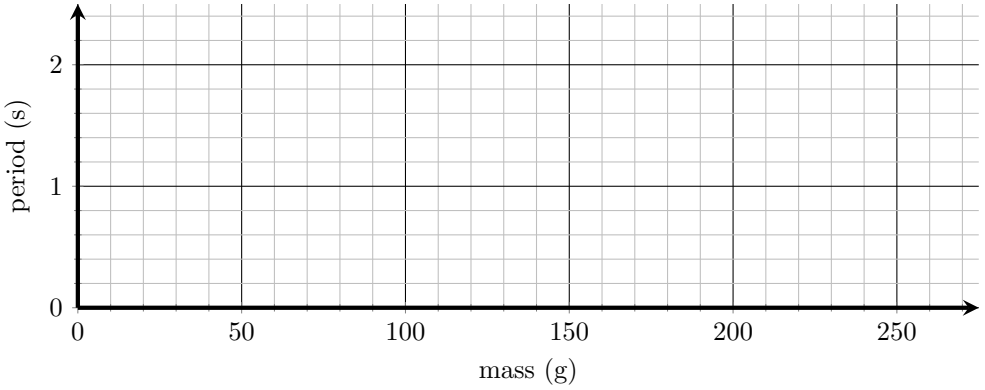
	Trial #1	Trial #2	Trial #3	Average	



Experiment#3: Mass vs. Period

Constant Variables:

	Trial #1	Trial #2	Trial #3	Average	



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.

Result #1:

Result #2:

Result #3:

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?