Lab 15-2 : **Simple Pendulum**

Names:

Purpose: To determine the effect of mass, length and initial angle on the period of a simple pendulum.

Procedure:
- Clamp pendulum to a corner of the lab bench with a C-clamp.
- To measure the period, time how long it takes for the pendulum to swing back and forth 10 times – and then divide by 10 to find the period.
- Keep the initial angles small (< 10º) so that the pendulum swings are smooth, don't rotate and don't smack into anything. (Obviously this doesn't apply to Period vs Initial Angle.)
- For each of the trials, try to have
- Period vs Mass: start with 2 washers, and increase by 2 washers each trial until the paperclip hanger is "full." The washers should always be in a line and not stacked on top of each other.
- Period vs Length: Don't stress about changing the length the exact same amount each time. Measure to the middle of the mass.
- Period vs. Initial Angle: Do your best to make sure the string doesn't go slack.
- For each of the investigations, go for about 10 data points.
- Make and interpret the appropriate graphs for each of the investigations and paste them below. Remember that horizontal lines should have the average value, lines should have a best fit, and curves should be linearized.

Data:

Mass (#washers)	Period (s)	Initial Angle (º)	Period (s)	Length (m)	Period (s)

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Graphs:

<mark>Paste your graphs here</mark>

Conclusion:

Interpret your results. Write a nice paragraph that explains what your results were and include a discussion of your graphs. What does the period of a pendulum depend on and how?