

Physics 1101-1120 Prelab

Surrey Campus
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Expt. 3: The Simple Pendulum

Read Experiment #3 and find the equation that theoretically describes the relationship between the length and the period of a pendulum.

Think about how you will graph your experimental data and extract information from it. Answer the following questions:

What will be plotted on the y-axis?

What will be plotted on the x-axis?

What does the equation predict the algebraic expression for the slope will be?

What does the equation predict the algebraic expression for the y-intercept will be?

The length of a pendulum is $L = 1.50 \pm 0.01$ cm. Find \sqrt{L} .

(Unrounded answer: 1.2247 ± 0.0041)

If the graph for this lab has a slope of 2.15 ± 0.11 s/m^{1/2}, what value for the acceleration due to gravity, g , would you get from this graph?

(Unrounded answer: $g_{\text{exp}} = 8.54 \pm 0.87$)

Note: You will not be allowed into the lab until you show that you have done the prelab and have properly prepared the introductory portion (Title, Objective, Theory Summary and Uncertainty Derivations) of the lab in your notebook.

No extra lab time will be allowed for the time you miss if you are unprepared.