

The Pendulum

As you work through the steps in the lab procedure, record your experimental values and the results on this worksheet. Use the exact values you record for your data to make later calculations.

Data

Search and write in the following constraints.

radius of the Earth (Give your answer to 3 significant figures.)

mass of the Earth (Give your answer to 3 significant figures.)

universal gravitational constant (Give your answer to 3 significant figures.)

Experiment I

Give the slope period vs. mass.

Experiment II

Record your observations on the relationship between period and amplitude for reference when you write your discussion in the lab report.

Experiment III

Give the slope period^2 vs. length.

Calculating the mass of Earth

For one of your trials, give the measured length of the pendulum and the average period as determined by DataStudio; you will use this to determine the mass of the Earth.

Upload the file with your graphs. Do a print screen and save the graphs as a file with a maximum size of 1 MB. (*You will upload this file in the WebAssign question.*) Print the graph for your TA to sign, and for your reference.