

The Science of Acoustics – McCaskey

Assignment #3

Due next week at the **beginning** of class. Please write out or type your answers, and hand them in then. No homework will be accepted after solutions are posted. Show your work!

1. (a) Your main task is to write the lab report as instructed. For this problem, do two graphs, one with T on the y-axis and one with T^2 on the y-axis (with length (in **m**) on the x-axis). Use the trendline feature shown in class (with equation) to find the slope of the graph that is more linear.

(b) The slope of the line you got in #1 will be equal to $\frac{4\pi^2}{g}$ (and $\pi = 3.1416$,

approximately). Use the slope you got in #1 to find the value of g , the acceleration due to gravity. Does it equal what you expect?

Now that's done, go to Chapter 3 in the course materials and do problems #2-8 and 11.