

King Fahd University of Petroleum and Minerals
Department of Physics
Phys 102-Lab Sec.# 76, 80 (042)
Homework # 2 (Due On March 16)

The data in the following table is for frequency modes in a closed cylindrical tube:

n	f_n
1	175
2	350
3	515
4	690
5	855
6	1025

1. Plot the above data using *EXCEL*. (3 pts)
2. Plot the best straight line fitting the data, and show its equation. (4 pts)
3. From the slope of the straight line equation, estimate the speed of sound in the cylindrical tube. (Assume the tube is one meter long) (2 pts)
4. If you were to draw error bars on your graph, estimate how wide your error bars should be for both f_n and n (i.e., estimate Δf_n and Δn). (4 pts)