QUESTIONS TO HAND IN – EXPERIMENT 3

NAME_____

LAB INSTRUCTOR_____**LAB DAY/TIME**_____

1. What does the term "longitudinal wave" mean when applied to sound?

2. The speed of sound v_s is 343 m/s at room temperature. Assuming that the light from a lightning flash is comparatively instantaneous, how far away is a flash whose thunder takes 5 seconds to reach an observer?

3. A certain musical note has a frequency f of 440 hertz. What is its wavelength λ? Take $v_s = $ 343 m/s.

4. A closed tube has a length of $L = 0.75$ m. What is its fundamental resonant frequency? Take $v_s = 343$ m/s.

5. In Figure 3-2 the first three standing wave patterns for a closed pipe as the plunger is removed are shown. Assume the same frequency sound is applied at the left end. What is the distance the plunger must be moved between resonances?