Due Feb. 11, Tuesday

All problems must be solved symbolically first. Then, any numerical answer, when required, can be computed by substituting numbers into the symbolic expression at/near the very end. Solving problems symbolically means deriving the answer in terms of symbols, instead of numerical values. All problem numbers refer to those in the textbook. (Not all problems may be graded in detail, due to limited man power; however, you must do all problems.)

For each problem, you are required to use sensible symbols, by defining or adopting them yourself, for your symbolic solution. If you are unsure how to do so, feel free to ask (or look back at homework 1)!

Problem 1 (10 points) Problem 15.17 (circular wave).

Problem 2 (10 points) Problem 15.40 (wave reflection, transmission).

Problem 3 (10 points) Problem 15.52 (standing wave).

Problem 4 (10 points) Problem 16.19 (dB).

Problem 5 (10 points) Problem 16.58 (interference).

Problem 6 (10 points) Problem 16.59 (beats).

Problem 7 (10 points) Problem 16.90 (tuning fork and pipe).

Problem 8 (10 points) Problem 16.97 (Doppler effect).

Problem 9 (10 points) Problem 16.104 (Doppler effect).

Problem 10 (10 points) Problem 16.108 (sound wave).