

Due Mar. 5, Thursday

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 33.100 (Telescope).

Problem 2 (10 points) Problem 34.11 (Young's double slit).

Problem 3 (10 points) Problem 34.17 (Young's double slit).

Problem 4 (10 points) Problem 34.19 (Young's double slit).

Problem 5 (10 points) Problem 34.33 (Thin film—Newton's ring).

Problem 6 (10 points) Problem 34.65 (Thin film—How bits are read from a CD).

Problem 7 (10 points) Problem 35.56 (Polarization—Brewster angle).

Problem 8 (10 points) Problem 35.61 (Polarization).