HIP 08

COMMENTS:

- Problem 1 is a list of suggested Student Workbook Volume 2 problems to practice in your spare time. You do not need to turn these in, they will not be graded. I recommend working through theses before attempting problem 2, or if you get stuck while working on problem 2.
- Problem 2 will be graded based off of the HIP rubric.

(1) CH 17: 1, 2

(2) There are two small problems this week.
   a. In a Young's double slit experiment a screen is placed 75.0 cm from two slits spaced 0.400 mm apart. If the slits are illuminated with coherent light of 540 nm, how many total bright fringes are seen on the screen?
   b. A thin oil slick ($n_o = 1.5$) floats on top of water ($n_w = 1.33$). When a beam of white light strikes the film at a normal incidence from air, the only enhanced reflected colors are red (650 nm) and violet (390 nm). From this information, deduce the minimum thickness t of the oil slick.