Physics 152—Accelerated Physics II: Electricity, Magnetism, and Optics
Homework Assignment #2
Revised Due Date: Monday, September 11, 2023, 10:00 am

Mastering Physics

Do the on-line assignment "HW #02."

Note that the k in the first problem (21.52) is Boltzmann's constant $k = 1.38 \times 10^{-23}\,\mathrm{J/K}$, not Coulomb's constant.

Pencil-and-Paper Problems

Ch. 22: 22.24, 22.27, and 22.28 (30 pts. each). For problem 22.28, note that you can't directly use Gauss's Law for points B and C because they are not symmetrically placed in the system. Instead you should use (but not re-derive) the result of Example 22.7 for a single surface and then superpose the results from all 4 surfaces together. You have to think carefully about the + or − for the field due to each surface. Drawing arrows on a figure is usually helpful.

Please write *neatly* and show your work *clearly*. I need to be able to follow your reasoning. Homework that is incomplete or difficult to understand will not get full credit.

Academic Honesty

If you get bogged down with any of the problems, do not hesitate to discuss them with your instructor or with a fellow student. However, if you discuss a problem with *anyone* (besides your instructor) you should acknowledge that collaboration. Please see the Academic Honesty policy for more information about appropriate and inappropriate collaboration.