Chapter 4 – Problems 4, 5, 7, 10, 12, 15b

Note: In Problem 4-12 \( \frac{1}{4\pi\varepsilon_0} \int \frac{\hat{R} d\tau'}{R^2} \) is the electric field from a uniformly charged sphere of charge density \( \rho = 1 \). This can be evaluated from Gauss’s Law (see Prob. 2-12) or any other method.

Note: Hour Exam 2 will be on Friday, November 7, at 4:00 pm, room 511. We will go over homework 8 during the regular class meeting (9:10 – 10:00) on Nov. 5th. We will not have class on Friday, Nov. 7th.