Phys221 Assignment #3

Due: 10:20am Friday May 25, 2012

Part 1. Textbook (Ulaby, Chapter 4, page 111):

4.15, 4.25, 4.29.

Part 2.   An electric dipole consists of two charges q and –q located at (0, 0, d/2) and (0, 0, -d/2) respectively.

(a) Determine the electric potential V at any point P(x, y, z) in free space, given that P is far away from the dipole.

(b) Determine the electric field **E** (both magnitude and direction) at point P.