

## Phys221 Assignment #2

Due: 10:20am Friday May 18, 2012

Part 1. Textbook (Ulaby, Chapter 3, page 63):

3.1, 3.12, 3.17.

Part 2. Electric charge is uniformly distributed along an arc located in the  $x$ - $y$  plane and defined by  $r = a$  and  $-\frac{\pi}{8} \leq \phi \leq \frac{\pi}{8}$ . The linear charge density is  $\rho_l$ . Determine the electric field  $\mathbf{E}$  at  $(0, 0, z)$ .