Homeowrk 1
Due: 2012 October 5

1. Problem 2.1
2. Problem 2.4
3. Problem 2.6
4. Problem 2.9
5. Problem 2.14
6. Find and sketch the field lines for an eletric dipole field.
7. Consider the infinetesimally thin flat disk of Problem 2.6. Set the symmetry axis of the disk to lie along the z-axis and assume that $\sigma > 0$.

   a. A charge q, where $q\sigma < 0$, is placed at the center of the disk. What is the force on charge q?

   c. If charge q can move only along the symmetry axis of the disk, find and describe its motion if it is displaced a small height, $|\delta z| \ll R$, and then released.