1^{st} Homework, Part I
Due October 9, 2009

1. Consider an infinite sheet of surface charge density σ. On one side of the surface, there is a point charge q at a distance d from the surface. Chose your axis such that the surface charge lies on the xy plane, and the point charge is at the point with coordinates $(0, 0, d)$. Find the electric field at an arbitrary points (x, y, z). Express your anser in i) cartesian coordinates ii) cylindrical coordinates iii) spherical coordinates.