Homework 8 for September 10 2008
Due 8AM on September 12 2008
Physics 221 with Professor Jeff Terry

1. We have a 1 dimensional isolated system. A charge of $-2.50*10^{-6}$ C is at the origin while a charge of $+6.00*10^{-6}$ C is 1.00m to the right (in the positive x direction). Identify a location where the electric field is zero. (Up to 1 extra point possible if you can name more than one.)

2. Imagine a proton travels through the 1 dimensional system from the left. What happens when it hits the point where the E field is zero? (No diagram necessary for this one, and it is worth 3 points.)

3. The electrons in a particle beam each have a kinetic energy K. What are the magnitude and direction of the electric field that will stop these electrons in a distance d?