

PHYSICS 114 Contemporary Physics II – Homework 6

1. A rod lies along the x axis with one end at the origin and the other at $x = \infty$ with a uniform charge $\rho C/m$. Starting from Coulomb's law, find the electric field at the point $x = -a$ on the x axis.
2. Repeat problem (1) Except this time I want to know what the electric field is at a point on the x axis where $y = b$.
3. Suppose I have 3 rods of uniform charge density of charge Q and length L . I place rod 1 between 0 and L on the x axis, rod 2 between 0 and L on the y axis and rod 3 between 0 and L on the z axis. What is the electric field at. $\langle L/2, L/2, L/2 \rangle$?

Chapter 15 : 27, 32, 38 Chapter 16: 36, 38, 41, 48