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 \( < L/2, L/2, L/2 > ? \)

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