

4-5 E-field Computation using Gauss's Law

Reading Assignment: *pp. 98-107*

Q:

A:

1. HO: Spherically Symmetric Charge Densities

Example: Using Gauss's Law to Determine the Electric Field

2. HO: Cylindrically Symmetric Charge Densities

1. A hollow, charged cylinder (4.29)
2. Balanced, coaxial cylinders (4.31)
3. A Uniformly charged sphere (4.34)
4. A hollow, charged sphere (4.37)

$\rho_{v1}(\vec{r})$ creates $\mathbf{E}_1(\vec{r})$,

$\rho_{v2}(\vec{r})$ creates $\mathbf{E}_2(\vec{r})$,

$\rho_v(\vec{r}) = \rho_{v1}(\vec{r}) + \rho_{v2}(\vec{r})$ creates $\mathbf{E}(\vec{r}) = \mathbf{E}_1(\vec{r}) + \mathbf{E}_2(\vec{r})$.