

Physics 322 Homework Set #5 Winter 2009

1. Problem 6.16 in your textbook.
2. Problem 6.19 in your textbook.
3. Problem 6.24 in your textbook. Use the result that the electric field of a uniformly charged sphere of radius R is:

$$\vec{E}_{in} = \frac{\rho r}{3\epsilon_0} \hat{r} \quad \vec{E}_{out} = \frac{\rho R^3}{3\epsilon_0 r^2} \hat{r}$$

4. Problem 6.25 in your textbook.
5. Problem 6.26 in your textbook.