Physics 23 Problem Set #5

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Due Friday, Oct. 24, 2003

1. The sphere of radius $a$ in Fig. 1 is filled with positive charge at uniform density $\rho$. Then a smaller sphere of radius $a/2$ was carved out, as shown in the figure, then left empty. What are the direction and magnitude of the electric field at $A$? At $B$? (Hint: use superposition).


Figure 1: Figure for Problem 1.