# Charged Conducting Spheres—Electric Field at Various Points [131]

Shown below are two hollow spheres made of an electrically conducting material such as copper. On these spheres there is a different charge on each as given in the figure which is distributed evenly over the sphere. Each figure or sphere is independent of the others (they do not affect each other).

Rank these situations, from greatest to least, on the basis of the magnitude of the electric field at the following points: **A** and **D,** which are inside the sphere at the center of the spheres; **B** and **E,** which are inside the sphere at a distance of R/2 from the center of the spheres; and **C** and **F,** which are outside the sphere at a distance of 3R/2 from the center of the spheres.
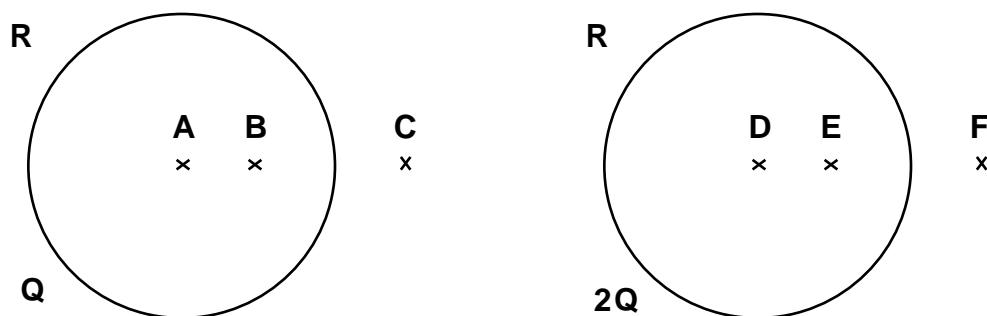
Greatest 1_____ 2_____ 3_____ 4_____ 5_____ 6_____ Least

Or, the magnitude of the electric field is the same for these cases (but not zero). _____

Or, the magnitude of the electric field is zero for these cases. _____

Please carefully explain your reasoning.

How sure were you of your ranking? (circle one)

Basically Guessed				Sure				Very Sure	
1	2	3	4	5	6	7	8	9	10