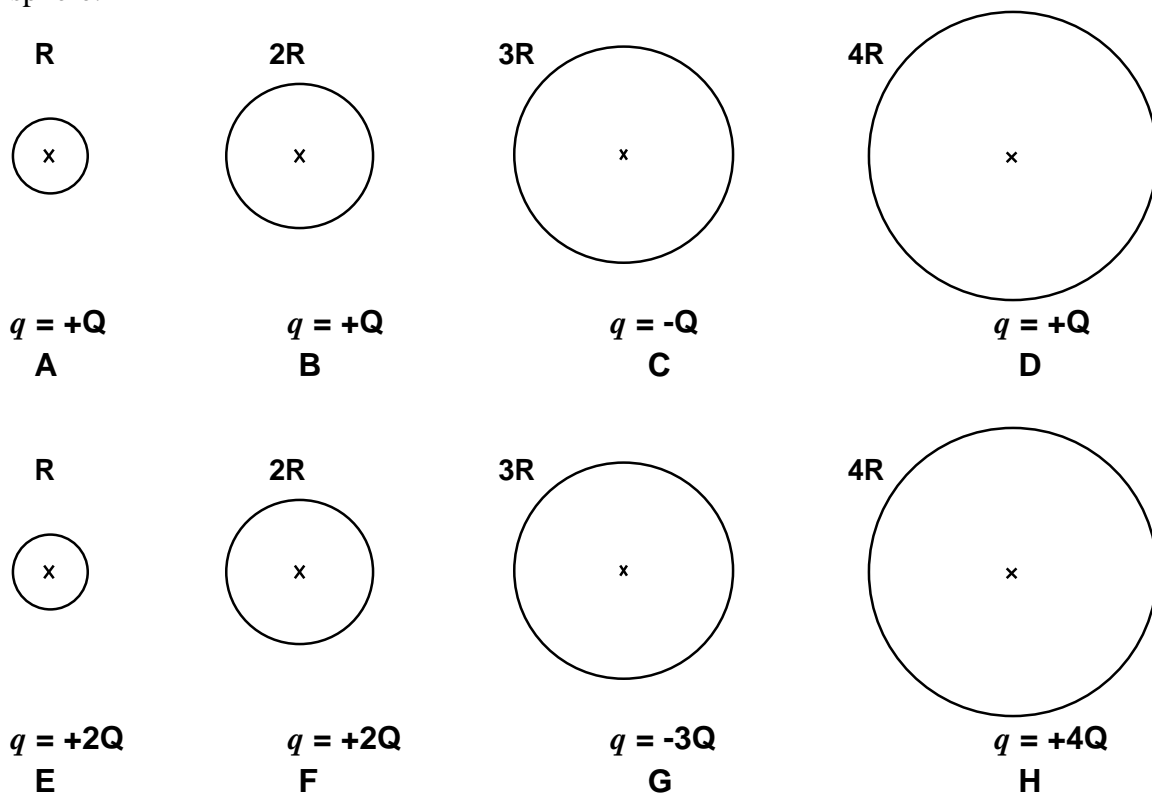


Charged Conducting Spheres—Electric Potential at the Center ¹³⁰

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

Rank these situations, from greatest to least, on the basis of the electric potential at the center of the sphere.



Greatest 1_____ 2_____ 3_____ 4_____ 5_____ 6_____ 7_____ 8_____ Least

Or, the electric potential at the center is the same (but not zero) for these cases. _____

Or, the electric potential at the center 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

¹³⁰ C. Hieggelke, T. O’Kuma