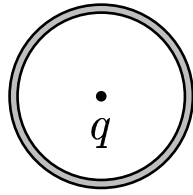


Imagine a charge in the center of a conducting, hollow sphere. There is no net charge on the sphere, and the sphere is not connected to ground.



What will happen if the charge is moved a little away from the center?

- A) The charge will return to the center.
- B) The charge will remain stationary.
- C) The charge will move away from the center.
- D) All of these can happen, depending on the size of the charge.

There will be an image-charge attracting it towards each metal surface. The charge will move towards the metallic surface closest to it because the image-charge attracting it will be closest and thus stronger.

Any charge (free to move) will go toward the closest conductor it can find.

Answer **C**.

23.03-09 Inside a Sphere 2004-9-9