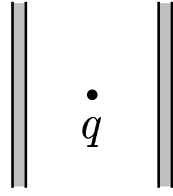


Imagine a charge in the middle between two parallel plate conductors. There is no net charge on the plates, and the plates are not connected to ground.



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

- A) The charge will return to the middle.
- B) The charge will remain stationary.
- C) The charge will move away from the middle.
- 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 plate 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.

23.03-08 Inside Parallel Plates 2004-9-9