

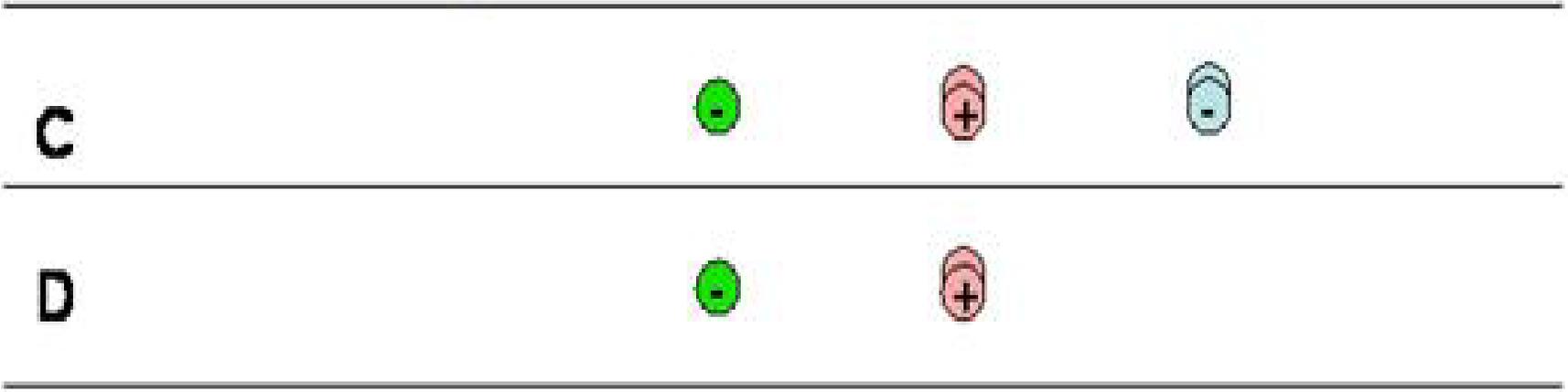
All of the pucks ● feel a force to the right.

**A. True    B. False**

"Nailed down"  
Negative charges (blue)

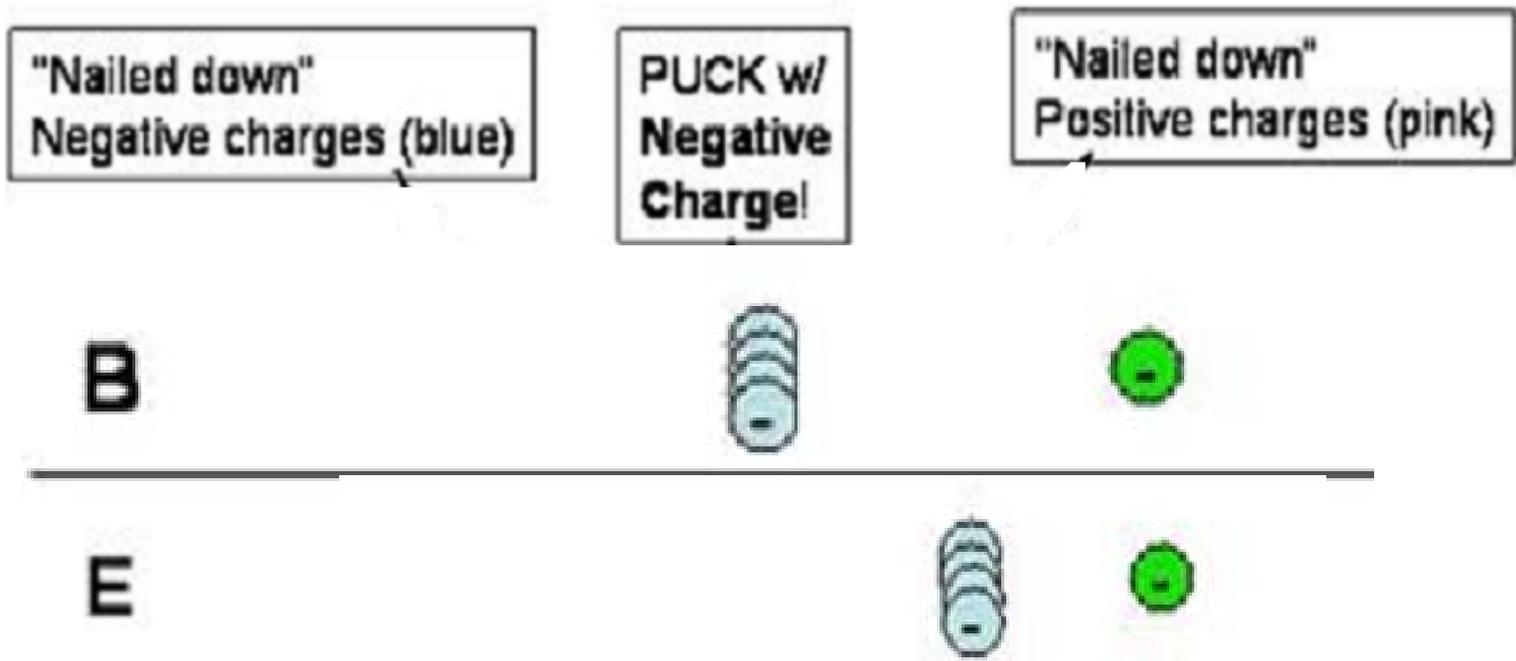
PUCK w/  
Negative  
Charge!

"Nailed down"  
Positive charges (pink)



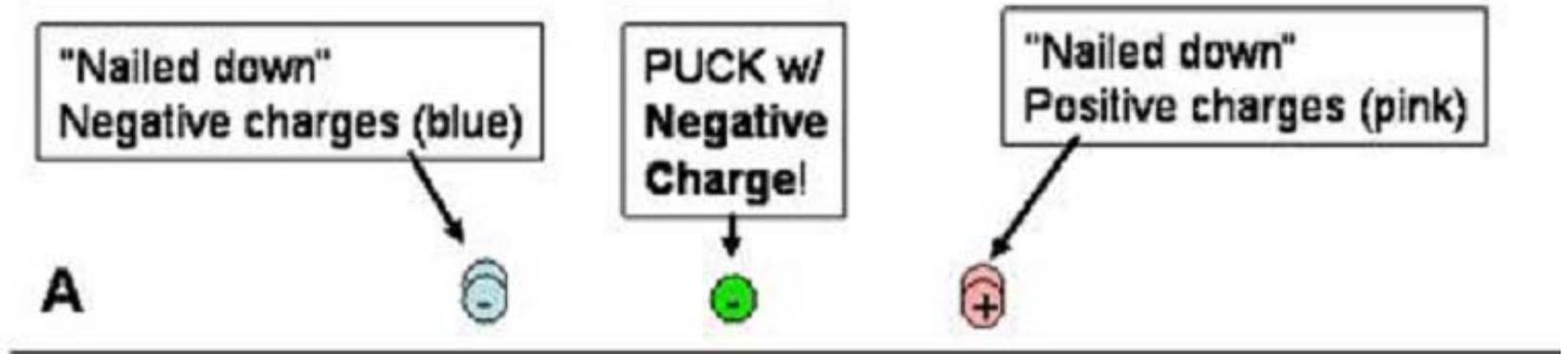
The puck ● in C feels a greater force to the right than the puck in D.

**A. True    B. False**



The puck  $\bullet$  in E feels a force to the right that is four times greater than that felt by the puck in B.

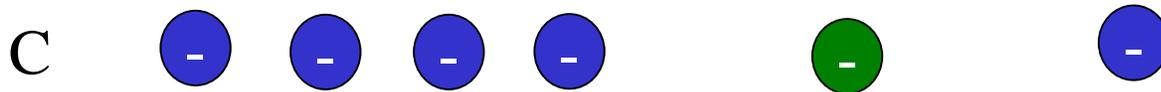
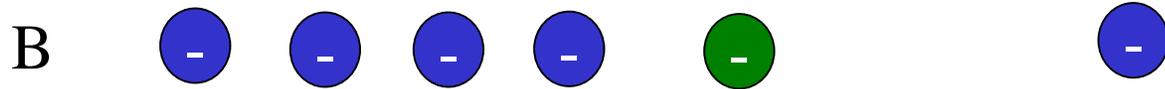
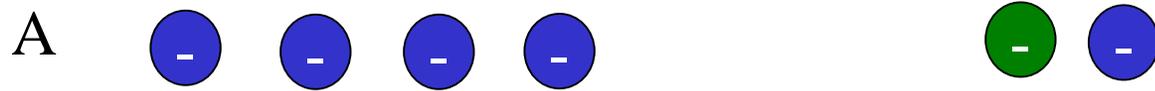
**A. True    B. False**



The net force on the puck  in A is zero.

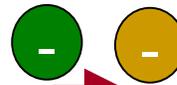
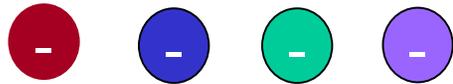
**A. True    B. False**

For which of these choices is puck most likely not to move?



# Answer A Look at forces from each charge and add them up

A



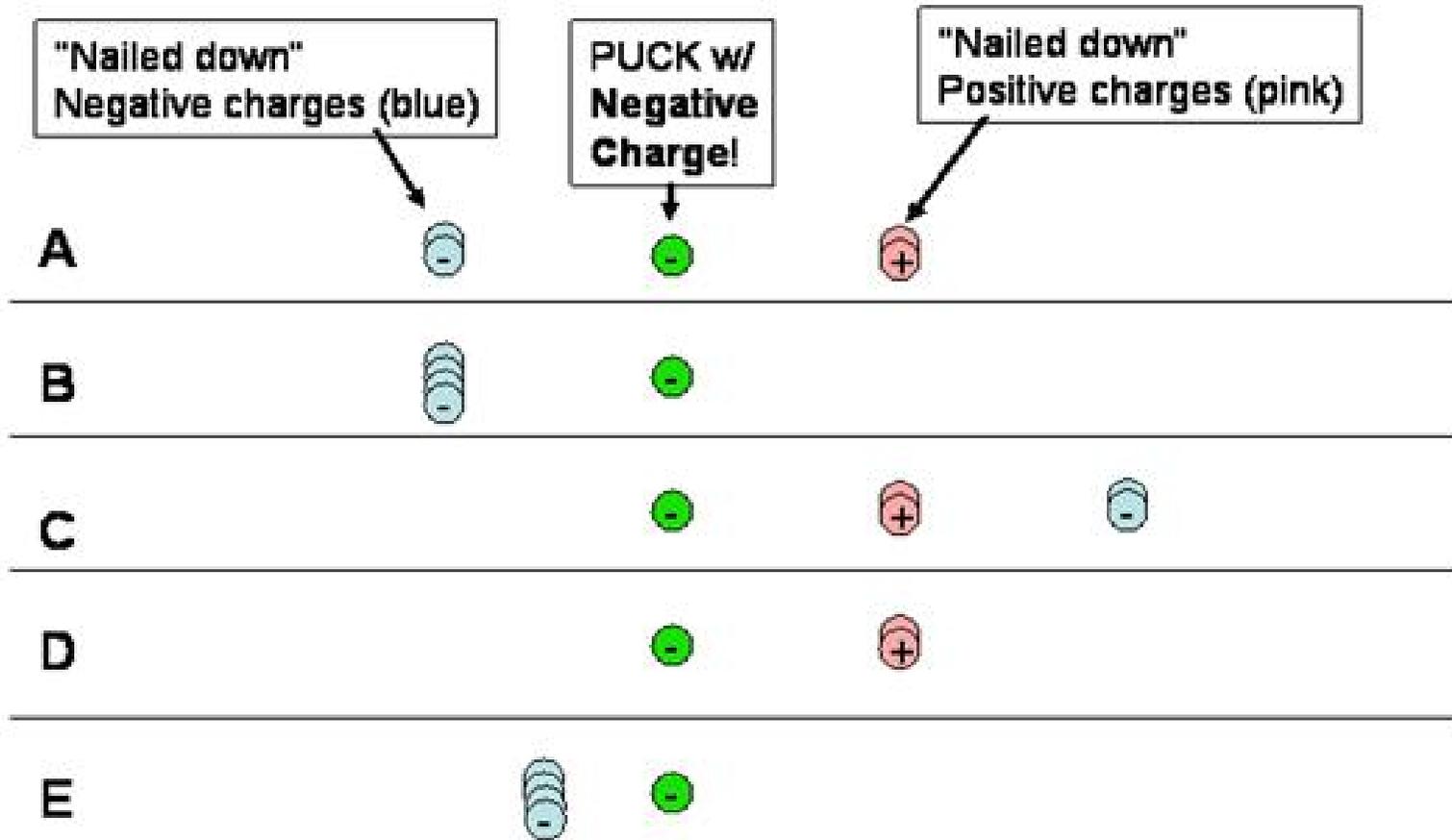
Color-code  
force from each  
charge.

If we put bunch of electrons in a box.

They will

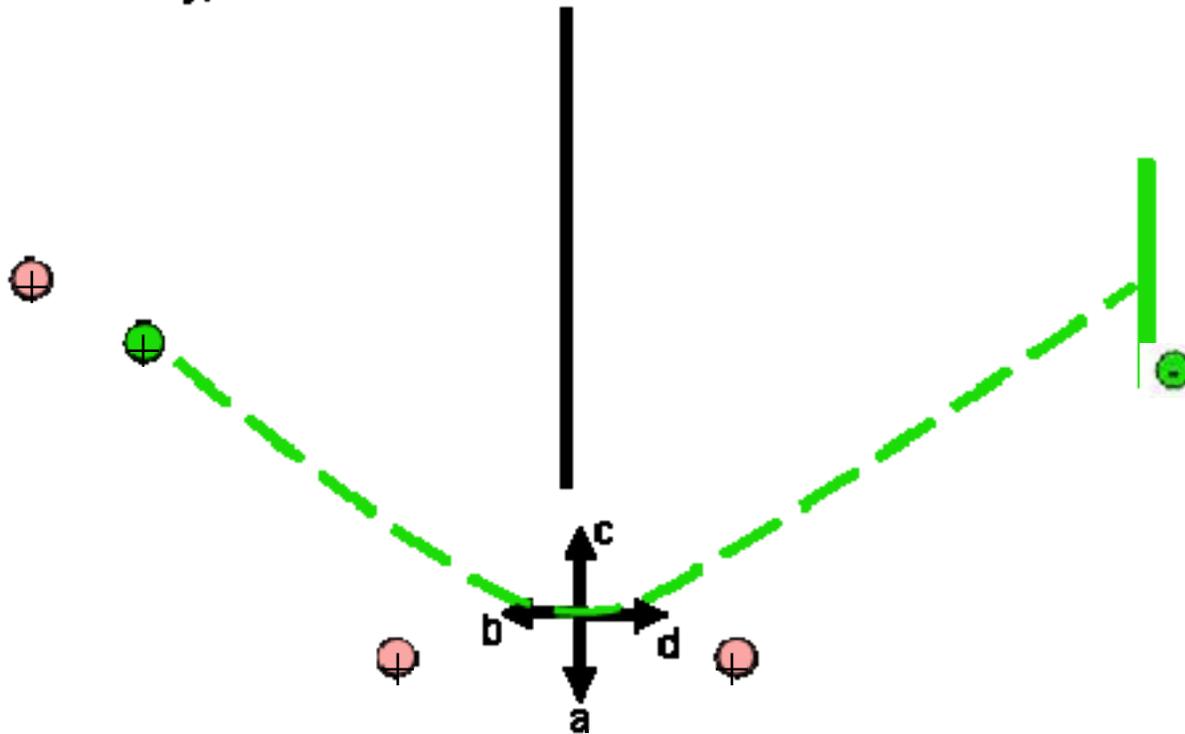
- a. clump together.
- b. spread out uniformly across box.
- c. make a layer on walls.
- d. do something else.

Which one would help explain why a charged balloon sticks to a wall.

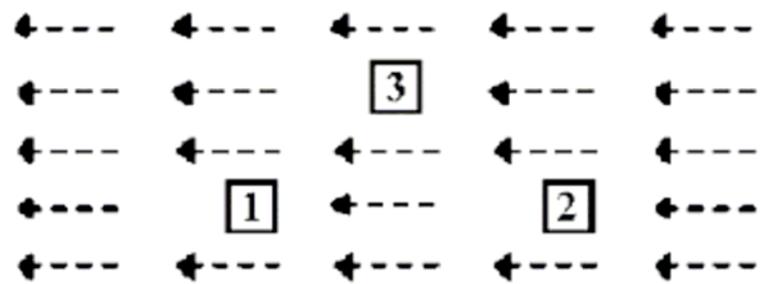


Which arrow best represents the direction of acceleration of the puck as it passes by the wall ?

Electric Hockey, Level 1



A positive charge might be placed at one of three different locations in a region where there is a uniform electric field, as shown.



How do the electric force,  $F$ , on the charge at positions 1, 2, and 3 compare?

1.  $F$  is greater at 1.
2.  $F$  is greater at 2.
3.  $F$  is greater at 3.
4.  $F$  is zero at all three places.
5.  $F$  at all three positions is the same but not zero.

When a positive charge is released from rest in a uniform electric field, it will

1. remain at rest in its initial position.
2. move at a constant acceleration.
3. move at a constant velocity.
4. move with a linearly changing acceleration.
5. you can't tell from the information given