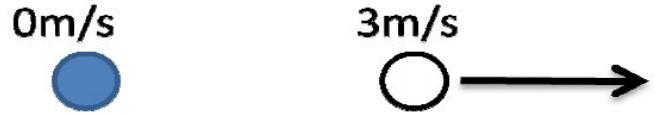
Question 7: A ball moving at 4m/s collides with a stationary ball of equal mass. If the collision is not perfectly elastic, which of the following could be the result of the collision?

A) 

B) 

C) 

D) 

E) Any of the above are possible

Question 7: A ball moving at 4m/s collides with a stationary ball of equal mass. If the collision is not perfectly elastic, which of the following could be the result of the collision?

A) 0m/s 3m/s

B) both 1m/s

C) 1m/s 3m/s

D) 3m/s

E) Any of the above are possible

While fighting over a potential mate, two space salmon traveling at equal speeds collide with each other. During the collision, we can say that

A) The force on the smaller space salmon from the larger space salmon is **greater** than the force on the larger space salmon from the smaller space salmon.
B) The force on the smaller space salmon from the larger space salmon is **less** than the force on the larger space salmon from the smaller space salmon.
C) The force on the smaller space salmon from the larger space salmon is the **same as** than the force on the larger space salmon from the smaller space salmon.
D) Any of the above are possible.

While fighting over a potential mate, two male space salmon traveling at equal speeds collide with each other. During the collision, we can say that

A) The force on the smaller space salmon from the larger space salmon is **greater** than the force on the larger space salmon from the smaller space salmon.
B) The force on the smaller space salmon from the larger space salmon is **less** than the force on the larger space salmon from the smaller space salmon.
C) The force on the smaller space salmon from the larger space salmon is the **same as** than the force on the larger space salmon from the smaller space salmon.
D) Any of the above are possible.

A small car pushes a large truck that has broken down. We can say that

a) The net force on the car has greater magnitude
b) The net force on the truck has greater magnitude
c) The net force on the car is equal to the net force on the truck

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a) The net force on the car has greater magnitude
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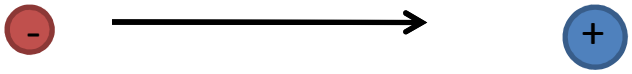


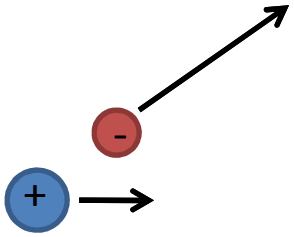
(arrows indicate direction of velocity but are not drawn to scale)

In a particle accelerator, an electron collides with a stationary proton as shown. Which of the following is a possible outcome of the collision?

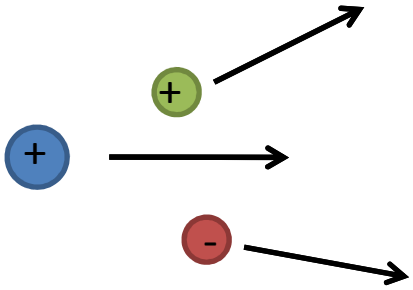
A)

H atom
v=0

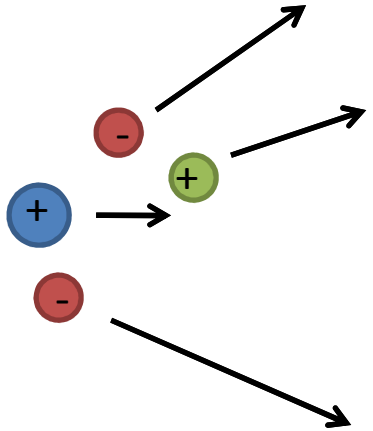
B)



C)

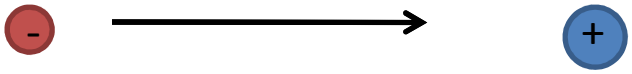


D)



(the little green ones are positrons with charge +1)

E) A, B, or D



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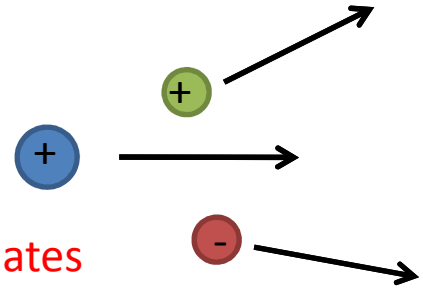
In a particle accelerator, an electron collides with a stationary proton as shown. Which of the following is a possible outcome of the collision?

A)

H atom
v=0

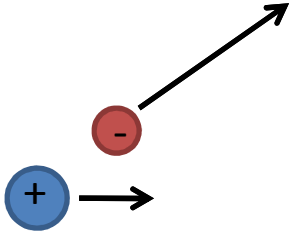
Violates x momentum conservation

C)



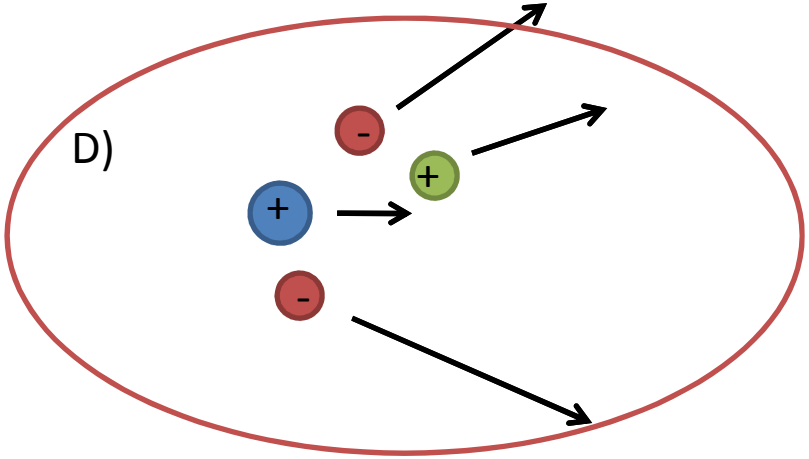
Violates charge conservation

B)



Violates y momentum conservation

D)



E) A, B, or D