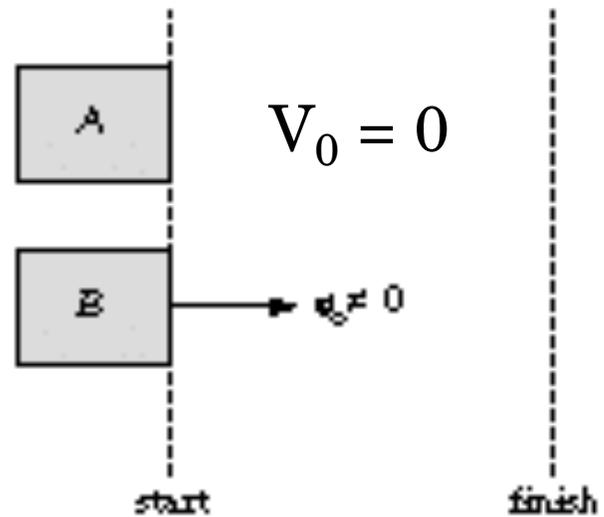


Two objects (labeled A & B) collide. Newton's 3rd law tells us that the force A exerts on B must be equal and opposite to the force B exerts on A. Which of the following is true:

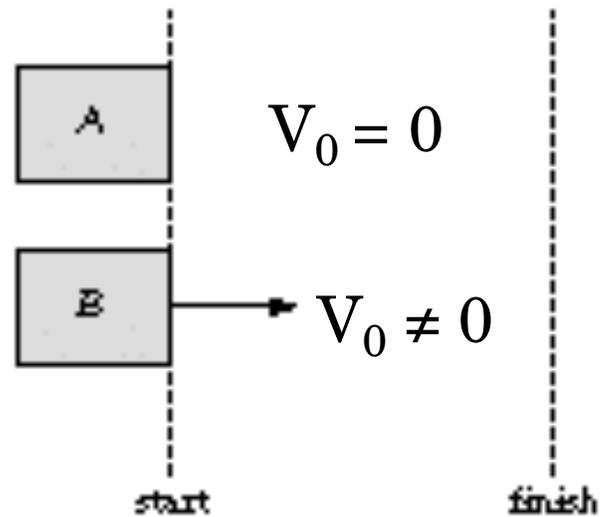
- 1) The change in momentum of A due to the force between the objects must be equal and opposite of the change in momentum of B.
- 2) The work done on A by the force between the objects must be equal and opposite of the work done on B.
- 3) The change in kinetic energy of A due to the force between the objects must be equal and opposite of the change in kinetic energy of B.
- 4) (1) and (2) are true.
- 5) (2) and (3) are true.
- 6) (1) and (3) are true.
- 7) None of the above are true.
- 8) All of the above are true.

Identical constant forces push two identical objects A and B continuously from a starting line to a finish line. If A is initially at rest and B is initially moving to the right, which of the following is true:



- 1) Object A has the larger change in kinetic energy.
- 2) Object B has the larger change in kinetic energy.
- 3) Both objects have the same change in kinetic energy.
- 4) There is no change in kinetic energy.
- 5) Not enough information is given to decide.

Identical constant forces push two identical objects A and B continuously from a starting line to a finish line. If A is initially at rest and B is initially moving to the right, which of the following is true:



- 1) Object A has the larger change in momentum.
- 2) Object B has the larger change in momentum.
- 3) Both objects have the same change in momentum.
- 4) There is no change in momentum.
- 5) Not enough information is given to decide.