

- 3 Two identical frictionless trolleys A and B approach each other along a horizontal straight line, as illustrated in the figure below. Trolley A is moving faster than B. The trolleys collide and are in contact for a short period of time before separating.



Which of the following statements is false?

- A It is not possible for both trolleys to be at rest simultaneously.
- B During the collision, the two trolleys exert equal and opposite forces on each other.
- C Trolley B must be moving to the right after the collision.
- D The collision must be elastic as trolley A remains in contact with trolley B for only a short period of time