

**9** Two bodies travelling along the same straight line collide in a perfectly elastic collision.

Which statement **must** be correct?

- A** The initial speed of one body will be the same as the final speed of the other body.
- B** The relative speed of approach between the two bodies equals their relative speed of separation.
- C** The total momentum is conserved but the total kinetic energy will be reduced.
- D** One of the bodies will be stationary at one instant.