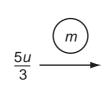
8 The diagram shows two spherical masses approaching each other head-on at an equation one has mass 2*m* and the other has mass *m*.



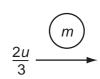


Which diagram, showing the situation after the collision, shows the result of an elastic collision?

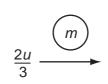












C



В

the spheres stick together

**9** A supermarket trolley, total mass 30 kg, is moving at 3.0 m s<sup>-1</sup>. A retarding force of 60 N is applied to the trolley for 0.50 s in the opposite direction to the trolley's initial velocity.

What is the trolley's new velocity after the application of the force?

- **A**  $1.0 \,\mathrm{m\,s^{-1}}$
- **B**  $1.5 \,\mathrm{m\,s^{-1}}$
- $C 2.0 \, \text{m s}^{-1}$
- **D**  $2.8 \,\mathrm{m \, s^{-1}}$

**Space for working**