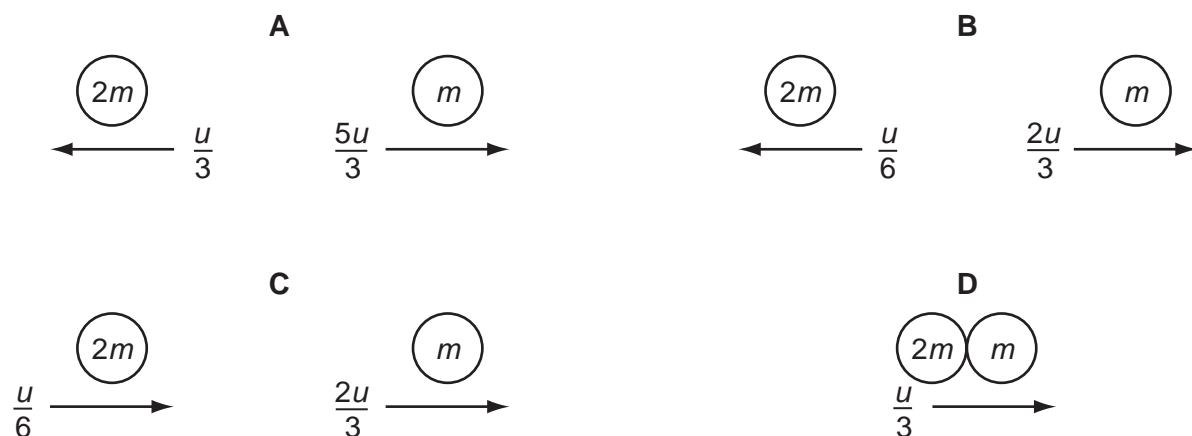


- 8 The diagram shows two spherical masses approaching each other head-on at an equal speed. One has mass $2m$ and the other has mass m .



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



the spheres stick together

- 9 A supermarket trolley, total mass 30 kg , is moving at 3.0 m s^{-1} . 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 m s^{-1} **B** 1.5 m s^{-1} **C** 2.0 m s^{-1} **D** 2.8 m s^{-1}

Space for working