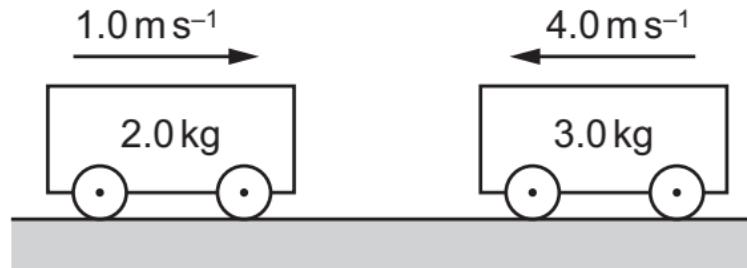


- 11 Two frictionless trolleys are moving towards each other along the same horizontal straight line. Their masses and velocities are shown.



The trolleys collide and stick together.

What is the velocity of the trolleys after the collision?

- A  $2.0 \text{ m s}^{-1}$  to the left
- B  $2.0 \text{ m s}^{-1}$  to the right
- C  $2.8 \text{ m s}^{-1}$  to the left
- D  $2.8 \text{ m s}^{-1}$  to the right

- 12 A bullet of mass 8.0 g travels at a speed of  $300 \text{ m s}^{-1}$ . The bullet hits a target and stops after a