

- 7 Two satellites in deep space collide inelastically.

What happens to the total kinetic energy and total momentum?

| | total kinetic energy | total momentum |
|----------|----------------------|----------------|
| A | conserved | conserved |
| B | conserved | reduced |
| C | reduced | conserved |
| D | reduced | reduced |

- 8 What is a reasonable estimate of the momentum of a family car travelling at 25 kilometres per hour?

- A** $1 \times 10^4 \text{ kg m s}^{-1}$
B $1 \times 10^5 \text{ kg m s}^{-1}$
C $1 \times 10^6 \text{ kg m s}^{-1}$
D $1 \times 10^7 \text{ kg m s}^{-1}$

- 9 A ball collides with a wall. Before the collision, the ball moves with velocity 8 m s^{-1} to the right. After the collision, it moves with velocity 3 m s^{-1} to the left.

What is the change in velocity of the ball during the collision?

- A** 5 m s^{-1} to the left
B 5 m s^{-1} to the right
C 11 m s^{-1} to the left
D 11 m s^{-1} to the right