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 $8\,\text{m s}^{-1}$ to the right. After the collision, it moves with velocity $3\,\text{m s}^{-1}$ to the left.

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

A $5\,\text{m s}^{-1}$ to the left

B $5\,\text{m s}^{-1}$ to the right

C $11\,\text{m s}^{-1}$ to the left

D $11\,\text{m s}^{-1}$ to the right