

- 9 A ball X of mass  $1.0 \text{ kg}$  travelling at  $4.0 \text{ m s}^{-1}$  to the right hits a stationary ball Y of mass  $10.0 \text{ kg}$ . Ball Y moves off at  $0.50 \text{ m s}^{-1}$  to the right after the collision.



What is the velocity of X after the collision and what is the difference in kinetic energy of the system?

	velocity of X after collision	difference in kinetic energy / J
A	$1.0 \text{ m s}^{-1}$ to the left	6.3
B	$1.0 \text{ m s}^{-1}$ to the left	3.3
C	$1.0 \text{ m s}^{-1}$ to the right	6.3
D	$1.0 \text{ m s}^{-1}$ to the right	3.3

