1 An object of mass 50 kg accelerates from a velocity of $2.0 \mathrm{~m} / \mathrm{s}$ to a velocity of $10 \mathrm{~m} / \mathrm{s}$ in the same direction.

What is the impulse provided to cause this acceleration?
A 250 Ns
B 400 Ns
C 850 Ns
D 2500 Ns

2 A gas molecule strikes the wall of a container. The molecule rebounds with the same speed.


What happens to the kinetic energy and what happens to the momentum of the molecule?

|  | kinetic energy | momentum |
| :--- | :---: | :---: |
| A | changes | changes |
| B | changes | stays the same |
| C | stays the same | changes |
| D | stays the same | stays the same |

3 Which quantity is measured in newton seconds ( Ns )?
A impulse
B moment
C power
D work done

