

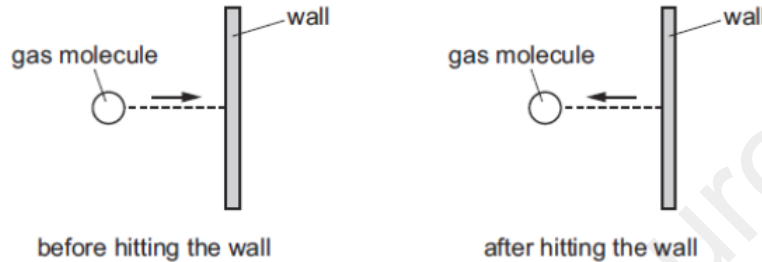
MOMENTUM

1 An object of mass 50 kg accelerates from a velocity of 2.0 m/s to a velocity of 10 m/s in the same direction.

What is the impulse provided to cause this acceleration?

- A 250 N s B 400 N s C 850 N s D 2500 N s

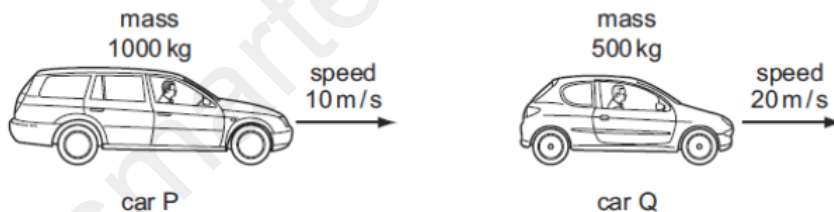
A gas molecule strikes the wall of a container. The molecule rebounds with the same speed.



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
<input checked="" type="checkbox"/> C	stays the same	changes
D	stays the same	stays the same

2 Two cars, P and Q, have different masses and different speeds as shown.



Which row correctly compares the momentum and the kinetic energy of P with the momentum and the kinetic energy of Q?

	momentum	kinetic energy
A	P greater than Q	P equal to Q
B	P equal to Q	P equal to Q
<input checked="" type="checkbox"/> C	P equal to Q	P less than Q
D	P less than Q	P greater than Q

3 A girl of mass 50 kg runs at 6.0 m/s.

What is her momentum?

A 300 J

B 300 kgm/s

C 900 J

D 900 kgm/s

A vehicle of mass 900 kg is travelling with a velocity of 20 m/s.

4 What is the momentum of the vehicle?

A 45 kgm/s

B 450 kgm/s

C 18000 kgm/s

D 180000 kgm/s