

2 This question is about momentum.

(a) Which of these is the correct unit for momentum?

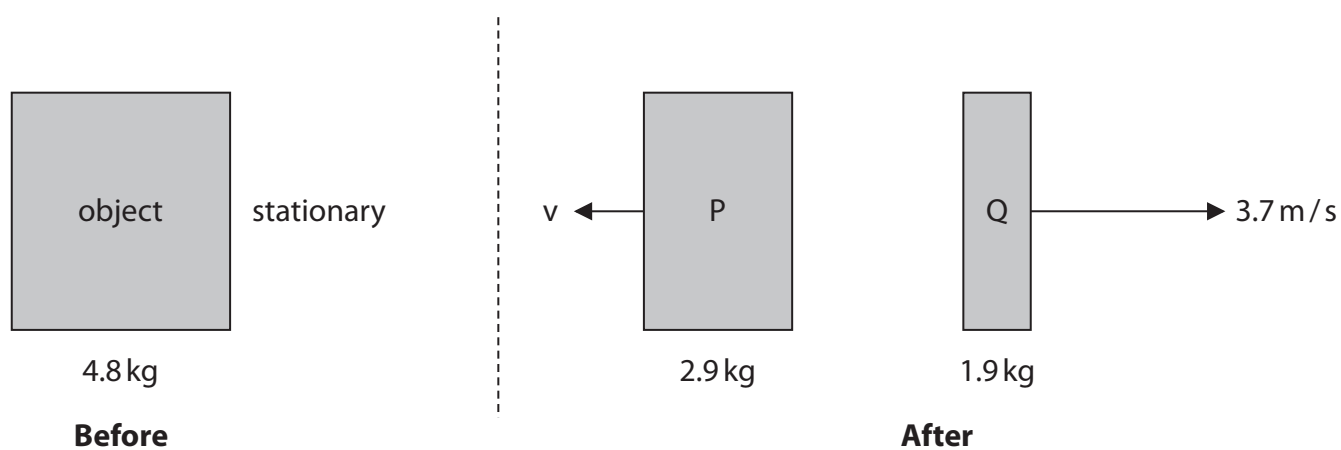
(1)

- ☐ A kg/m/s
- ☐ B $\text{kg}^2\text{m/s}$
- ☐ C kg m/s^2
- ☐ D kg m/s

(b) The diagram shows an object before and after an explosion.

The object breaks into two parts, P and Q.

The parts move away from each other in opposite directions.



(i) State what is meant by the **principle of conservation of momentum**.

(1)

(ii) Calculate the magnitude of the velocity of part P after the explosion.

(3)

velocity = m/s



(3)

(Total for Question 2 = 8 marks)