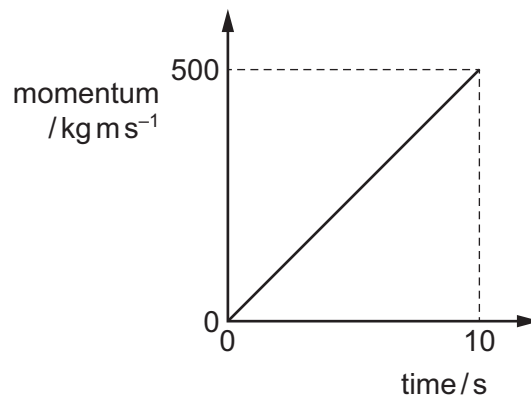


- 9 An object of mass  $4.0\text{ kg}$  moving with a speed of  $3.0\text{ ms}^{-1}$  strikes a stationary object in an inelastic collision.

Which statement is correct?

- A After collision, the total kinetic energy is  $18\text{ J}$ .
  - B After collision, the total kinetic energy is less than  $18\text{ J}$ .
  - C Before collision, the total kinetic energy is  $12\text{ J}$ .
  - D Before collision, the total kinetic energy is less than  $12\text{ J}$ .
- 10 The graph shows how the momentum of a motorcycle changes with time.



What is the resultant force on the motorcycle?

- A  $50\text{ N}$
- B  $500\text{ N}$
- C  $2500\text{ N}$
- D  $5000\text{ N}$

**Space for working**