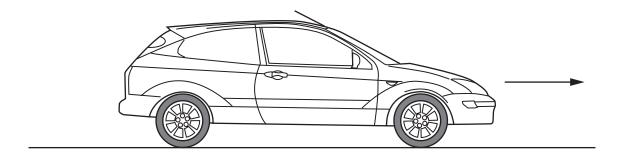
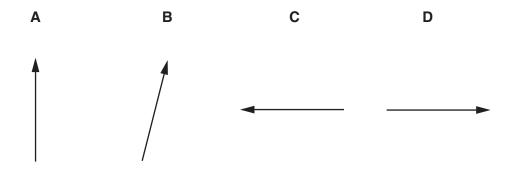
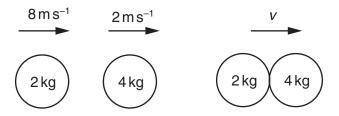
11 A car with front-wheel drive accelerates in the direction shown.



Which diagram best shows the direction of the total force exerted by the road on the front wheels?



12 A ball of mass 2 kg travelling at 8 m s⁻¹ strikes a ball of mass 4 kg travelling at 2 m s⁻¹. Both balls are moving along the same straight line as shown.



After collision, both balls move at the same velocity v.

What is the magnitude of the velocity v?

- **A** $4 \,\mathrm{m}\,\mathrm{s}^{-1}$
- **B** 5 m s⁻¹
- **C** $6 \,\mathrm{m}\,\mathrm{s}^{-1}$
- **D** 8 m s⁻¹