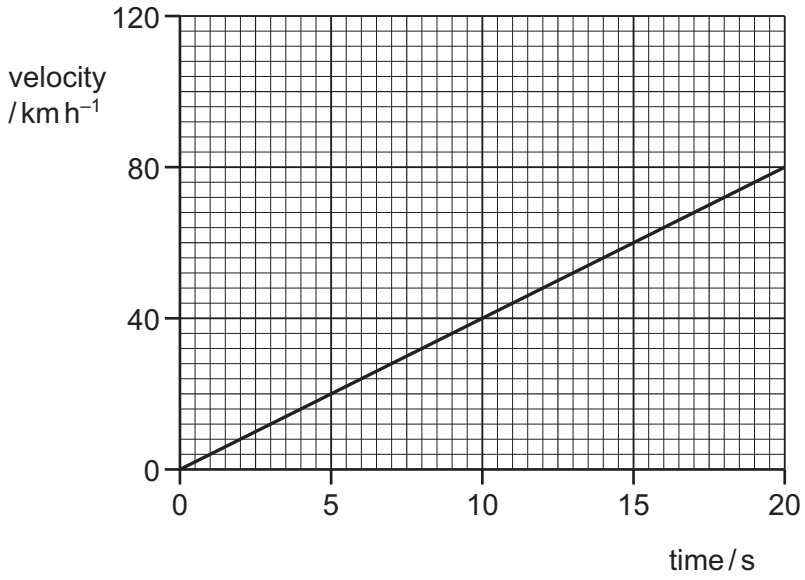
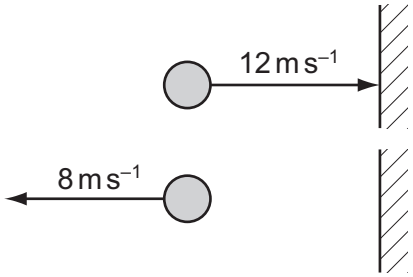
11 The velocity of a car changes as shown.



What is the acceleration of the car?

A $1.1\,m\,s^{-2}$ **B** $4.0\,m\,s^{-2}$ **C** $224\,m\,s^{-2}$ **D** $800\,m\,s^{-2}$

12 A ball of mass 0.5 kg is thrown against a wall at a speed of $12\,m\,s^{-1}$. It bounces back with a speed of $8\,m\,s^{-1}$. The collision lasts for 0.10 s.



What is the average force on the ball due to the collision?

A 0.2 N **B** 1 N **C** 20 N **D** 100 N

Space for working