**3**   A good driver is driving a car at 30 m s$^{-1}$ on a lane when another bad driver travelling at a constant speed of 20 m s$^{-1}$ swerves into the lane 20 m ahead. As soon as the good driver sees the car in front of him, he begins to brake.

Assume that the deceleration is constant.

Determine the smallest deceleration to avoid hitting the rear of the car.

**A**   1.5 m s$^{-2}$          **B**   2.5 m s$^{-2}$          **C**   5.0 m s$^{-2}$          **D**   12.5 m s$^{-2}$