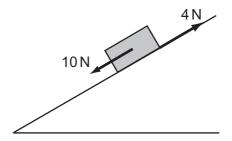
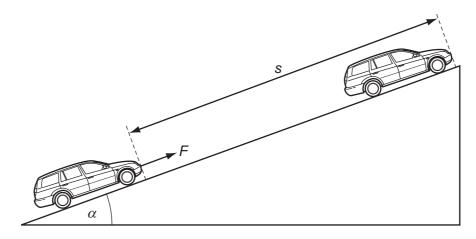
14 A brick weighing 20 N rests on an inclined plane. The weight of the brick has a component of 10 N parallel with the plane. The brick also experiences a frictional force of 4 N.



What is the acceleration of the brick down the plane? Assume that the acceleration of free fall g is equal to $10\,\mathrm{m\,s^{-2}}$.

- **A** $0.3 \, \text{m s}^{-2}$
- **B** $0.8\,\mathrm{m\,s^{-2}}$
- $C 3.0 \,\mathrm{m\,s^{-2}}$
- **D** $8.0 \,\mathrm{m\,s^{-2}}$
- **15** A constant force F, acting on a car of mass m, moves the car up the slope through a distance s at constant velocity v. The angle of the slope to the horizontal is α .



Which expression gives the efficiency of the process?

- A $\frac{mgs \sin \alpha}{F_V}$
- $\mathbf{B} = \frac{mv}{Fs}$
- $C = \frac{mv^2}{2Fs}$
- $\mathbf{D} \quad \frac{mg \sin \alpha}{F}$

Space for working