

- 6** A car of mass 1200 kg is moving at  $20 \text{ m s}^{-1}$  up a slope which is inclined at an angle of  $30^\circ$ . The frictional force opposing the motion is 900 N. If the car accelerates at  $3.0 \text{ m s}^{-2}$  when it is moving at this speed, what is the power delivered by the engine at this instant?

**A** 140 kW

**B** 170 kW

**C** 210 kW

**D** 250 kW