

- 17** The force resisting the motion of a car is proportional to the square of the car's speed. The magnitude of the force at a speed of  $20.0 \text{ m s}^{-1}$  is  $800 \text{ N}$ .

What useful output power is required from the car's engine to maintain a steady speed of  $40.0 \text{ m s}^{-1}$ ?

- A** 32 kW                      **B** 64 kW                      **C** 128 kW                      **D** 512 kW