

- 7 A car travels along a road at a constant speed of  $20\text{ m s}^{-1}$ . Its power output is 23 kW. The total resistive force on the car is proportional to the square of its speed.

What power will be required for the car to travel at a constant speed of  $40\text{ m s}^{-1}$ ?

A 46 kW

B 92 kW

C 184 kW

D 368 kW

