

- 7** A 1000 kg car travels along a road at with a constant acceleration of 0.50 m s^{-2} . At a speed of 20 m s^{-1} , its power output is 40 kW. The total resistive force on the car is proportional to the square of its speed.

What power will be required to travel at a constant speed of 25 m s^{-1} ?

A 1.8 kW

B 47 kW

C 59 kW

D 72 kW