

A railway locomotive pulling a train delivers a constant power of 2.0×10^6 W to the wheels. The resistive forces are constant at all speeds. The maximum speed that the train can achieve on a level track is 40 m s^{-1} .

What is the resultant force accelerating the train when it is travelling at 10 m s^{-1} ?

- A $5.0 \times 10^4\text{ N}$
- B $1.5 \times 10^5\text{ N}$
- C $2.0 \times 10^5\text{ N}$
- D $2.5 \times 10^5\text{ N}$