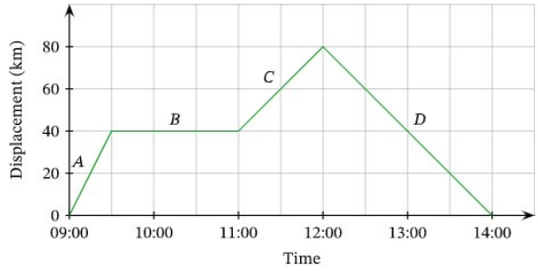
This displacement–time graph shows the journey of a car along a straight road. The journey has four stages: A, B, C, and D.



Calculate the average velocity for each stage of the journey.

A $A = 80$ km/h, $B = 0$ km/h, $C = 80$ km/h, $D = 40$ km/h

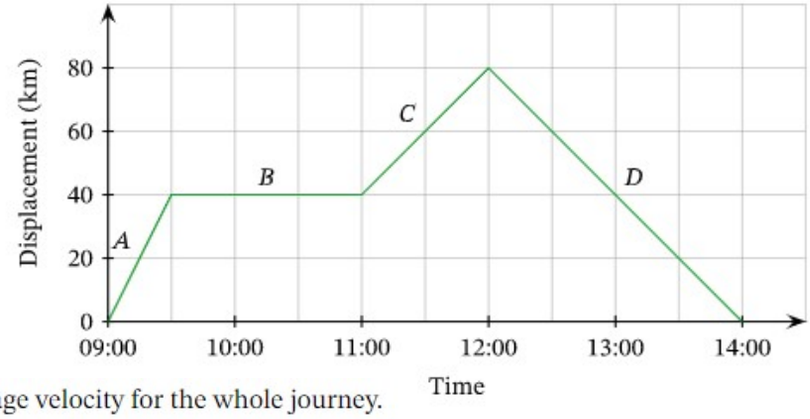
B $A = 0$ km/h, $B = 80$ km/h, $C = 40$ km/h, $D = -40$ km/h

C $A = 80$ km/h, $B = 0$ km/h, $C = 80$ km/h, $D = -40$ km/h

D $A = 80$ km/h, $B = 0$ km/h, $C = 40$ km/h, $D = 40$ km/h

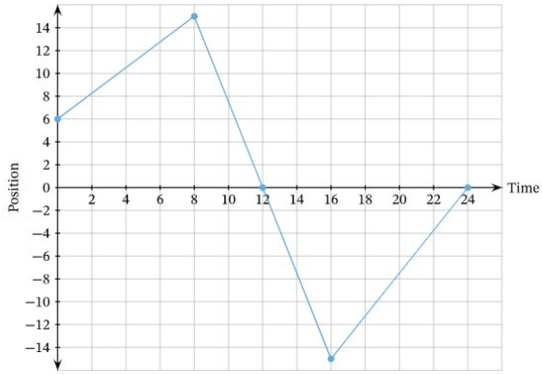
E $A = 80$ km/h, $B = 0$ km/h, $C = 40$ km/h, $D = -40$ km/h

This displacement–time graph shows the journey of a car along a straight road. The journey has four stages: A, B, C, and D.



- Write down the average velocity for the whole journey.
- Calculate the average speed for the whole journey.

Q4: The position-time graph given below describes an object's motion.



Which of the following statements is true?

A The velocity is positive at $t = 4$ and $t = 24$.

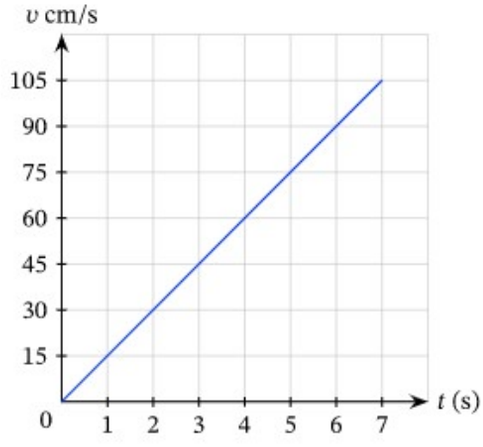
B The velocity is positive at the time interval $16 < t < 24$ only.

C The velocity is positive at the time intervals $0 < t < 8$ and $16 < t < 24$.

D The velocity is positive at $t = 3$ and $t = 16$.

E The velocity is positive at the time interval $0 < t < 8$ only.

Q1: The given velocity-time graph represents a particle moving in a straight line. Determine its displacement at $t = 2\,\text{s}$.



Q3: Given the velocity-time graph of a particle moving in a straight line, determine the displacement of the particle within the time interval $[0, 9]$.