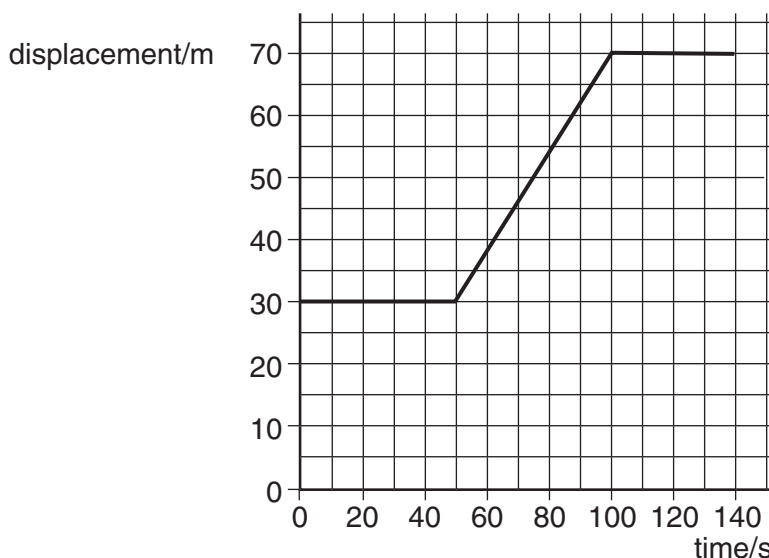


- 7 A car at rest in a traffic queue moves forward in a straight line and then comes to rest again. The graph shows the variation with time of its displacement.

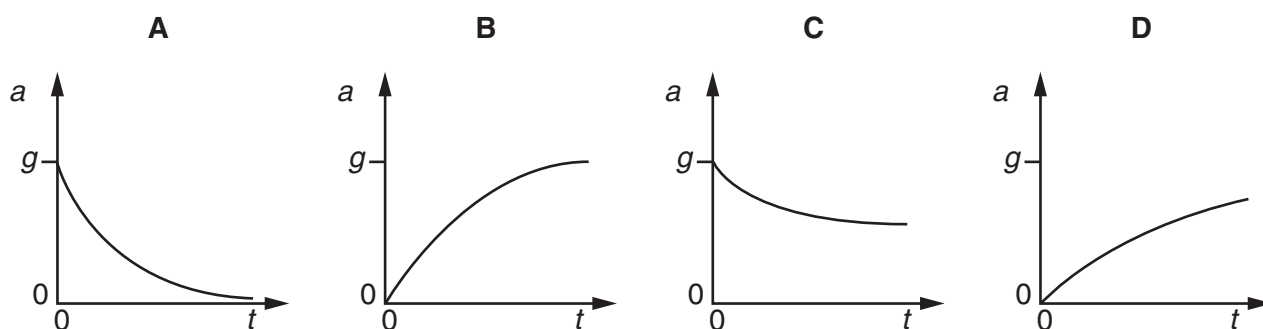


What is its speed while it is moving?

- A**  $0.70 \text{ m s}^{-1}$       **B**  $0.80 \text{ m s}^{-1}$       **C**  $1.25 \text{ m s}^{-1}$       **D**  $1.40 \text{ m s}^{-1}$
- 8 An object is dropped from a great height and falls through air of uniform density.

The acceleration of free fall is  $g$ .

Which graph could show the variation with time  $t$  of the acceleration  $a$  of the object?



- 9 Which of the following is a statement of the principle of conservation of momentum?
- A** Momentum is the product of mass and velocity.
- B** In an elastic collision, momentum is constant.
- C** The momentum of an isolated system is constant.
- D** The force acting on a body is proportional to its rate of change of momentum.