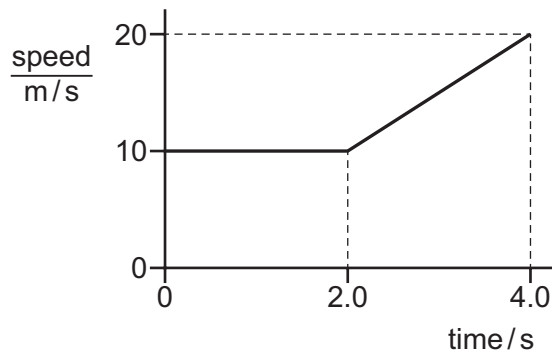


0654-P2-MOTION-SET-4-QP

1 The diagram is a speed-time graph for a moving object.

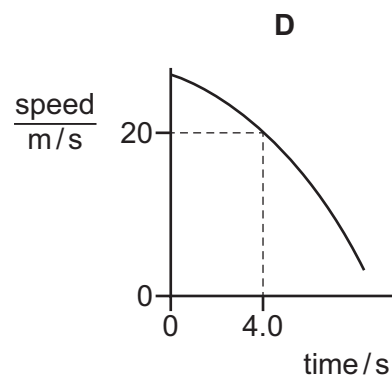
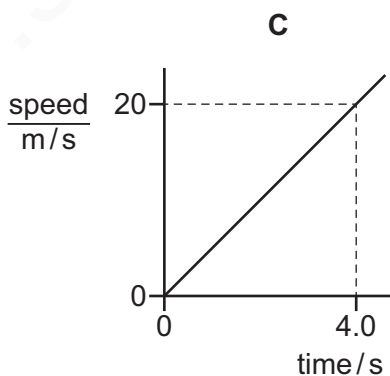
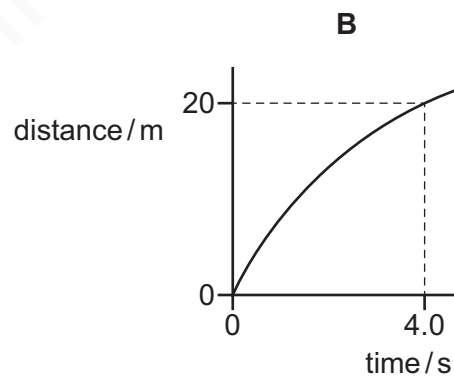
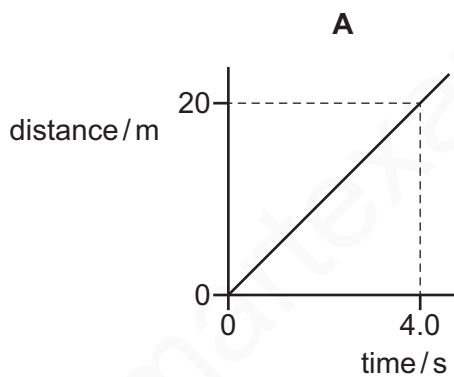


What is the distance travelled by the object in 4.0 s?

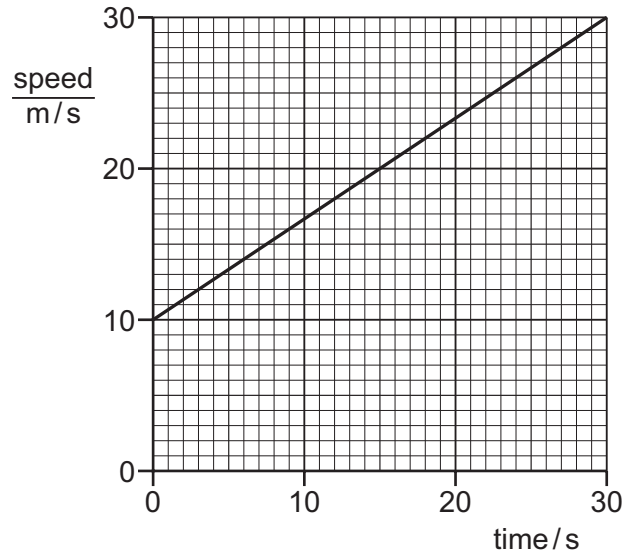
- A** 30 m **B** 40 m **C** 50 m **D** 80 m

2 The diagrams show two distance-time graphs and two speed-time graphs for objects travelling in a straight line.

Which graph represents an object with a constant, positive acceleration of 5.0 m/s^2 ?



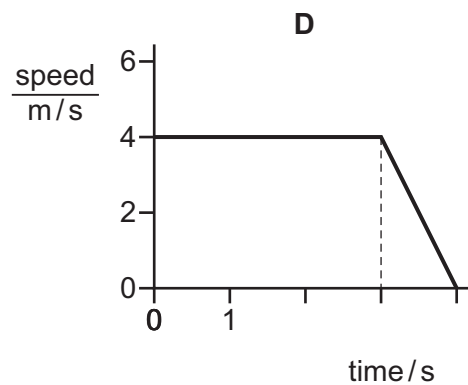
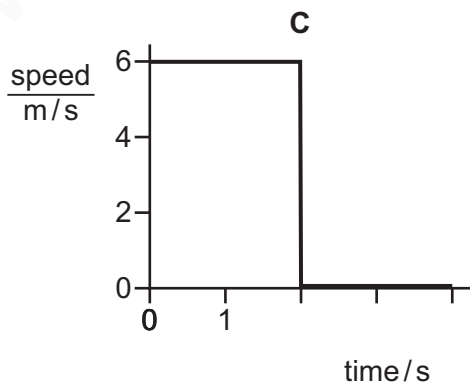
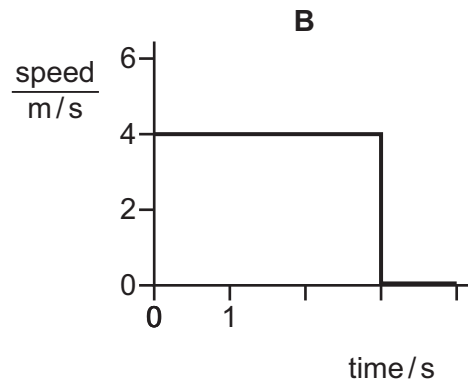
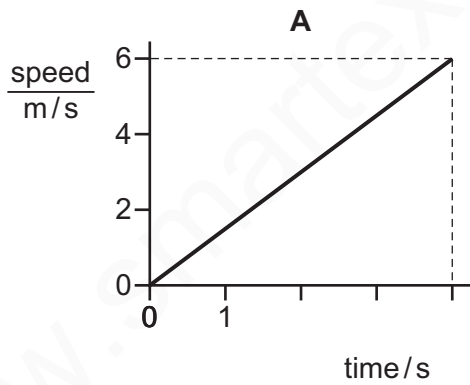
3 The diagram shows the speed-time graph for a car.



How far does the car travel in 30 seconds?

- A** 300 m **B** 450 m **C** 600 m **D** 900 m

4 The diagrams show the speed-time graphs for four objects.
Which object travels the greatest distance?



5 What is the difference, if any, between the terms *speed* and *velocity*?

- A** None. They have the same meaning.
- B** Speed is velocity with a direction.
- C** Velocity is rate of change of speed.
- D** Velocity is speed with a direction.

6 A pole-vaulter of mass 60 kg rises to a maximum height of 5.0 m and then falls to the ground. The acceleration of free fall g is 10 m/s^2 . Air resistance can be ignored.

At what speed does the pole-vaulter hit the ground when she falls?

- A** 5.0 m/s **B** 10 m/s **C** 25 m/s **D** 100 m/s