Kinematics Review

1

A truck starts at home. It travels 85 km [E], 63 km [W], and finally 47 km [E]. The whole thing took 3.75 hours.

What is the truck's

a) Distance travelled
b) Average speed
c) Displacement
d) Average velocity

2

An elevator starts on the ground floor. It moves up 81 m, down 63 m, and finally up another 27 m.

What is the elevator's

a) Distance travelled
b) Average speed
c) Displacement
d) Average velocity

3

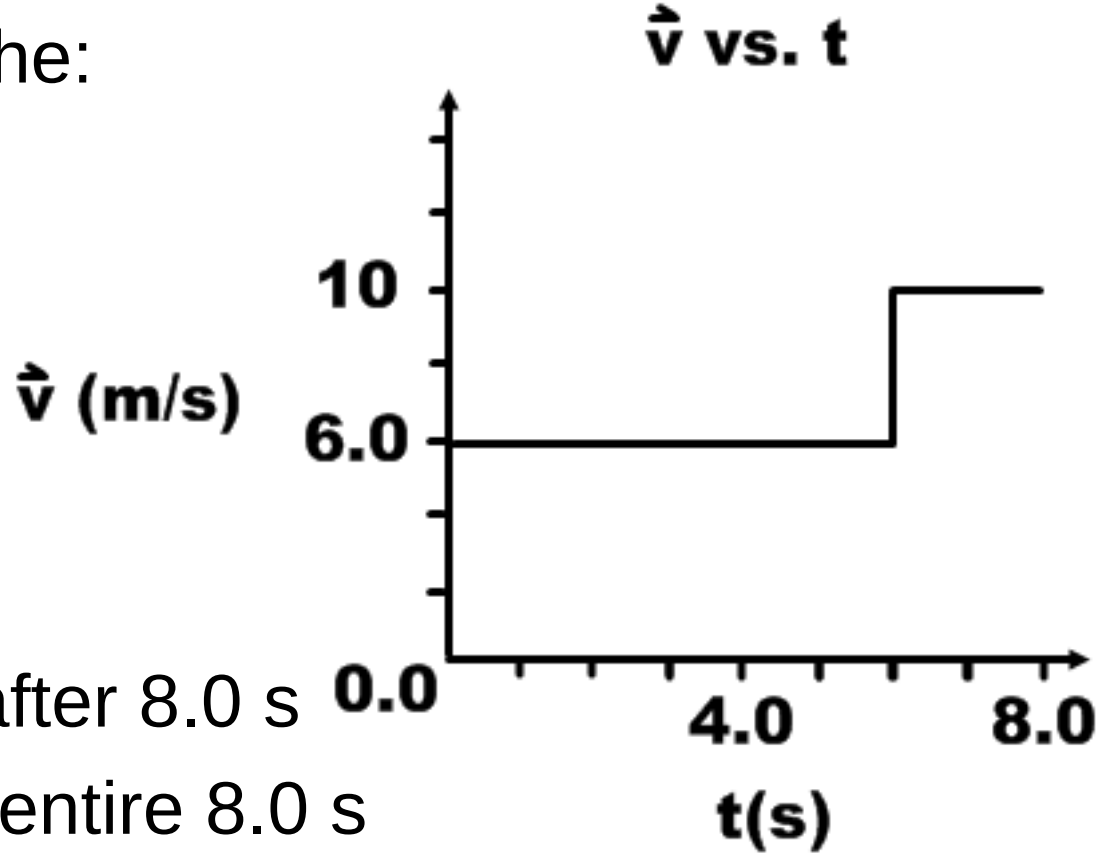
In a road race, a cyclist had an average velocity of 7.56 m/s [E] over 4.75 hours. What was their final displacement?

4

Mr. Cameron is going on a road trip. If he doesn't speed, he can maintain an average **velocity** of 78.9 km/h [W] on the trip to Prince George, which is 610 km West. How long will the trip take him?

5

Using the following graph, find the:



a) Velocity at 2.0 s
b) The total distance travelled after 8.0 s
c) The average velocity for the entire 8.0 s

6

On a distance vs. time graph, the slope of the tangent to the curve at a given point is the

a) average acceleration

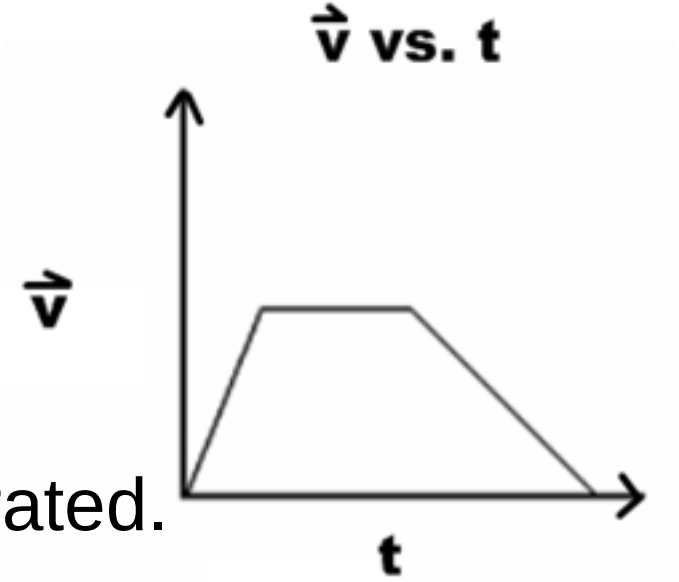
b) instantaneous velocity

c) instantaneous acceleration

d) displacement

7

The following velocity vs. time graph represents the motion of an object which



a) decelerated at a higher rate than it accelerated.

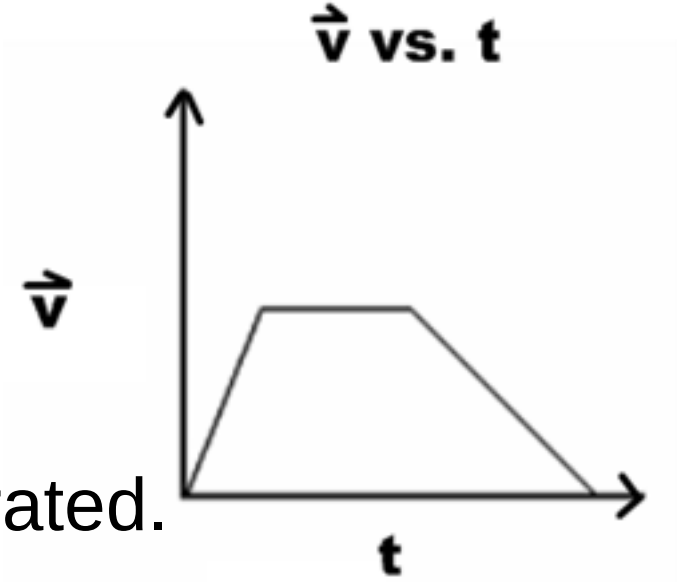
b) returned to its starting point.

c) accelerated at a higher rate than it decelerated.

d) traveled with uniform velocity.

8

The following velocity vs. time graph represents the motion of an object which



a) decelerated at a higher rate than it accelerated.

b) returned to its starting point.

c) accelerated at a higher rate than it decelerated.

d) traveled with uniform velocity.

9

Dmetri is driving his tractor at 32.0 m/s when the he applies the brakes and decelerates at a rate of 4.00 m/s2, bring the tractor to a stop. The time taken to bring the vehicle to a rest is

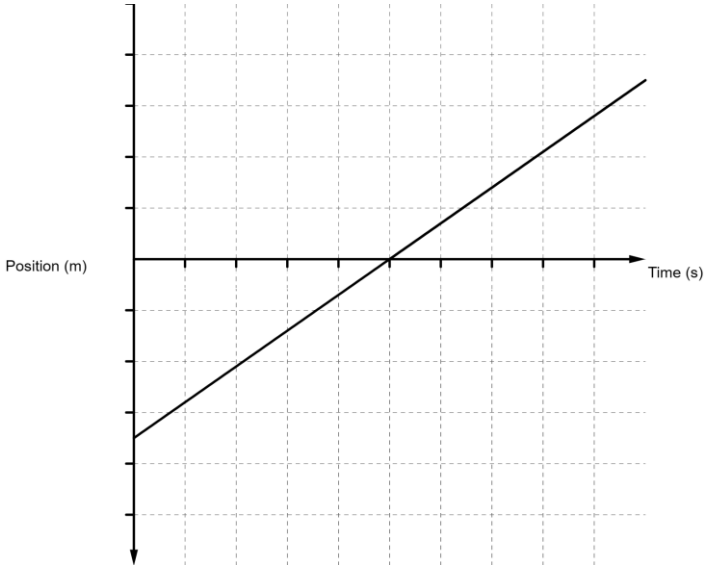
a) 4.00 s

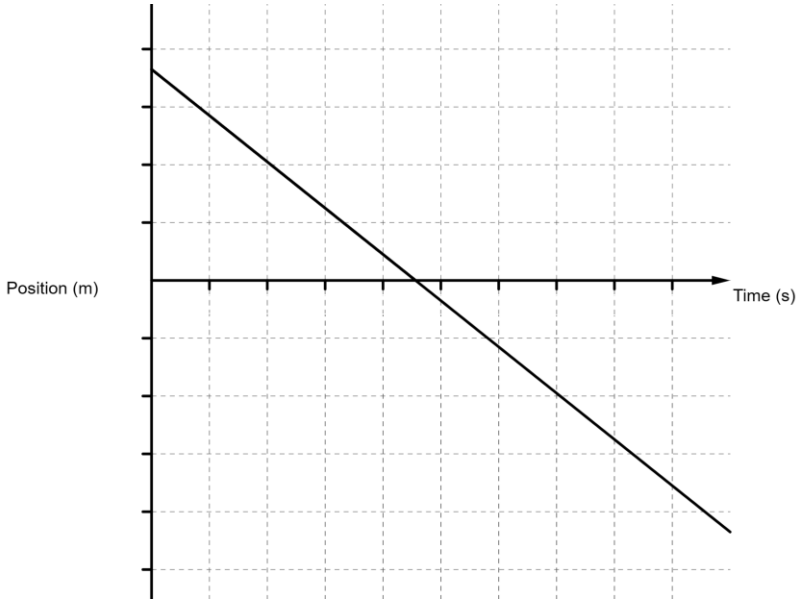
b) 128 s

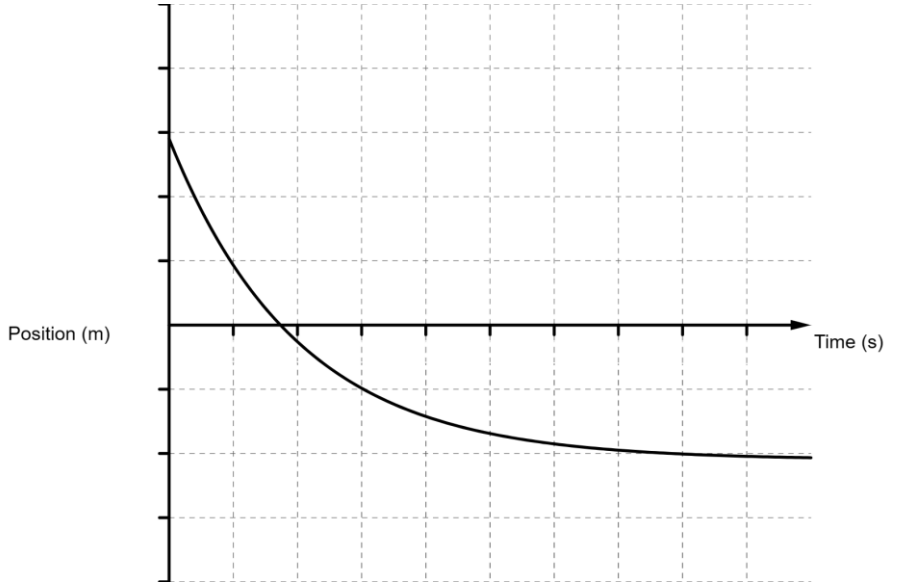
c) 0.125 s

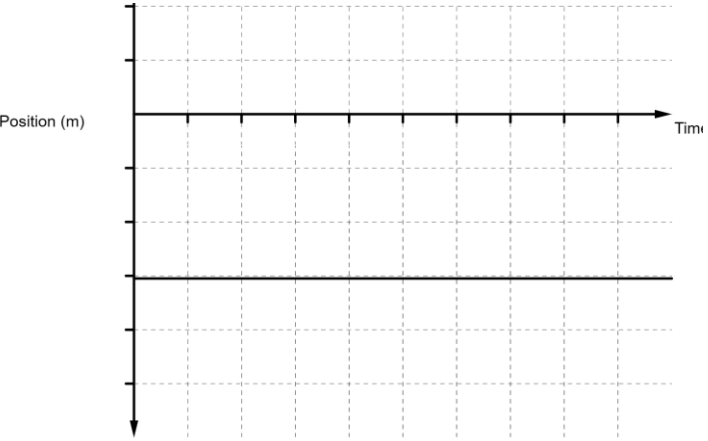
d) 8.00 s

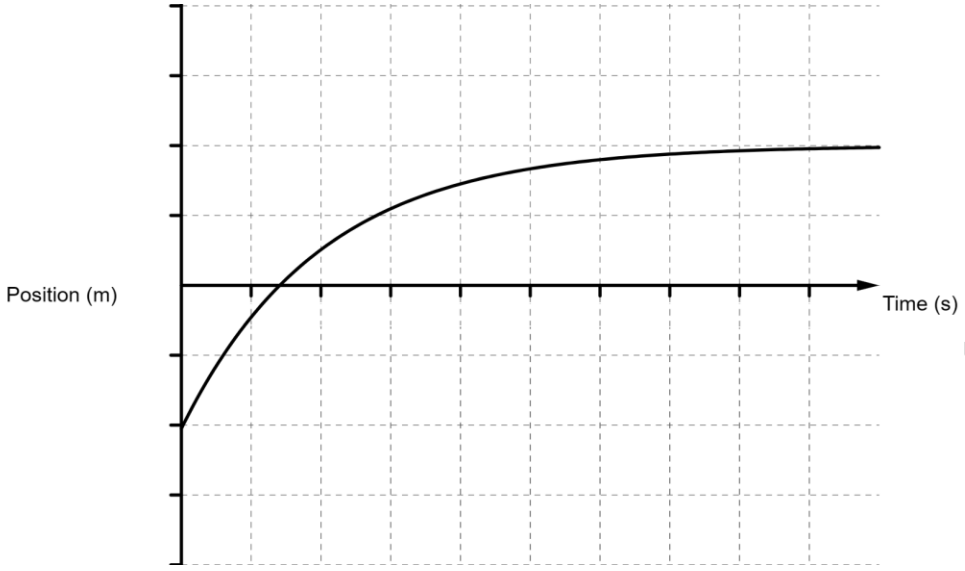
Which graphs represent constant positive velocity?

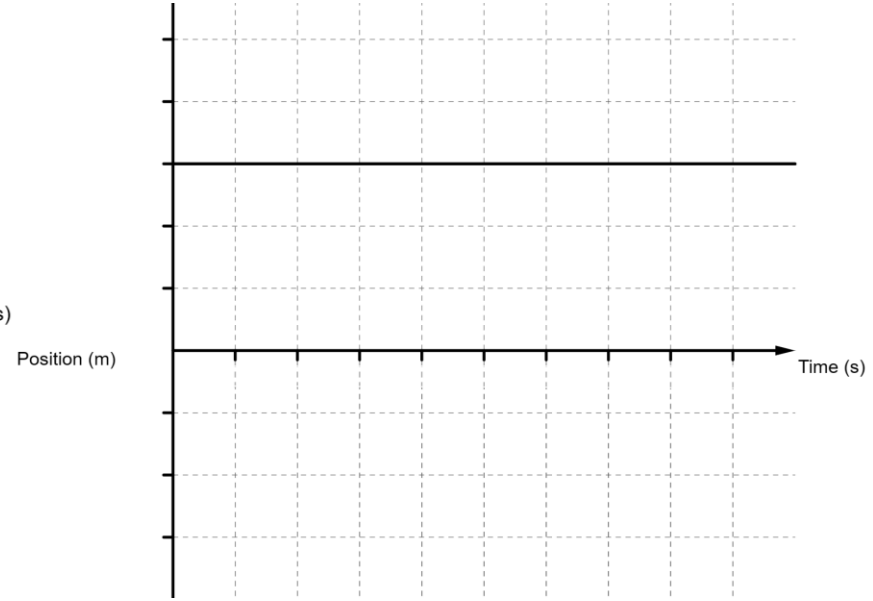




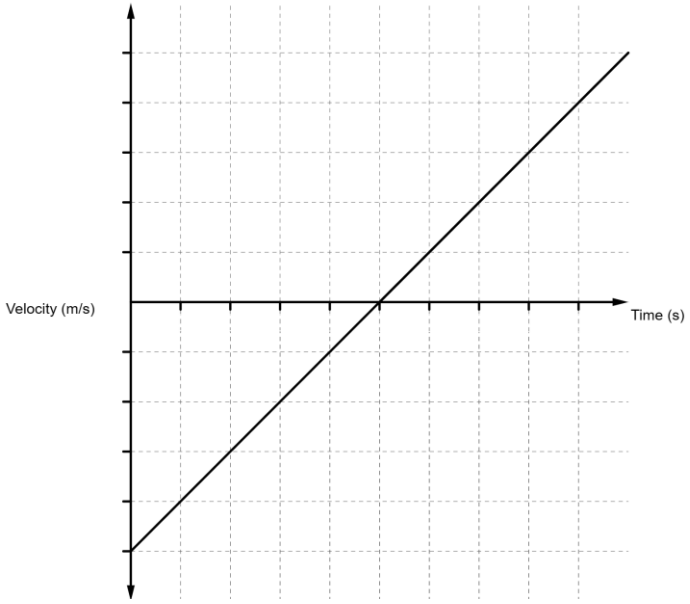


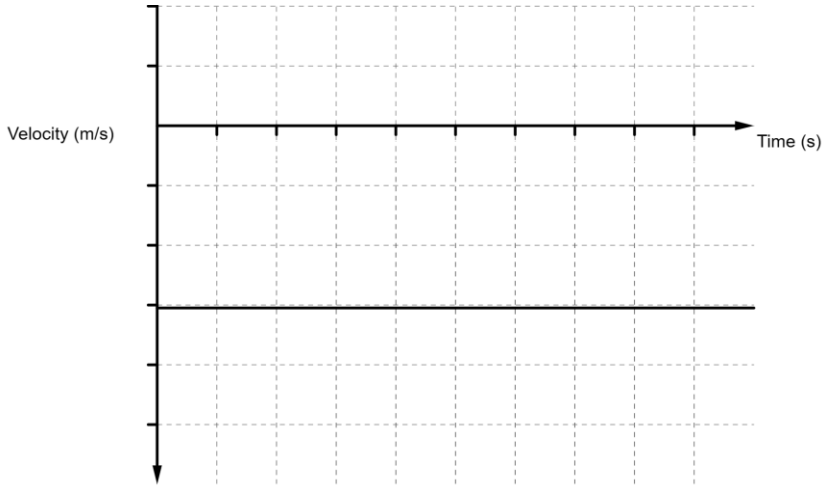


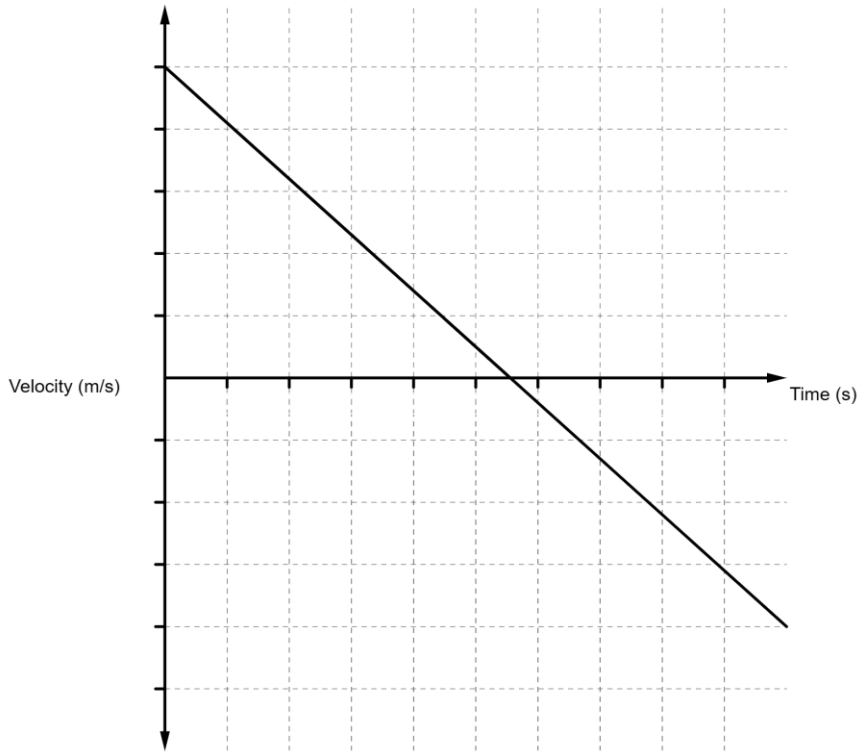


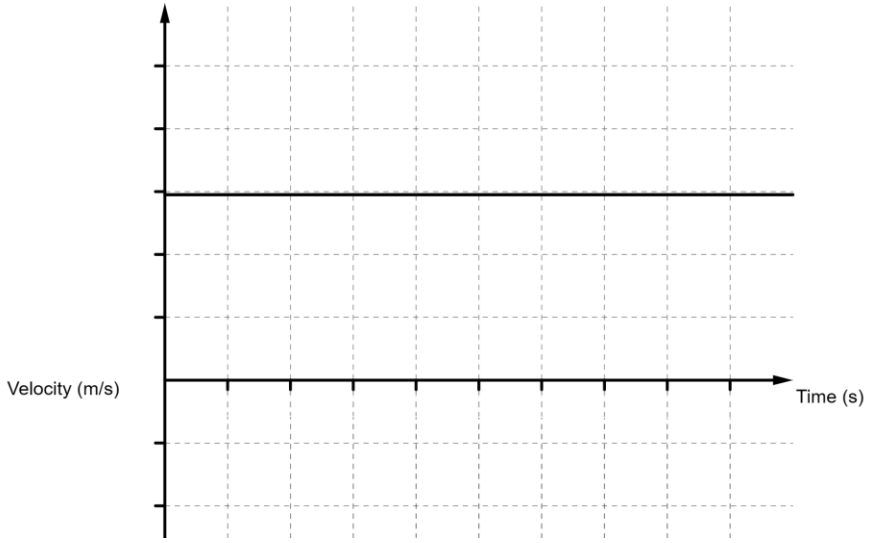


Which graphs represent constant negative acceleration?

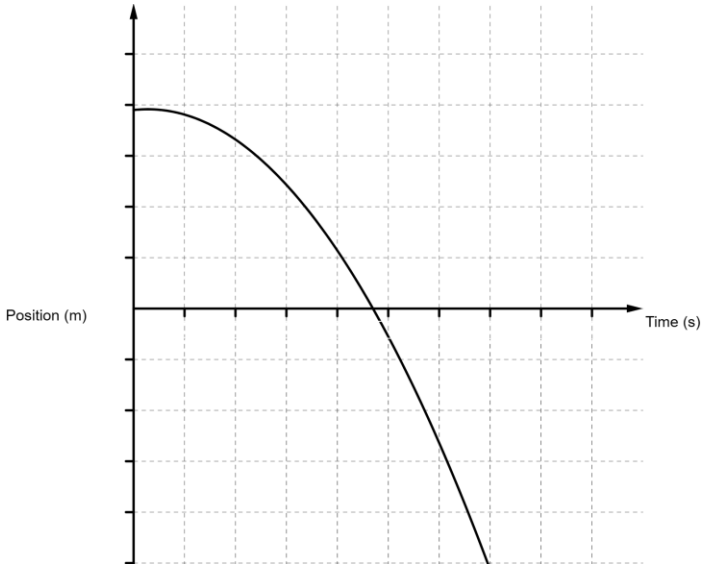


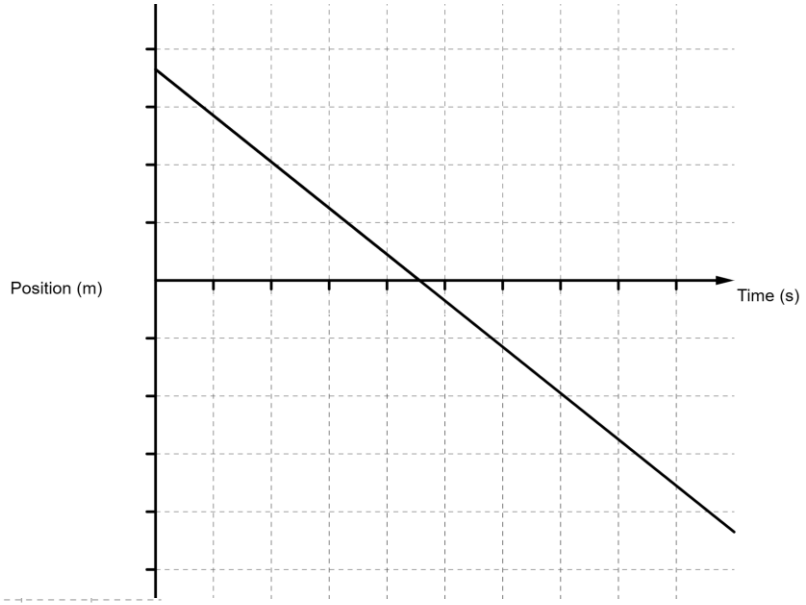


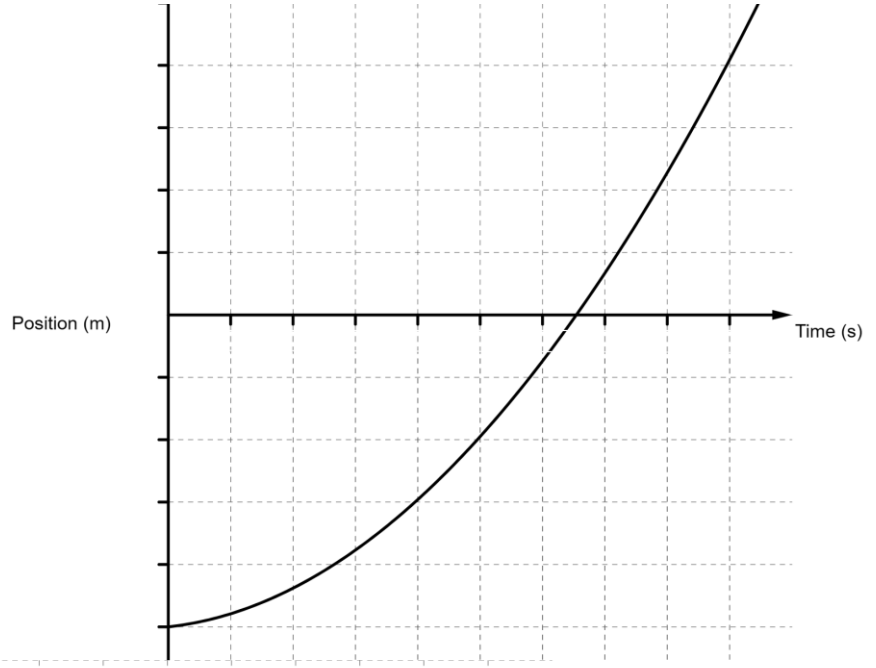


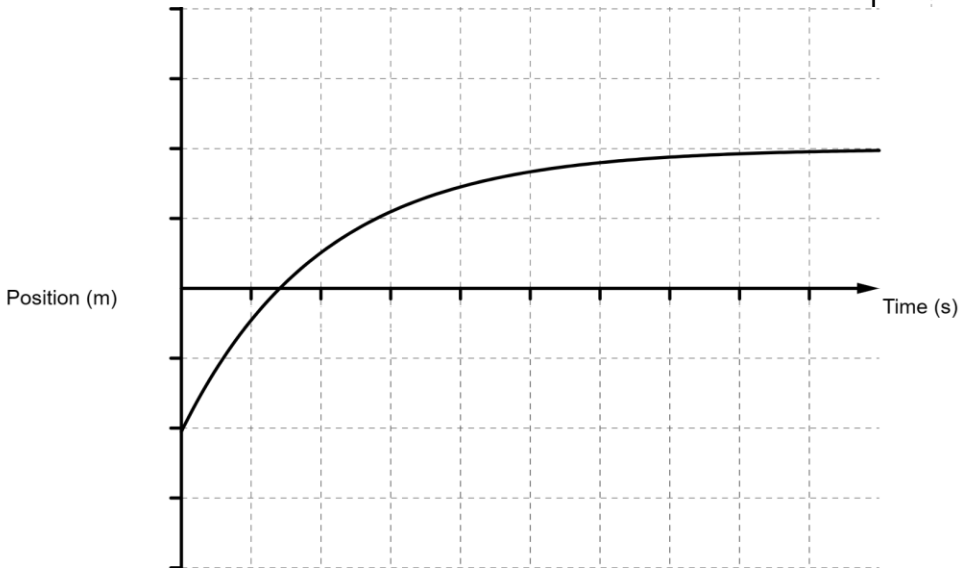


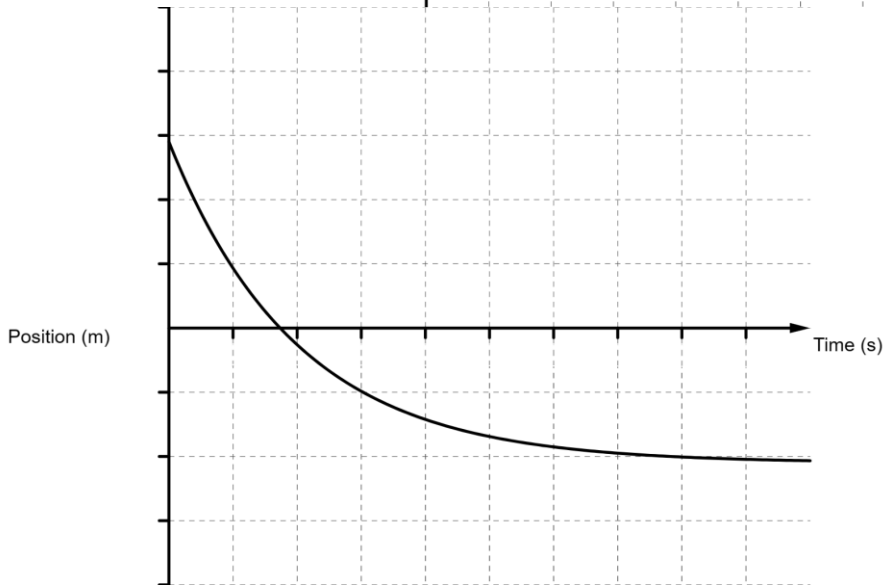
Which graphs represent constant positive acceleration?



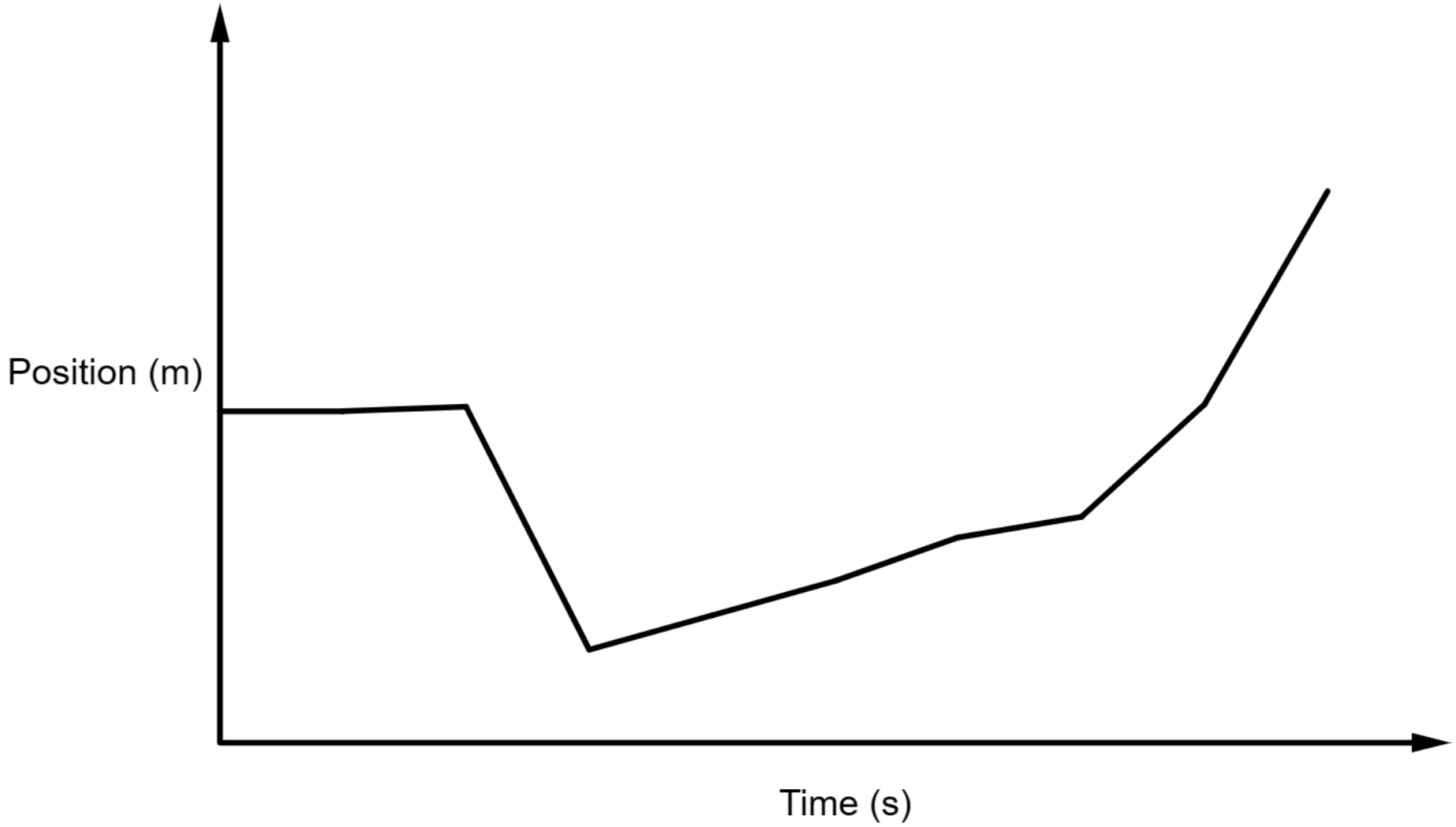




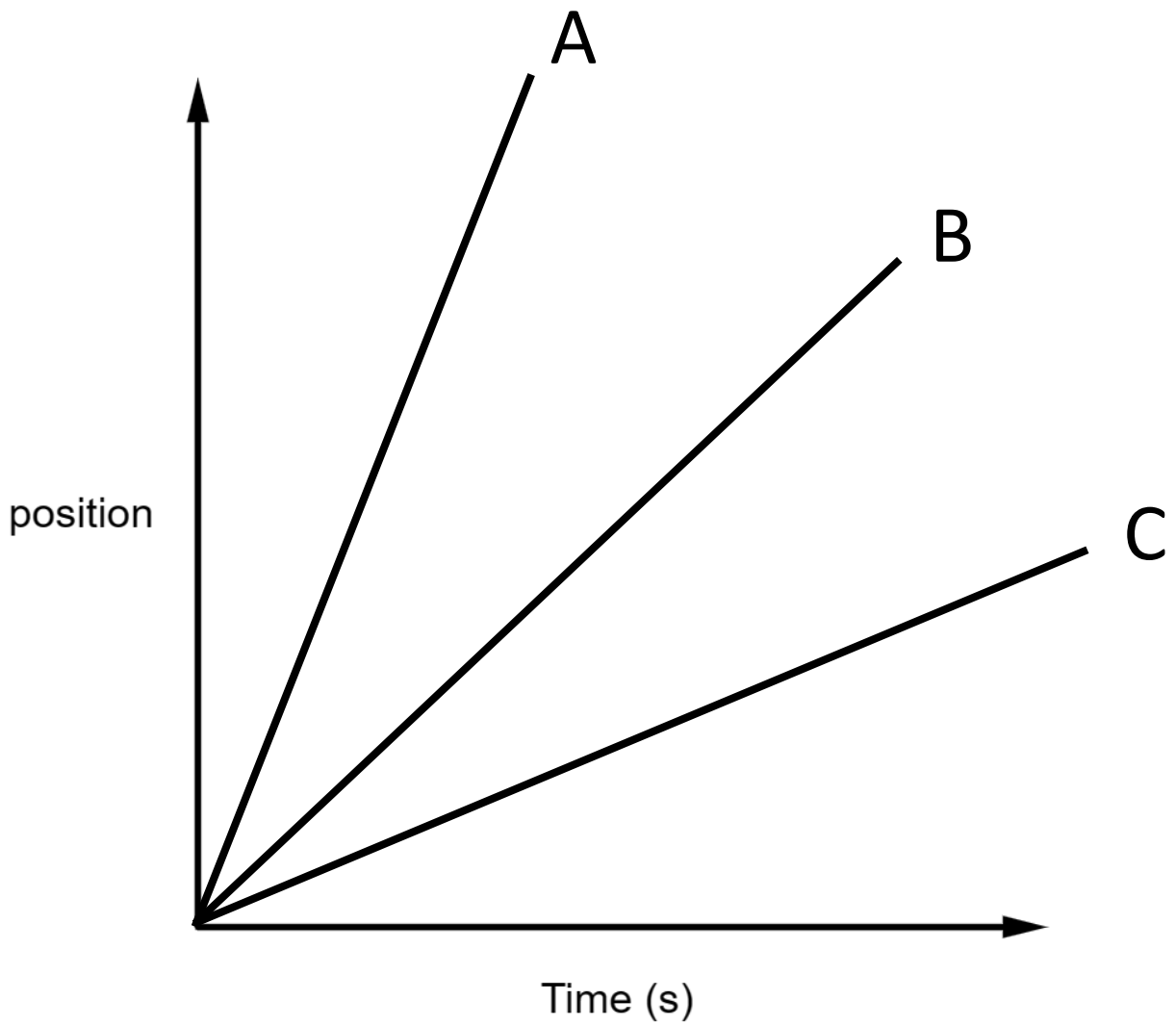




In which section is the object experiencing the greatest acceleration?



Which object has the greatest velocity?



Which object has the greatest acceleration?