

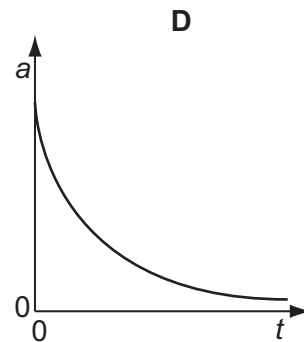
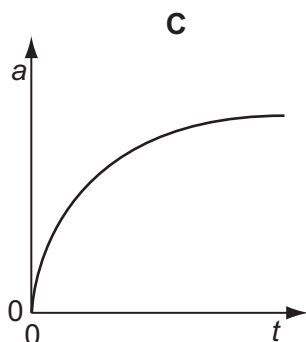
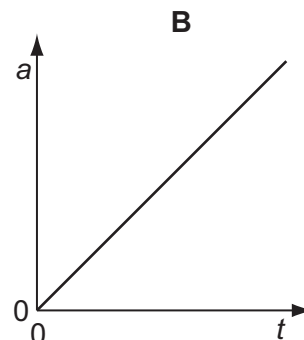
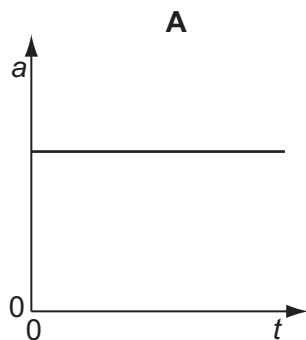
- 7 A car is travelling with uniform acceleration along a straight road. The road has marker posts every 100 m. When the car passes one post, it has a speed of 10 m s^{-1} and, when it passes the next one, its speed is 20 m s^{-1} .

What is the car's acceleration?

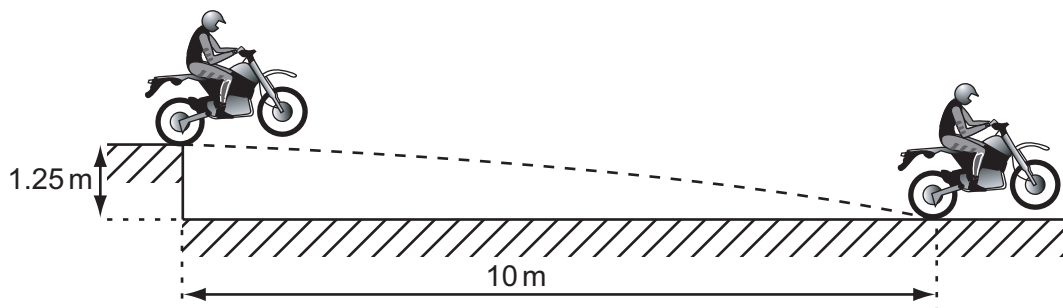
- A** 0.67 m s^{-2} **B** 1.5 m s^{-2} **C** 2.5 m s^{-2} **D** 6.0 m s^{-2}

- 8 A tennis ball is released from rest at the top of a tall building.

Which graph best represents the variation with time t of the acceleration a of the ball as it falls, assuming that the effects of air resistance are appreciable?



- 9 A motorcycle stunt-rider moving horizontally takes off from a point 1.25 m above the ground, landing 10 m away as shown.



What was the speed at take-off?

- A** 5 m s^{-1} **B** 10 m s^{-1} **C** 15 m s^{-1} **D** 20 m s^{-1}