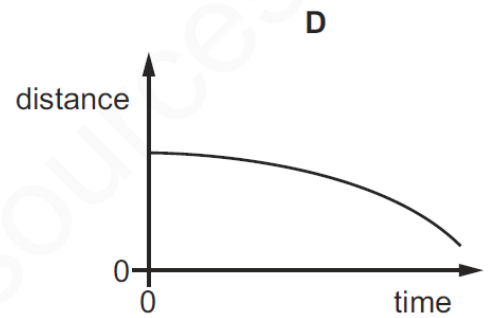
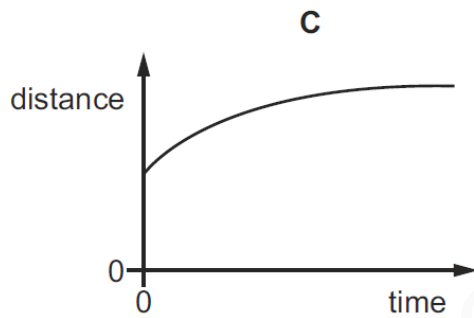
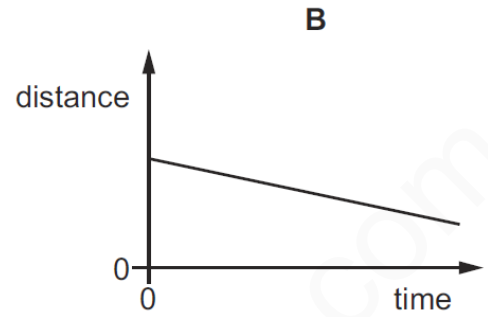
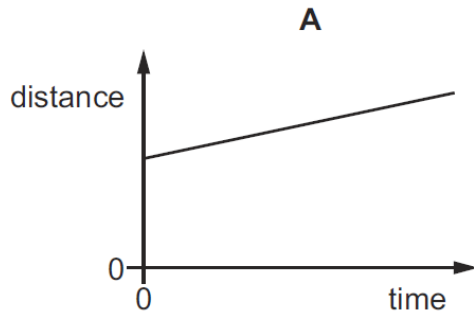


SPEED-TIME-SET-3-QP

1

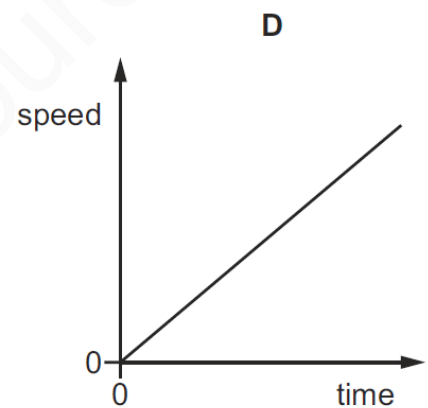
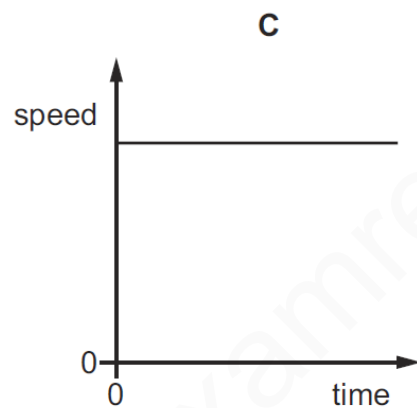
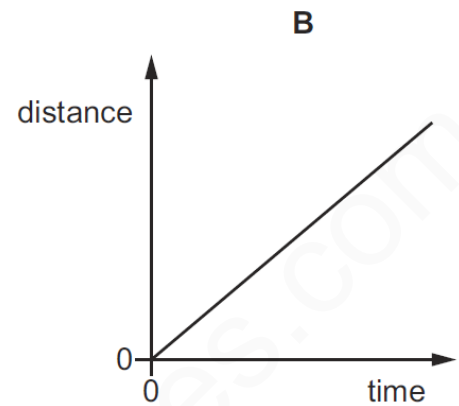
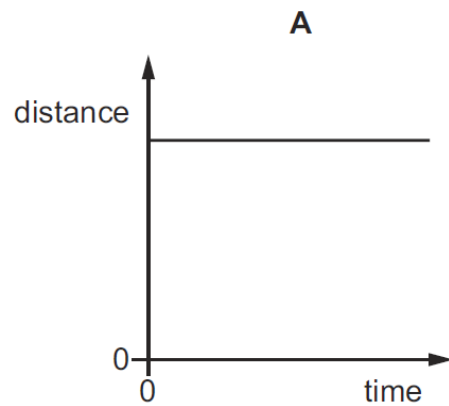
Which distance-time graph represents a body whose speed is decreasing?



2

A car is moving along a straight, level road, with a constant acceleration.

Which graph shows the motion of the car?



3

A sprinter runs a 100 m race in a straight line. The table shows how his speed changes with time for the first 5.0 s of the race.

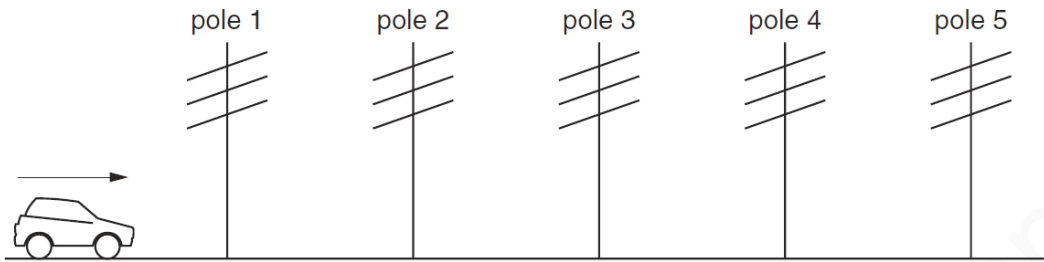
$\frac{\text{speed}}{\text{m/s}}$	0	1.7	4.1	5.7	6.5	6.8
time/s	0	1.0	2.0	3.0	4.0	5.0

What is the average acceleration of the sprinter between time 2.0 s and time 3.0 s?

- A** 1.6 m/s^2 **B** 1.9 m/s^2 **C** 4.1 m/s^2 **D** 5.7 m/s^2

4

Five telegraph poles are positioned at equal distances along the side of a road.



A car accelerates until it is level with pole 4. The car then continues along the road at a steady speed. The times taken to travel between one pole and the next are measured.

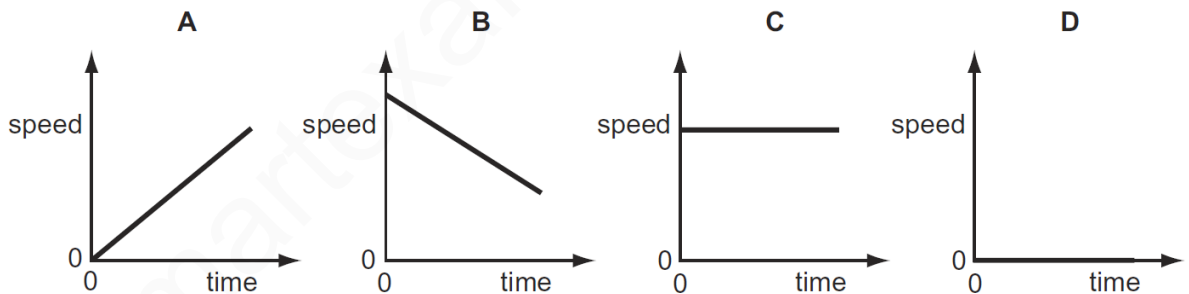
Which time is the greatest?

The time between

- A** pole 1 and pole 2.
- B** pole 2 and pole 3.
- C** pole 3 and pole 4.
- D** pole 4 and pole 5.

5

Which speed/time graph applies to an object at rest?



6

A racing car is fitted with an on-board computer. Every time the car passes the starting line, the computer records the distance travelled in the next 2 seconds.

Which set of data shows that the car is increasing in speed during the 2 seconds?

A

time / s	distance travelled / m
0	0
1	100
2	200

B

time / s	distance travelled / m
0	0
1	90
2	180

C

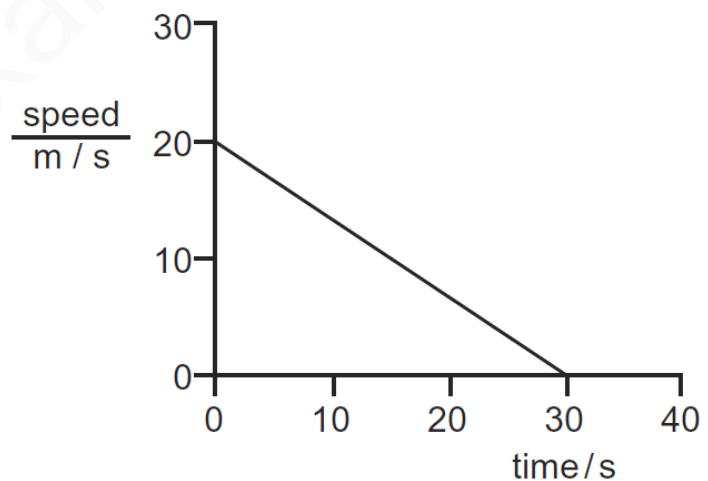
time / s	distance travelled / m
0	0
1	80
2	190

D

time / s	distance travelled / m
0	0
1	100
2	180

7

The graph represents part of the journey of a car.

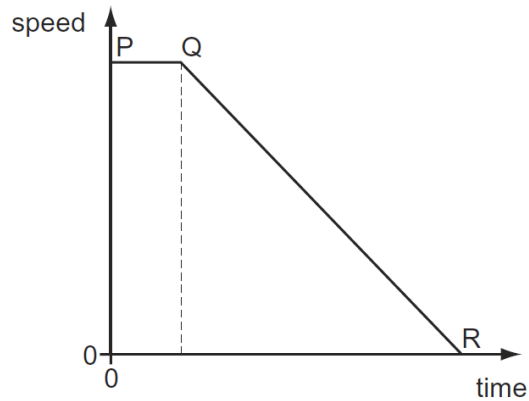


What distance does the car travel during this part of the journey?

A 150 m**B** 300 m**C** 600 m**D** 1200 m

8

A cyclist is riding along a road when an animal runs in front of him. The graph shows the cyclist's motion. He sees the animal at P, starts to brake at Q and stops at R.



What is used to find the distance travelled after he applies the brakes?

- A** the area under line PQ
- B** the area under line QR
- C** the gradient of line PQ
- D** the gradient of line QR

9

A car travels at various speeds during a short journey.

The table shows the distances travelled and the time taken during each of four stages P, Q, R and S.

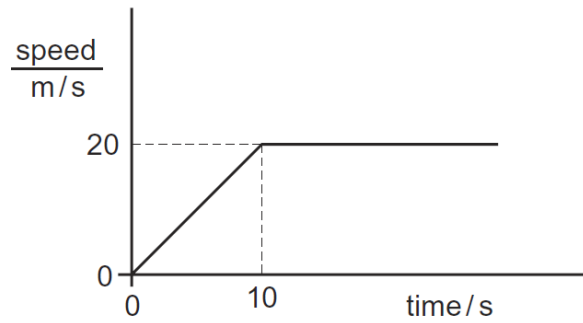
stage	P	Q	R	S
distance travelled / km	1.8	3.6	2.7	2.7
time taken / minutes	2	2	4	3

During which two stages is the car travelling at the same speed?

- A** P and Q
- B** P and S
- C** Q and R
- D** R and S

10

A car accelerates from traffic lights. The graph shows the car's speed plotted against time.

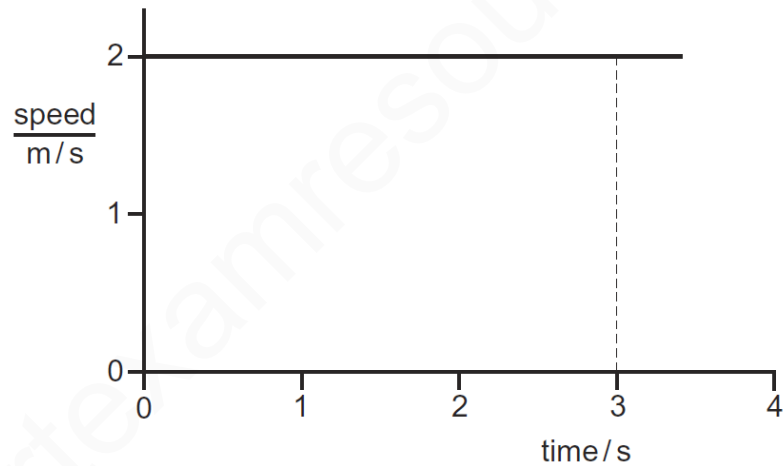


How far does the car travel before it reaches a constant speed?

- A** 10 m **B** 20 m **C** 100 m **D** 200 m

11

The diagram shows the speed/time graph for an object moving at constant speed.



What is the distance travelled by the object in the first 3 s?

- A** 1.5 m **B** 2.0 m **C** 3.0 m **D** 6.0 m