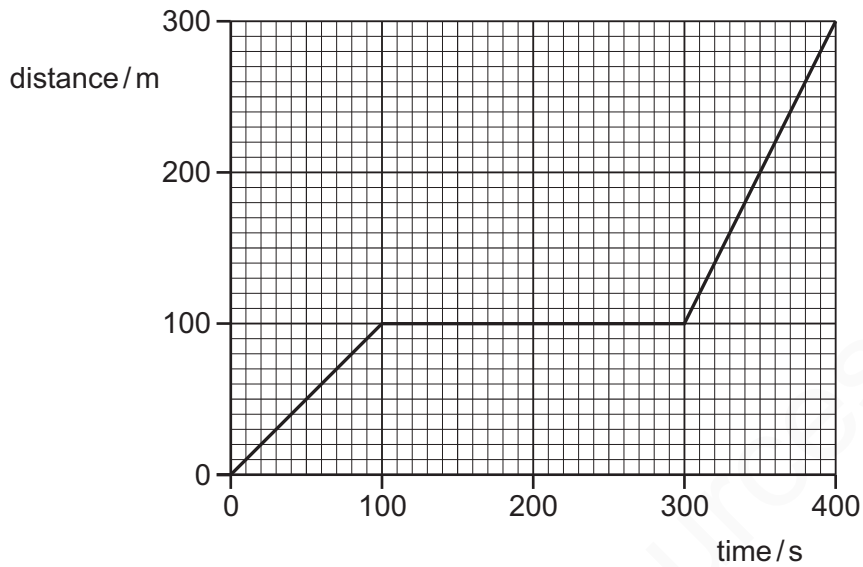# P2-MOTION-SET-2-MS

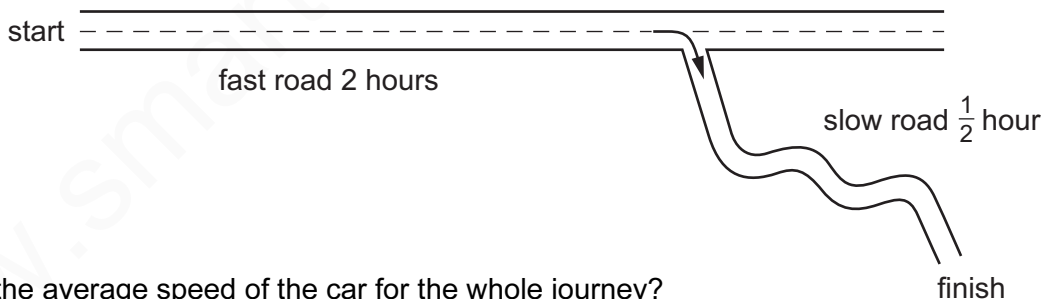**1** A girl rides her bicycle from home to her friend's home.
The distance/time graph for the whole journey is shown.

What is the average speed of the girl for the whole journey?

A 0.75 m/s   **B** 1.00 m/s   **C** 1.33 m/s   **D** 1.50 m/s

2 A motorist travels 200 km.
After travelling along a fast road for 2 hours, the motorist uses a slow road for the remaining $\frac{1}{2}$ hour of the journey.

What is the average speed of the car for the whole journey?

A 80 km/h   **B** 100 km/h   **C** 400 km/h   **D** 500 km/h

3 The circuit of a motor racing track is 3.0 km in length. In a race, a car goes 25 times round the circuit in 30 minutes.
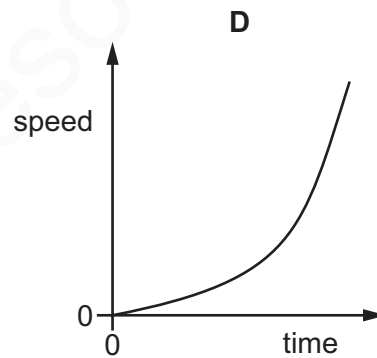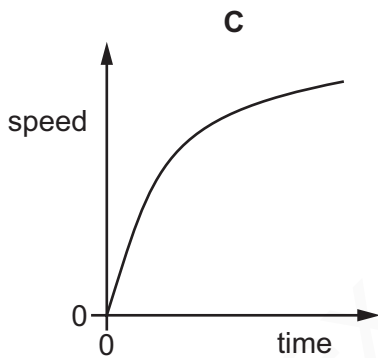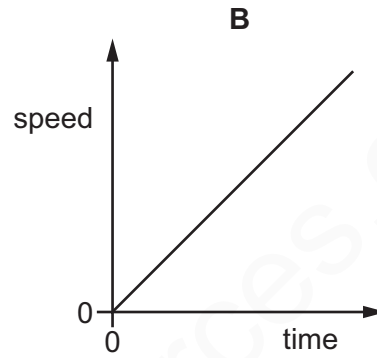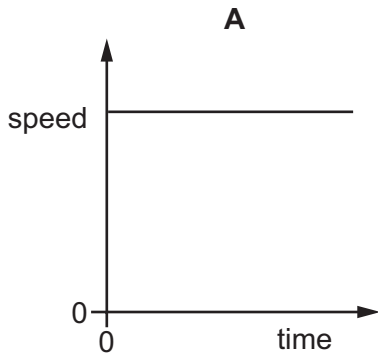
What is the average speed of the car?

A 75 km/hour

B 90 km/hour

C 150 km/hour

D 750 km/hour

4 The diagram shows forces of equal size acting on a moving car.

total resistive force ← → driving force from engine

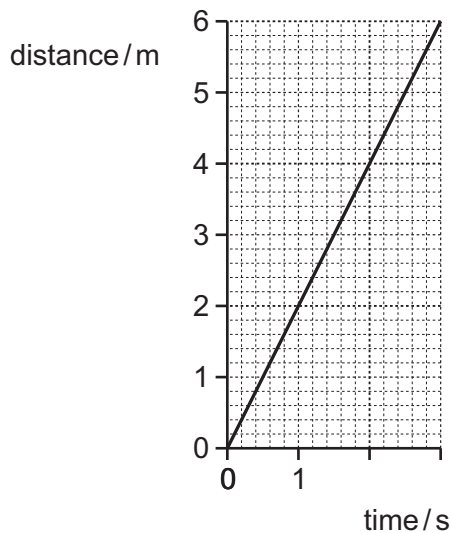Which speed / time graph represents the motion of the car?

A

B
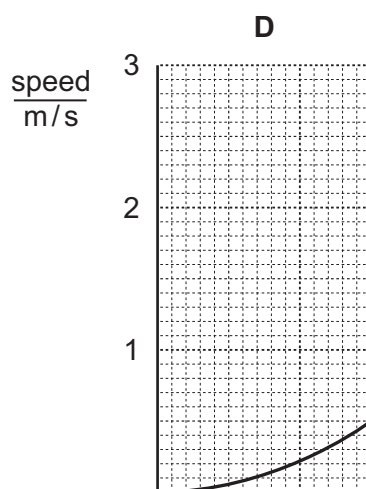

C

D

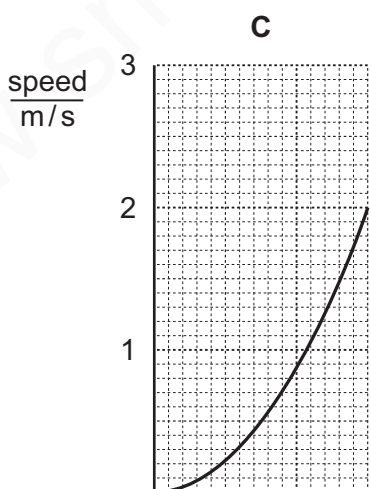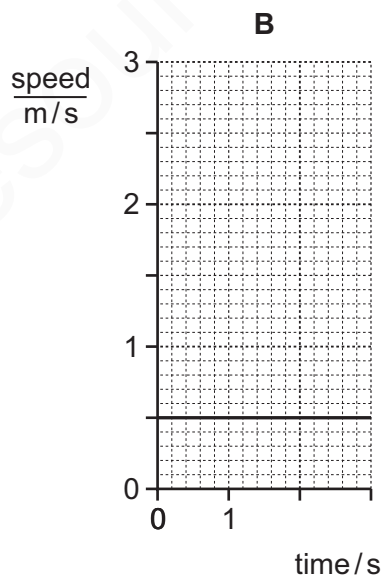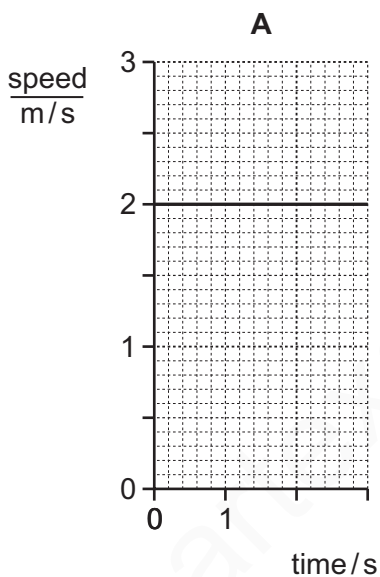**5** The diagram shows the speed / time graph for a car.

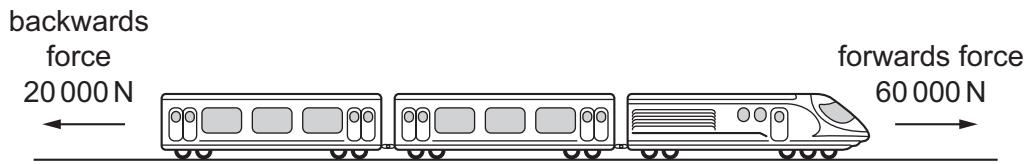During which period is the car moving at constant speed?
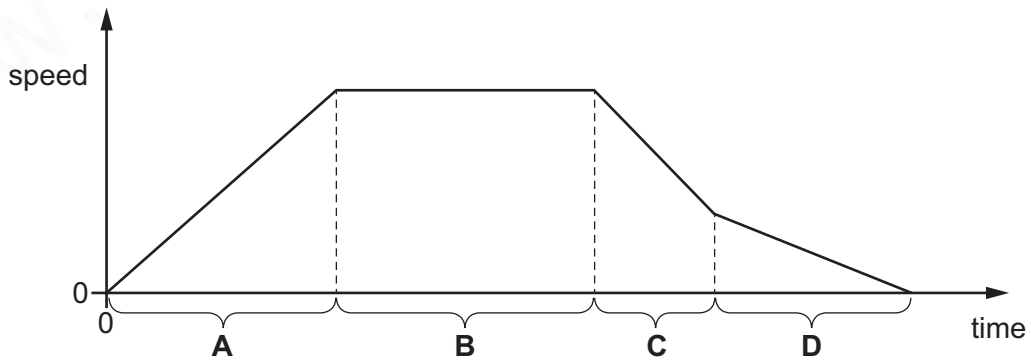
6 The distance / time graph represents a short journey.

Which speed / time graph represents the same journey?

7 A train travels along a horizontal track at constant speed. Two of the forces acting on the train are shown in the diagram.

backwards
force
20 000 N

forwards force
60 000 N

A force of air resistance is also acting on the train to give it a resultant force of zero.

What is this air resistance force?

A 40 000 N backwards

B 80 000 N backwards

C 40 000 N forwards

D 80 000 N forwards

8 The circuit of a motor racing track is 3.0 km in length. In a race, a car goes 25 times round the circuit in 30 minutes.

What is the average speed of the car?

A 75 km / hour

B 90 km / hour

C 150 km / hour

D 750 km / hour

9 Which graph represents the motion of an object that is accelerating?

A

speed

0
0   time

B

distance

0
0   time

C

speed

0
0   time

D

distance

0
0   time