

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Motion and Time

- Q1. Show the shape of the distance-time graph for the motion in the following cases:  
(i) A car moving with a constant speed.  
(ii) A car parked on a side road.

Ans.

- Q2. A car moves with a speed of 40 km/h for 15 minutes and then with a speed of 60 km/h for the next 15 minutes. Calculate the total distance covered by the car.

Ans.

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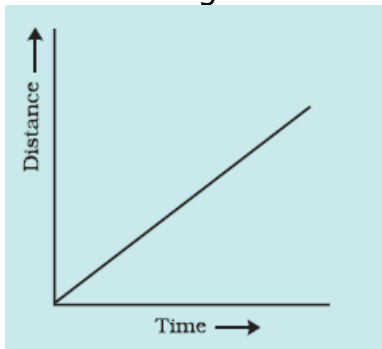


Image from NCERT

A car parked on a side road.

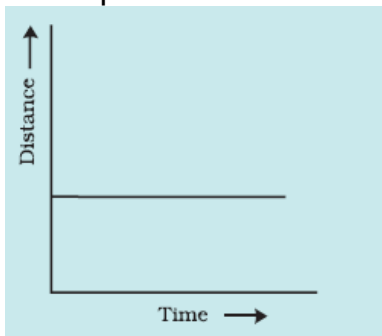


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Q2. A car moves with a speed of 40 km/h for 15 minutes and then with a speed of 60 km/h for the next 15 minutes. Calculate the total distance covered by the car.

Ans. Case 1

Speed = 40km/h

Time taken = 15 min =  $15/60 = \frac{1}{4}$  hours

Distance = Speed x Time =  $40 \times \frac{1}{4} = 10$  km

Case 2

Speed = 60km/h

Time taken = 15 min =  $15/60 = \frac{1}{4}$  hours

Distance = Speed x Time =  $60 \times \frac{1}{4} = 15$  km

Total Distance = 10 km + 15 km = 25 km