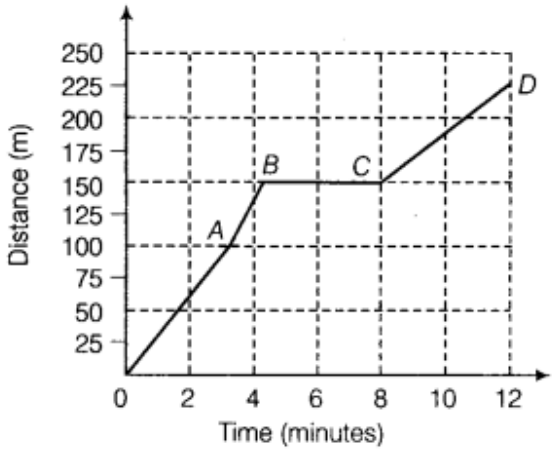
Board – CBSE	Class – 7	Topic – Motion and Time

1. Boojho goes to the football ground to play football. The distance-time graph of his journey from his home to the ground is given as a figure.



(a) What does the graph between points B and C indicate about the motion of Boojho?

(b) Is the motion between 0 to 4 min uniform or non-uniform?

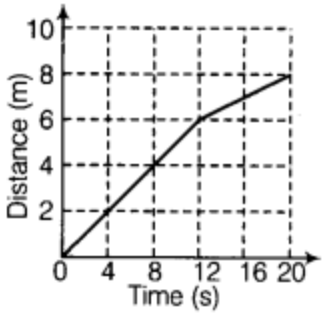
(c) What is his speed between 8 and 12 minutes of his journey?

2. The distance between Bholu's and Golu's house is 9 km. Bholu has to attend Golu's birthday party at 7 0′ clock. He started his journey from his home at 6 O'clock on his bicycle and covered a distance of 6 km in 40 min. At that point, he met Chintu, and he spoke to him for 5 minutes and reached Golu's birthday party at 7 o'clock. With what speed did he cover the second part of the journey? Calculate his average speed for the entire journey.
3. Given below as figure is the distance-time graph of the motion of an object.

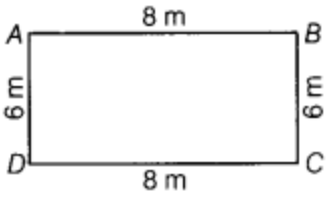
(a) What will be the position of the object at 20 s?

(b) What will be the distance travelled by the object in 12 s?

(c) What is the average speed of the object?

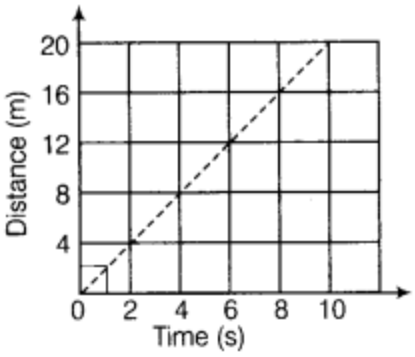


4. Starting from A, Paheli moves along a rectangular path ABCD as shown in the figure. It takes 2 min to travel each side. Plot a distance-time graph and explain whether the motion is uniform or non-uniform

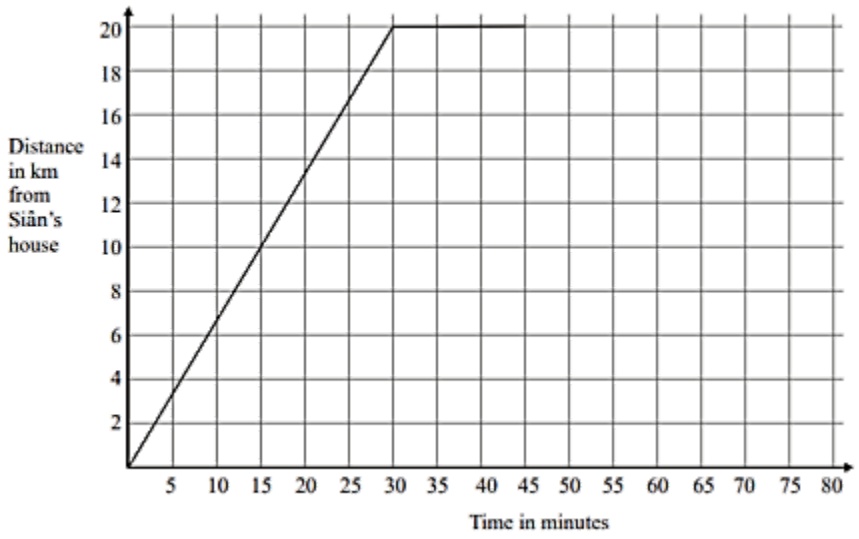


5. A bus travels 54 km in 90 min. What is the speed of the bus?
6. A spaceship travels 36000 km in one hour. Express its speed in km/s.
7. The average age of children of class VII is 12 years and three months. Express this age in seconds.
8. Complete the data of the table given below with the help of the distance-time graph given in the figure.

Distance (m)	0	4	?	12	?	20
Time (s)	0	2	4	?	8	10



9. Boojho walks to his school, which is 3 km from his home, in 30 min. On reaching, he finds that the school is closed. He comes back by a bicycle with his friend and reaches home in 20 minutes. His average speed in km/h is?
10. If a pendulum completes 40 oscillations in 10 seconds, calculate its time period.
11. Describe a simple pendulum. Draw a diagram. What kind of motion does it show?
12. The distance between the two stations is 1995 km. How much time will it take to cover this distance at an average speed of 19 km/h?
13. A car takes 20 minutes to cover a distance of 15 km. Therefore, calculate its speed in km/h.
14. Two boys ran in a race of 10 km. The first boy ran with a constant speed of 2 km/h for the whole
    race, while the second boy ran at 1 km/h for half of the race and 5 km/h for the other
    half. Who won the race?
15. Consider the following distance-time graph and answer the questions that follow.



a) What was Sian's speed for the first 30 minutes of her journey?

b) 15 minutes after starting the journey, how far had Sian reached

c) What is plotted in the X-axis and what is plotted in the Y-axis?