

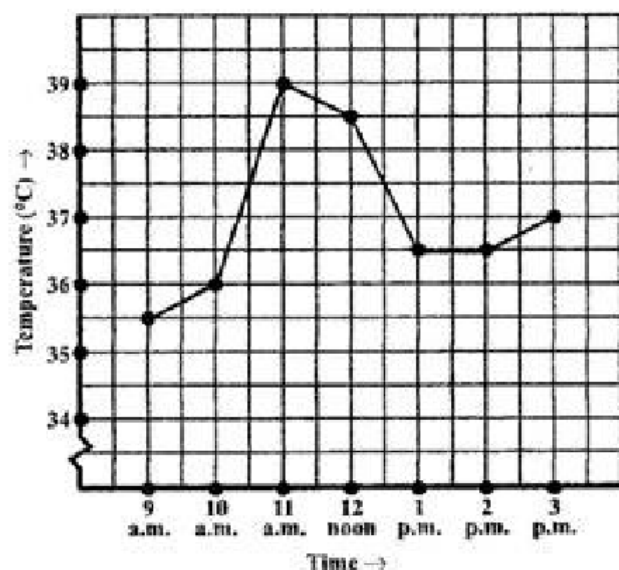
Exercise 13.1 (Revised) - Chapter 15 - Introduction To Graphs - Ncert Solutions class 8 - Maths

Updated On 11-02-2025 By Lithanya

Chapter 13 - Introduction To Graphs - NCERT Solutions for Class 8 Maths

Ex 13.1 Question 1.

The following graph shows the temperature of a patient in a hospital, recorded every hour:



- (a) What was the patient's temperature at 1 p.m.?
- (b) When was the patient's temperature 38.5°C ?
- (c) The patient's temperature was the same two times during the period given. What were these two times?
- (d) What was the temperature at 1.30 p.m.? How did you arrive at your answer?
- (e) During which periods did the patients' temperature showed an upward trend?

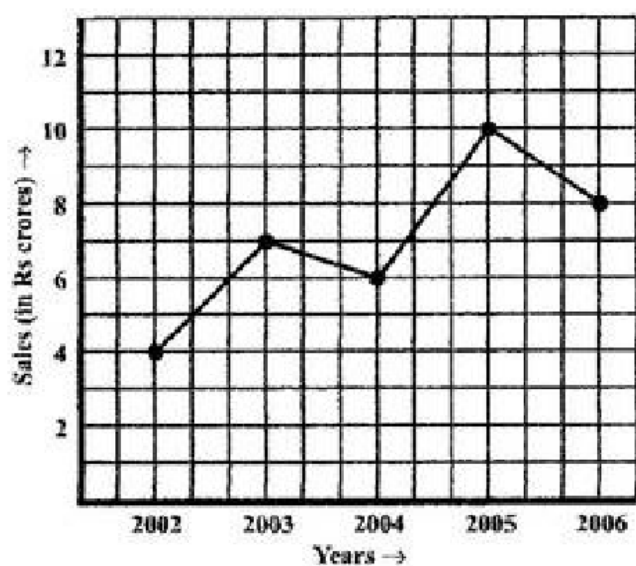
Answer.

- (a) The patient's temperature was 36.5°C at 1 p.m.
- (b) The patient's temperature was 38.5°C at 12 noon.
- (c) The patient's temperature was same at 1 p.m. and 2 p.m.
- (d) The temperature at 1.30 p.m. is 36.5°C . The point between 1 p.m. and 2 p.m., x -axis is equidistant from the two points showing 1 p.m. and 2 p.m. So, it represents 01.30 p.m. Similarly, the point on y -axis, between 36°C and 37°C will represent 36.5°C .
- (e) The patient's temperature showed an upward trend from 9 a.m. to 11 a.m., 11 a. m. to 12 noon and 2 p.m. to 3 p.m.

Ex 13.1 Question 2.

The following line graph shows the yearly sales figures for a manufacturing company.

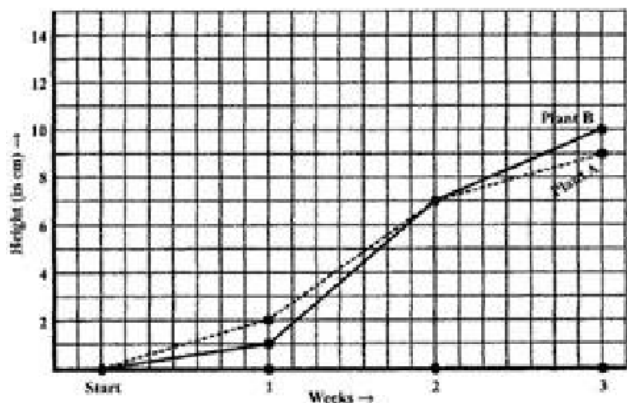




- What were the sales in (i) 2002 (ii) 2006 ?
- What were the sales in (i) 2003 (ii) 2005 ?
- What were the sales in (i) 2003 (ii) 2005 ?
- Compute the difference between the sales in 2002 and 2006.
- In which year was there the greatest difference between the sales as compared to its previous year?

Answer.

- The sales in: (i) 2002 was Rs. 4 crores and (ii) 2006 was Rs. 8 crores.
- The sales in: (i) 2003 was Rs. 7 crores (ii) 2005 was Rs. 10 crores.
- The difference of sales in 2002 and 2006 = Rs. 8 crores - Rs. 4 crores = Rs. 4 crores
- In the year 2005, there was the greatest difference between the sales as compared to its



- How high was Plant A after (i) 2 weeks (ii) 3 weeks?
- How high was Plant B after (i) 2 weeks (ii) 3 weeks?
- How much did Plant A grow during the 3rd week?
- How much did Plant B grow from the end of the 2nd week to the end of the 3rd week?
- During which week did Plant A grow most?
- During which week did Plant B grow least?
- Were the two plants of the same height during any week shown here? Specify.

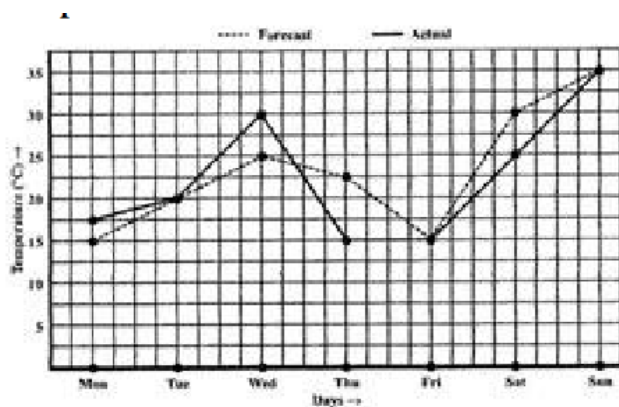
Answer.

- (i) The plant A was 7 cm high after 2 weeks and (ii) after 3 weeks it was 9 cm high.
- (i) Plant B was also 7 cm high after 2 weeks and (ii) after 3 weeks it was 10 cm high.
- Plant A grew = $9\text{ cm} - 7\text{ cm} = 2\text{ cm}$ during 3rd week.
- Plant B grew during end of the 2nd week to the end of the 3rd week = $10\text{ cm} - 7\text{ cm} = 3\text{ cm}$.
- Plant A grew the highest during second week.
- Plant B grew the least during first week.
- At the end of the second week, plant A and B were of the same height.

Ex 13.1 Question 4.

The following graph shows the temperature forecast and the actual temperature for each day of a week.

- On which days was the forecast temperature the same as the actual temperature?
- What was the maximum forecast temperature during the week?
- What was the minimum actual temperature during the week?
- On which day did the actual temperature differ the most from the forecast temperature?



- Ans.(a) On Tuesday, Friday and Sunday, the forecast temperature was same as the actual temperature.
 (b) The maximum forecast temperature was 35°C .
 (c) The minimum actual temperature was 15°C .
 (d) The actual temperature differed the most from the forecast temperature on Thursday.

Ex 13.1 Question 5.

Use the tables below to draw linear graphs.

Year	2003	2004	2005	2006
Days	8	10	5	12

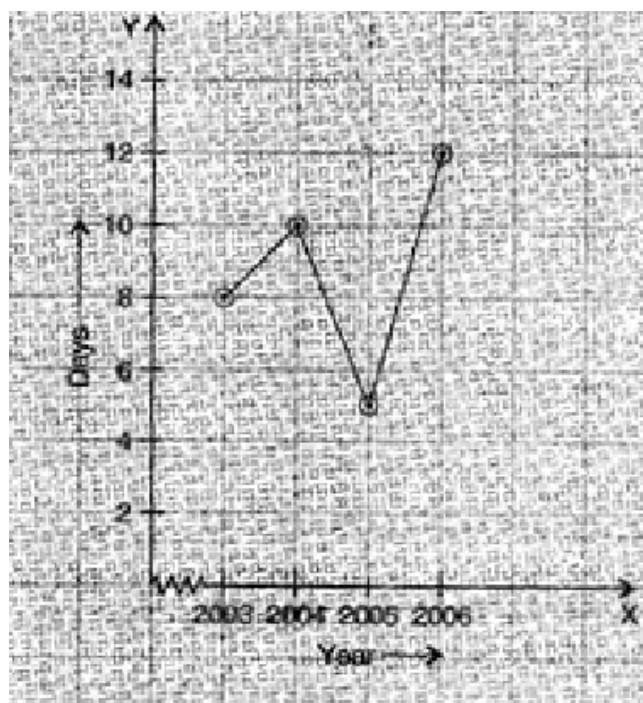
- (a) The number of days a hill side city received snow in different years.

Year	2003	2004	2005	2006	2007
No. of Men	12	12.5	13	13.2	13.5
No. of Women	11.3	11.9	13	13.6	12.8

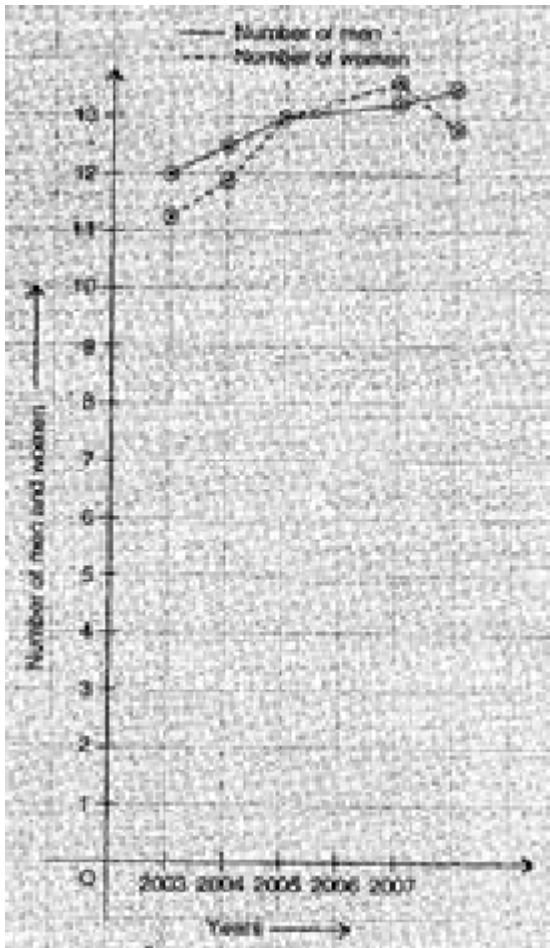
- (b) Population (in thousands) of men and women in a village in different years.

Answer.

- (a)

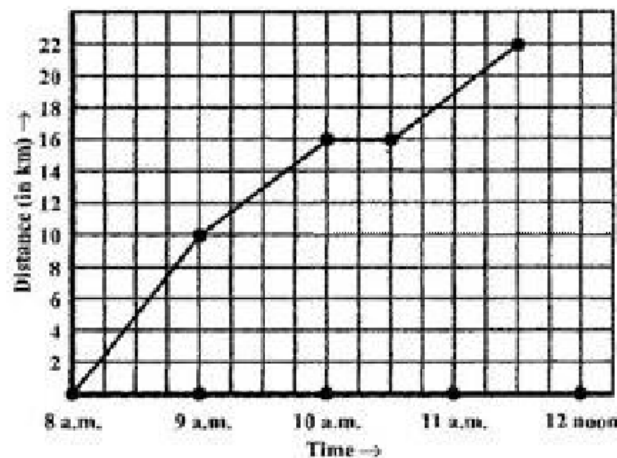


- (b)



Ex 13.1 Question 6.

A courier-person cycles from a town to a neighbouring suburban area to deliver a parcel to a merchant. His distance from the town at different times is shown by the following graph.



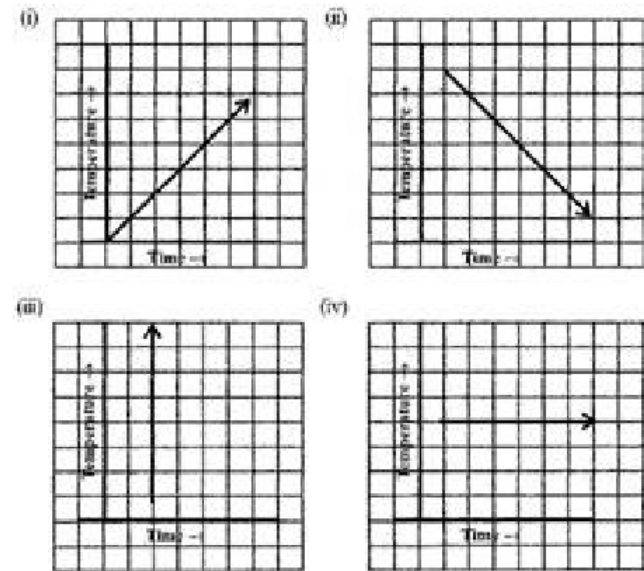
- (a) What is the scale taken for the time axis?
- (b) How much time did the person take for the travel?
- (c) How far is the place of the merchant from the town?
- (d) Did the person stop on his way? Explain.
- (e) During which period did he ride fastest?

Answer.

- (a) 4 units = 1 hour.
- (b) The person took $3\frac{1}{2}$ hours for the travel.
- (c) It was 22 km far from the town.
- (d) Yes, this has been indicated by the horizontal part of the graph. He stayed from 10 am to 10.30am.
- (e) He rode the fastest between 8 am and 9 am.

Ex 13.1 Question 7.

Can there be a time-temperature graph as follows? Justify your answer.



- Answer.
- (i) It is showing the increase in temperature.
 - (ii) It is showing the decrease in temperature.
 - (iii) The graph figure (iii) is not possible since temperature is increasing very rapidly which is not possible.
 - (iv) It is showing constant temperature.

Exercise 13.2 (Revised) – Chapter 15 – Introduction To Graphs – Ncert Solutions
class 8 – Maths

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Chapter 13 – Introduction To Graphs – NCERT Solutions for Class 8 Maths

Ex 13.2 Question 1.

Draw the graphs for the following tables of values, with suitable scales on the axes.

(a) Cost of apples

No. of apples	1	2	3	4	5
Cost (in Rs.)	5	10	15	20	25

(b) Distance travelled by a car

Time (in hours)	6 a.m.	7 a.m.	8 a.m.	9 a.m.
Distance (in km)	40	80	120	160

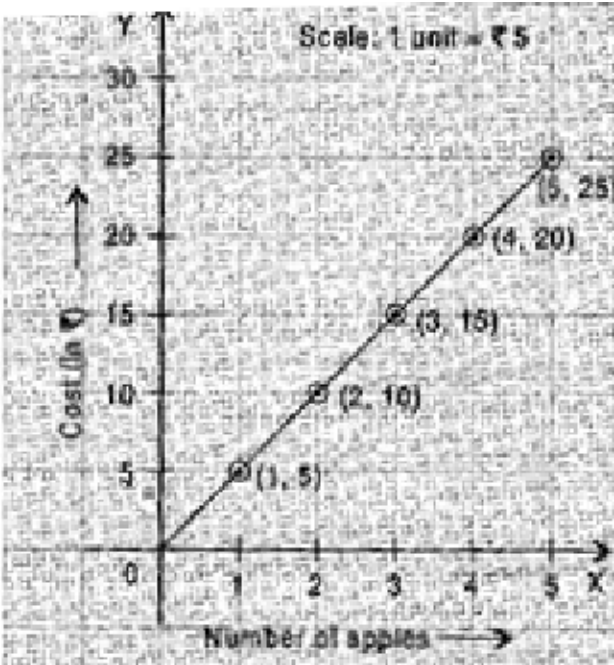
- (i) How much distance did the car cover during the period 7.30 a.m. to 8 a.m?
(ii) What was the time when the car had covered a distance of 100 km since it's start?
(c) Interest on deposits for a year.

Deposit(inRs.)	1000	2000	3000	4000	5000
Simple Interest (inRs.)	80	160	240	320	400

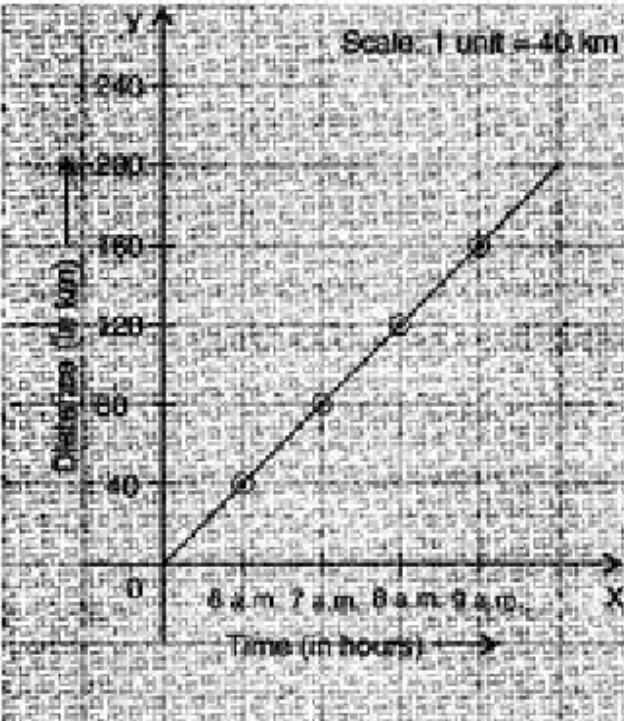
- (i) Does the graph pass through the origin?
(ii) Use the graph to find the interest on Rs 2500 for a year.
(iii) To get an interest of Rs 280 per year, how much money should be deposited?

Answer.

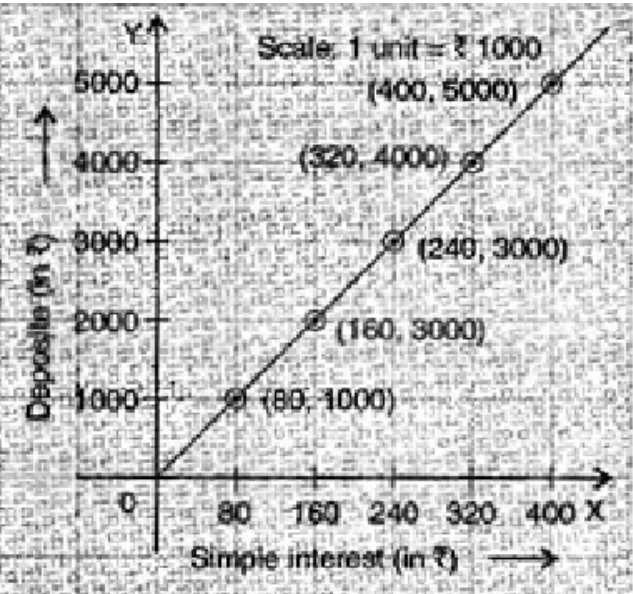
(a)



- (b) (i) The car covered 20 km distance.
(ii) It was 7.30am, when it covered 100 km distance.



- (c) (i) Yes, the graph passes through the origin.
(ii) Interest on Rs. 2500 is Rs. 200 for a year.
(iii) Rs. 3500 should be deposited for interest of Rs. 280 .



Ex 13.2 Question 2.

Draw a graph for the following.

(i)

Side of Square(in cm)	2	3	3.5	5	6
Perimeter (in cm)	8	12	14	20	24

Is it a linear graph?

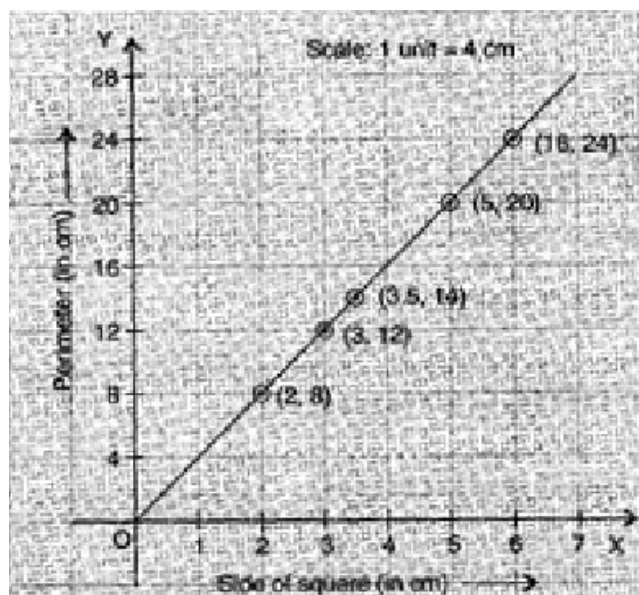
(ii)

Side of Square(in cm)	2	3	4	5	6
Area (in cm ²)	4	9	16	25	36

Is it a linear graph?

Answer.

(i) Yes, it is a linear graph.



(ii) No, it is not a linear graph because the graph does not provide a straight line.

