

CLASS VIII: Maths
Chapter 13: Introduction to Graphs

Questions and Solutions | Exercise 13.2 - NCERT Books

Q1 :

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

(a) Cost of apples

Number 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 its start?

(c) Interest on deposits for a year.

Deposit (in ₹)	1000	2000	3000	4000	5000
Simple Interest (in ₹)	80	160	240	320	400

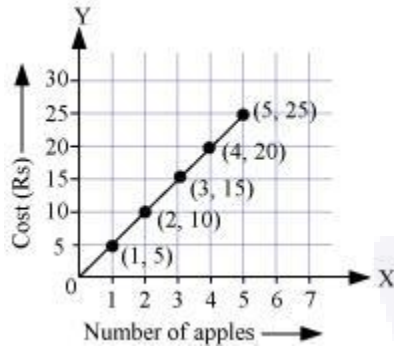
(i) Does the graph pass through the origin?

(ii) Use the graph to find the interest on Rs 2500 for a year.

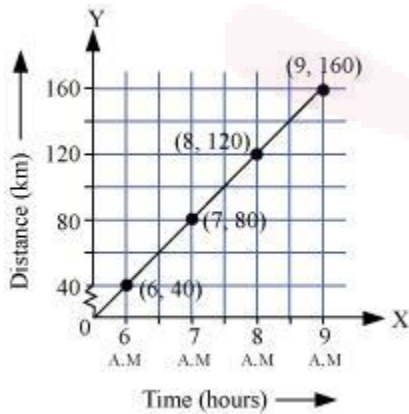
(iii) To get an interest of Rs. 280 per year, how much money should be deposited?

Answer :

(a) Taking a suitable scale (for x-axis, 1 unit = 1 apple and for y-axis, 1 unit = Rs 5), we can mark the number of apples on x-axis and the cost of apples on y-axis. A graph of the given data is as follows.



(b) Taking a suitable scale (for x-axis, 2 units = 1 hour and for y-axis, 2 units = 40 km), we can represent the time on x-axis and the distance covered by the car on y-axis. A graph of the given data is as follows.



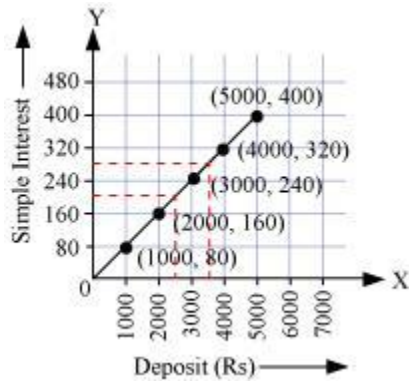
(i) During the period 7:30 a.m. to 8 a.m., the car covered a distance of 20 km.

(ii) The car covered a distance of 100 km at 7:30 a.m. since its start.

(c) Taking a suitable scale,

For x-axis, 1 unit = Rs 1000 and for y-axis, 1 unit = Rs 80

We can represent the deposit on x-axis and the interest earned on that deposit on y-axis. A graph of the given data is obtained as follows.



From the graph, the following points can be observed.

- (i) Yes. The graph passes through the origin.
- (ii) The interest earned in a year on a deposit of Rs 2500 is Rs 200.
- (iii) To get an interest of Rs 280 per year, Rs 3500 should be deposited.

Q2 :

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?

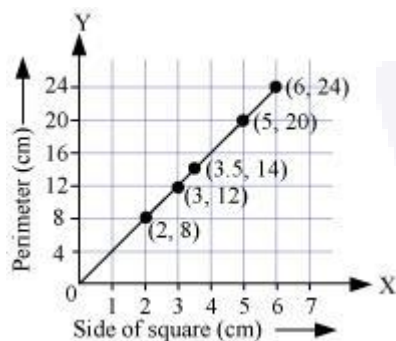


Answer :

(i) Choosing a suitable scale,

For x-axis, 1 unit = 1 cm and for y-axis, 1 unit = 4 cm

We can represent the side of a square on x-axis and the perimeter of that square on y-axis. A graph of the given data is drawn as follows.

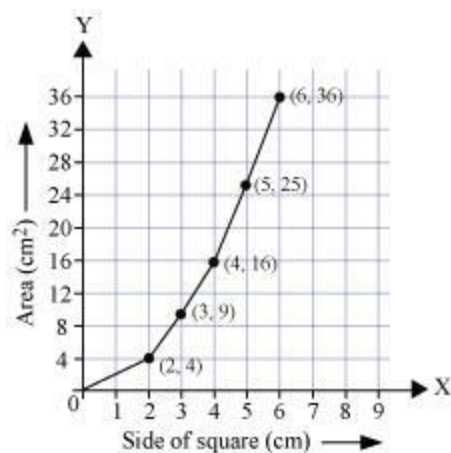


It is a linear graph.

(ii) Choosing a suitable scale,

For x-axis, 1 unit = 1 cm and for y-axis, 1 unit = 4 cm²

We can represent the side of a square on the x-axis and the area of that square on y-axis. A graph of the given data is as follows.



It is not a linear graph.