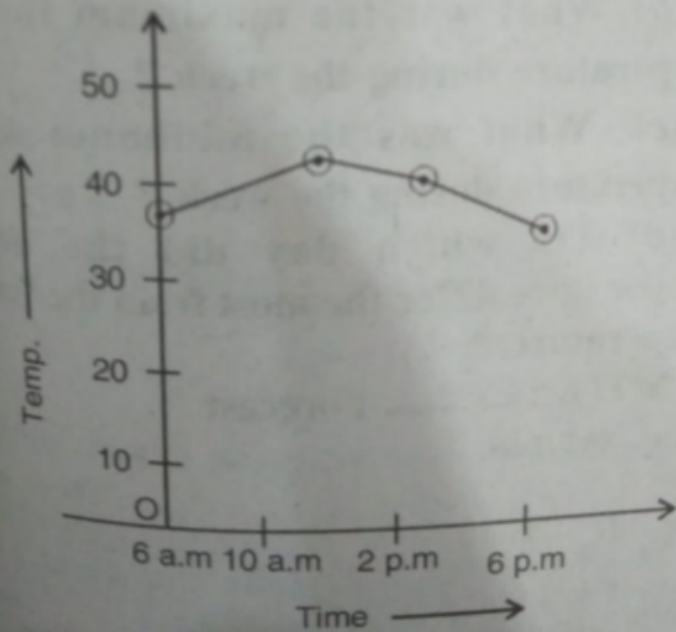# MATHS

BOOKS - MBD

INTRODUCTION OF GRAPHS.

Example

1. Take this graph drawn by a doctor recording the temperature of Renu at different times and answer the given questions.

[Horizontal line, 1 unit = 4 hours]
[Vertical line, 1 unit = 10° C]

What does this graph (we may call it temperature graph)show?

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2. Take this graph drawn by a doctor recording the temperature of Renu at different times and answer the given questions.

When Renu have the highest temperature?

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3. Take this graph drawn by a doctor recording the temperature of Renu at different times and answer the given questions.
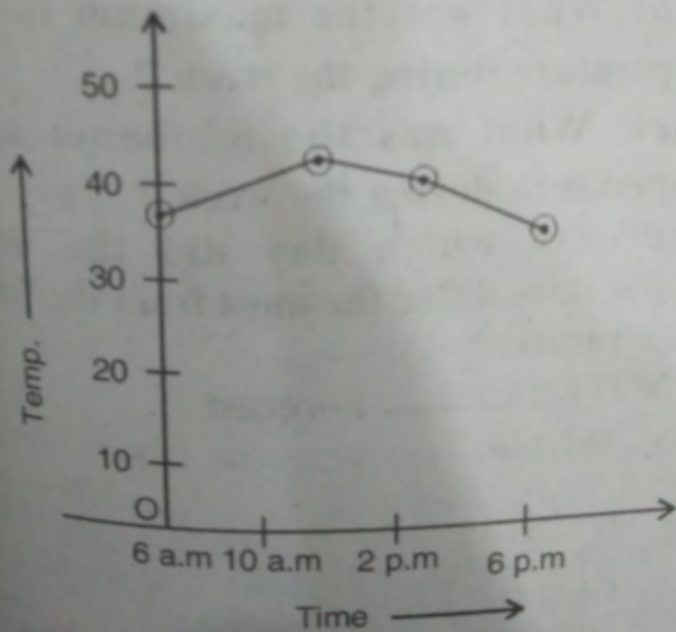
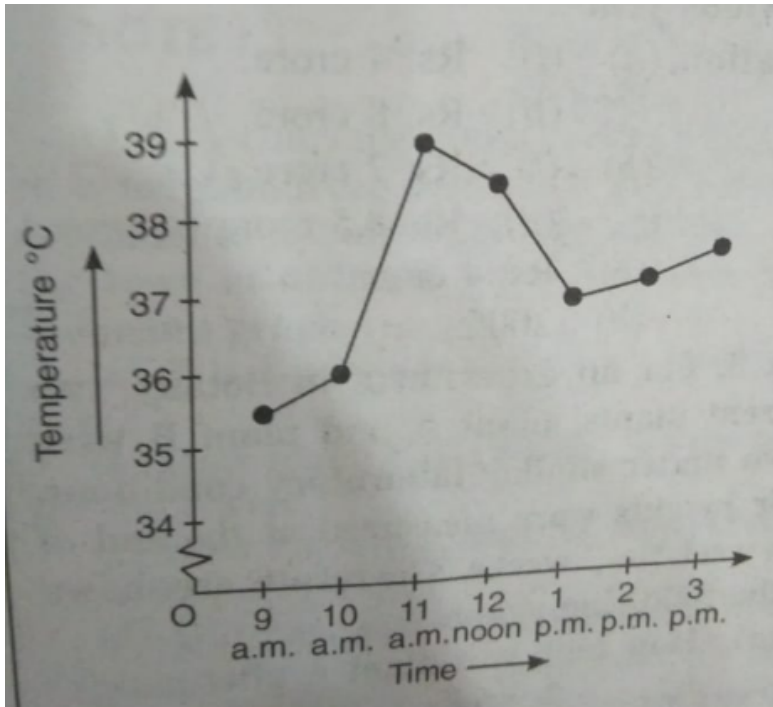[Horizontal line, 1 unit = 4 hours]
[Vertical line, 1 unit = 10° C]

When did she have the least temperature?

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4. The following graph shows the tempreature of a patient in a hospital,recorded every hour. What was the patient's temperature at 1p.m.?

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5. The following graph shows the tempreature of a patient in a hospital,recorded every hour. When was the patient's temperature was the same two times during the period is given.What were these two times?
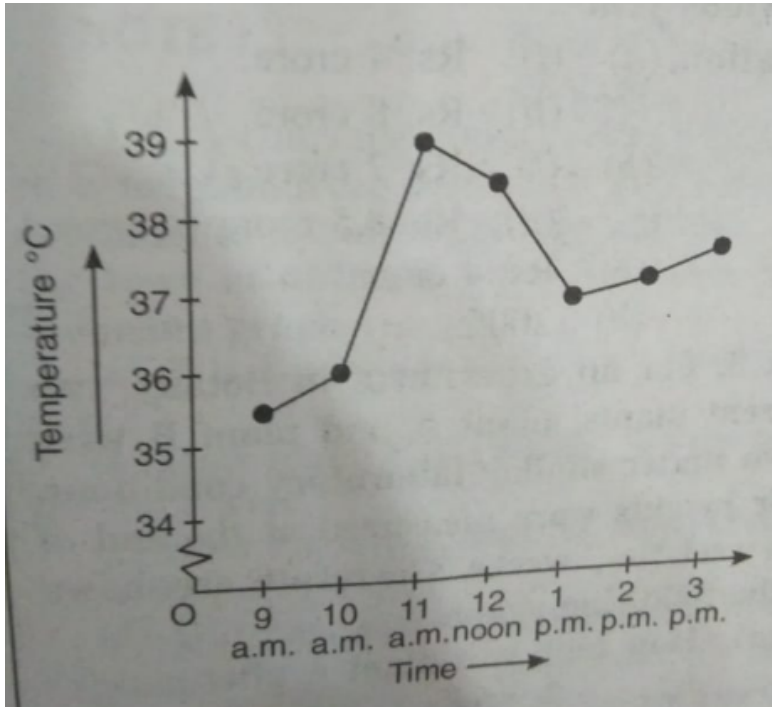
6. The following graph shows the tempreature of a patient in a hospital,recorded every hour. What was the temperature at 1.30 pm. ?How

did you arrive at your answer ?

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7. The following graph shows the temperature

of a patient in a hospital,recorded every hour.

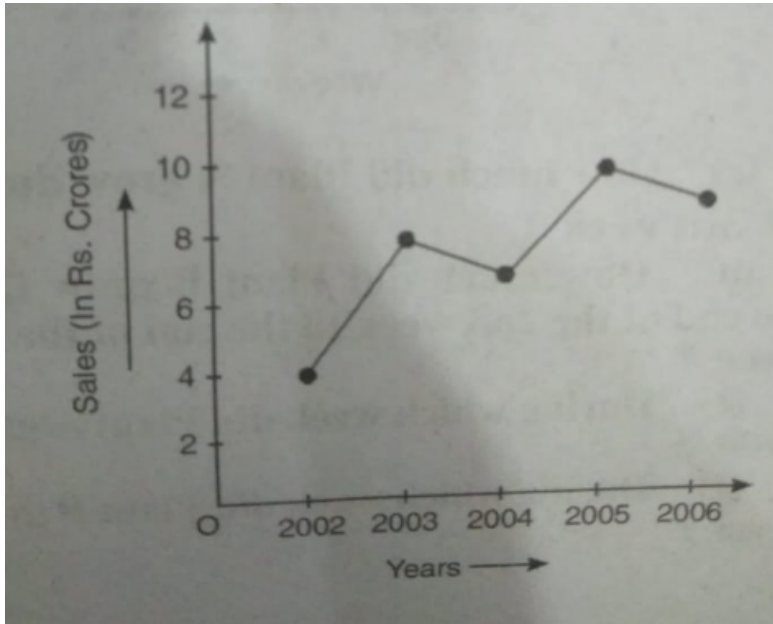During which periods did the patient's temperature showed an upward trend?

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8. The following line graph sows the yearly sales figures for a manufacturing company. What were the sales in

2002,2006

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

What were the sales in:

2003,2005

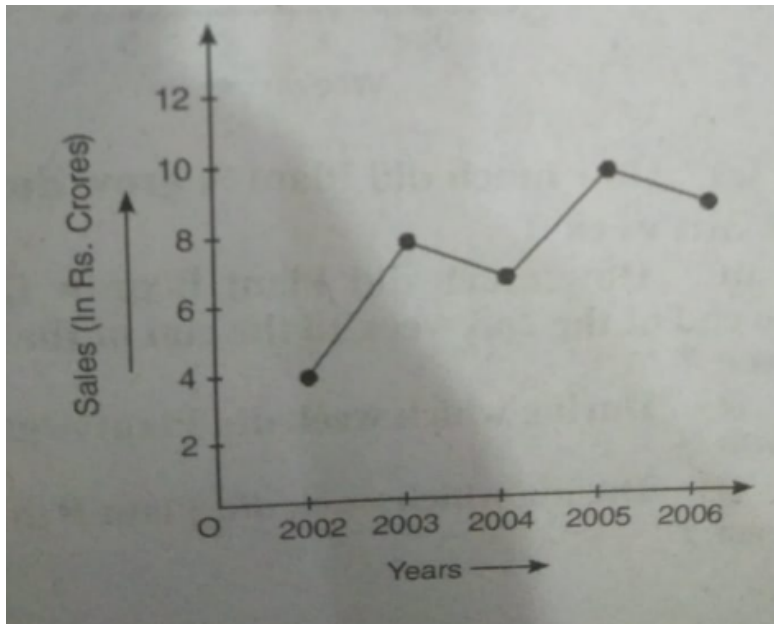**10.** The following line graph sows the yearly

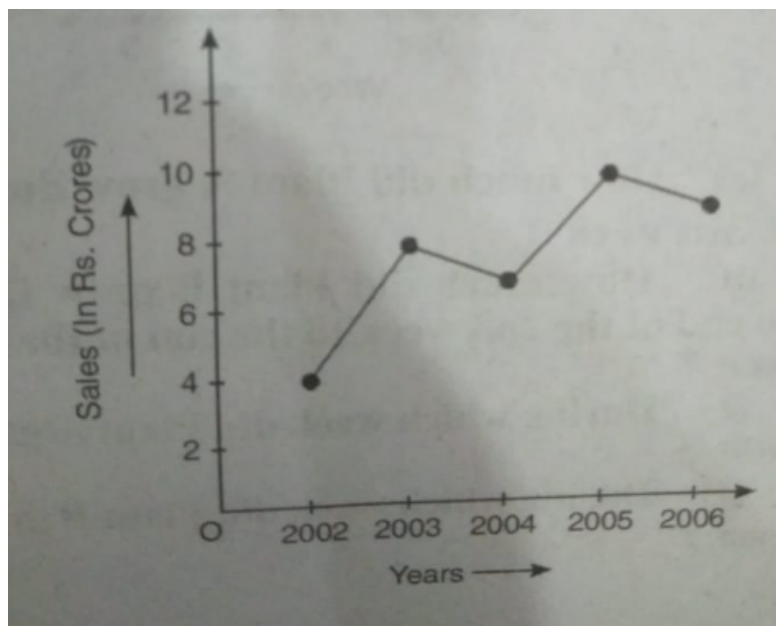sales figures for a manufacturing company.

Compute the difference between the sales in

2002 and 2006.

11. The following line graph sows the yearly sales figures for a manufacturing company. In which year was there the greatest

difference between the sales as compared to its previous year ?

12. For an experiment in Botany,two different plants, plant A nad plant B were grown under

similar laboratory conditions.Their heights were measured at the end of each week for 3 weeks.The results are shown by the following graph.

How high was plant A after 2 weeks?

3 weeks?

13. For an experiment in Botany,two different plants, plant A nad plant B were grown under

similar laboratory conditions.Their heights were measured at the end of each week for 3 weeks.The results are shown by the following graph.
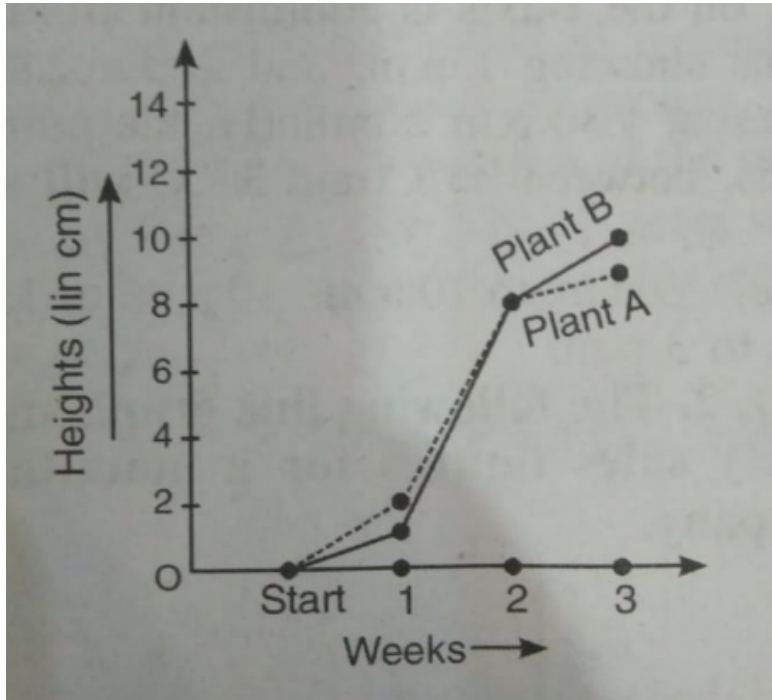
How high was plant A after 2 weeks?

3 weeks?
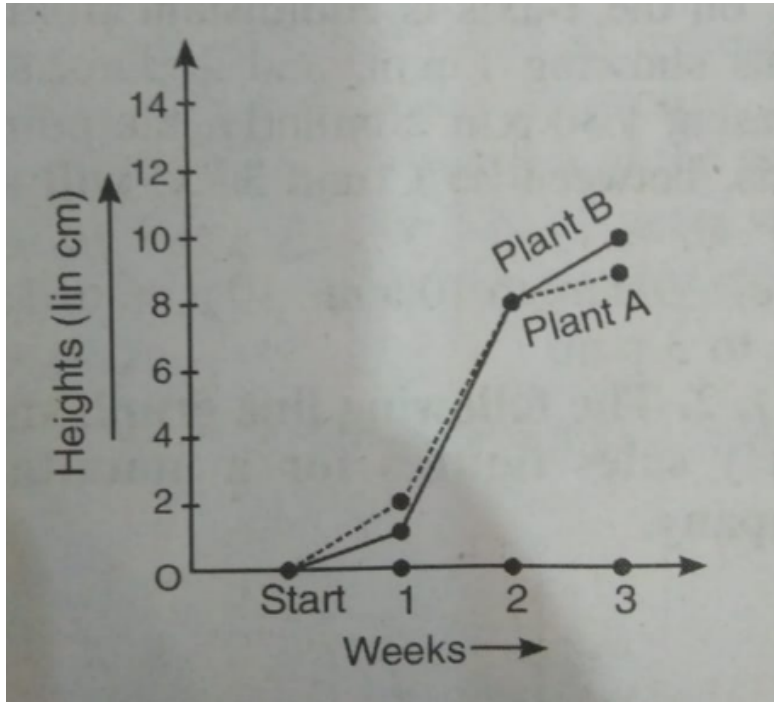
14. For an experiment in Botany,two different

plants, plant A and plant B were grown under

similar laboratory conditions.Their heights were measured at the end of each week for 3 weeks.The results are shown by the following graph.

How much did Plant A grow during the 3rd week?

15. For an experiment in Botany,two different plants, plant A nad plant B were grown under

similar laboratory conditions.Their heights were measured at the end of each week for 3 weeks.The results are shown by the following graph.

How much did Plant B grow from the end of the 2nd week to the end ofthe 3rd week?

16. For an experiment in Botany,two different plants, plant A nad plant B were grown under similar laboratory conditions.Their heights were measured at the end of each week for 3 weeks.The results are shown by the following graph.
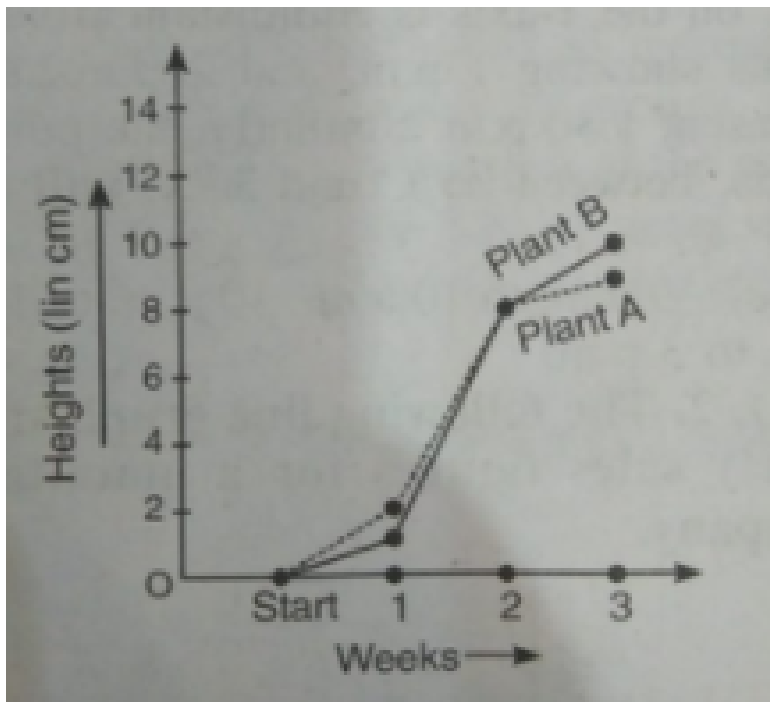
During which week did Plant A grow most?

17. For an experiment in Botany, two different plants, plant A nad plant B were grown under

similar laboratory conditions.Their heights were measured at the end of each week for 3 weeks.The results are shown by the following graph.

During which week did Plant A grow most?

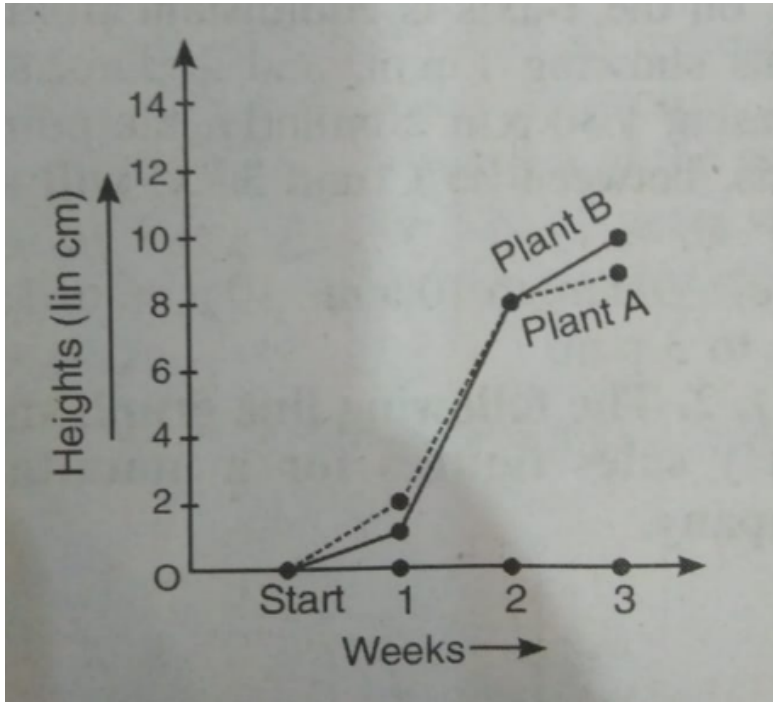**18.** For an experiment in Botany,two different plants, plant A nad plant B were grown under similar laboratory conditions.Their heights were measured at the end of each week for 3 weeks.The results are shown by the following graph.

Were the two plants of the same height

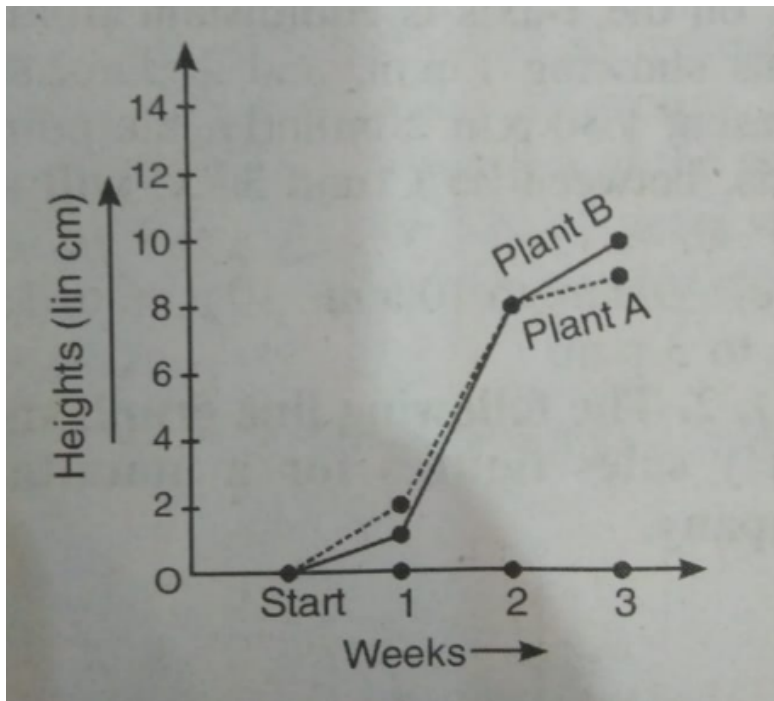during any week shown here ?Specify.
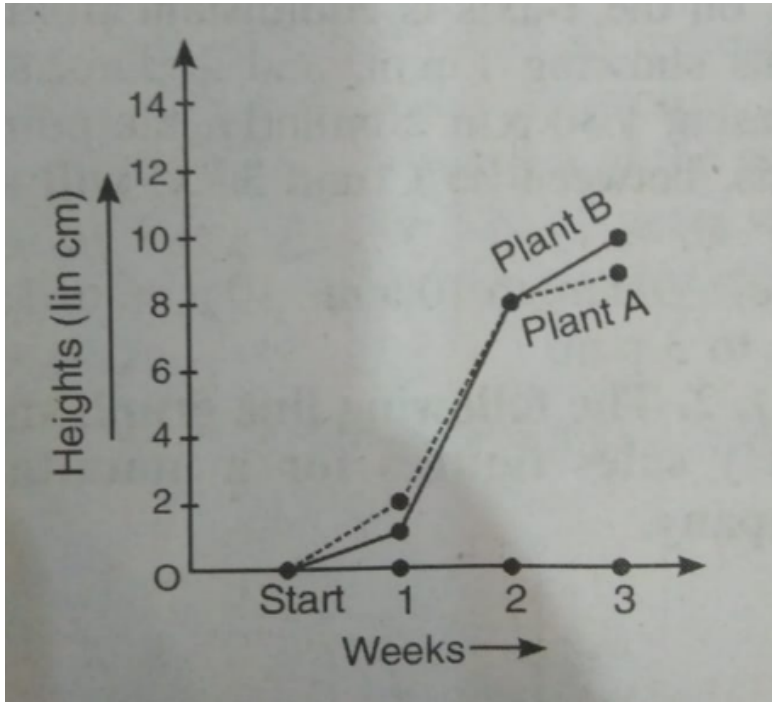
19. The following graph whose temperature

forecast and the actual temperature for each

day of a week.

On which days was the forecast temperature the same as the actual temperature ?

20. The following graph whos the temperature forecast and the actual temperature forecast and the actual temperature for eachday of a week.

What was the maximum forecaast

temperature during th week?
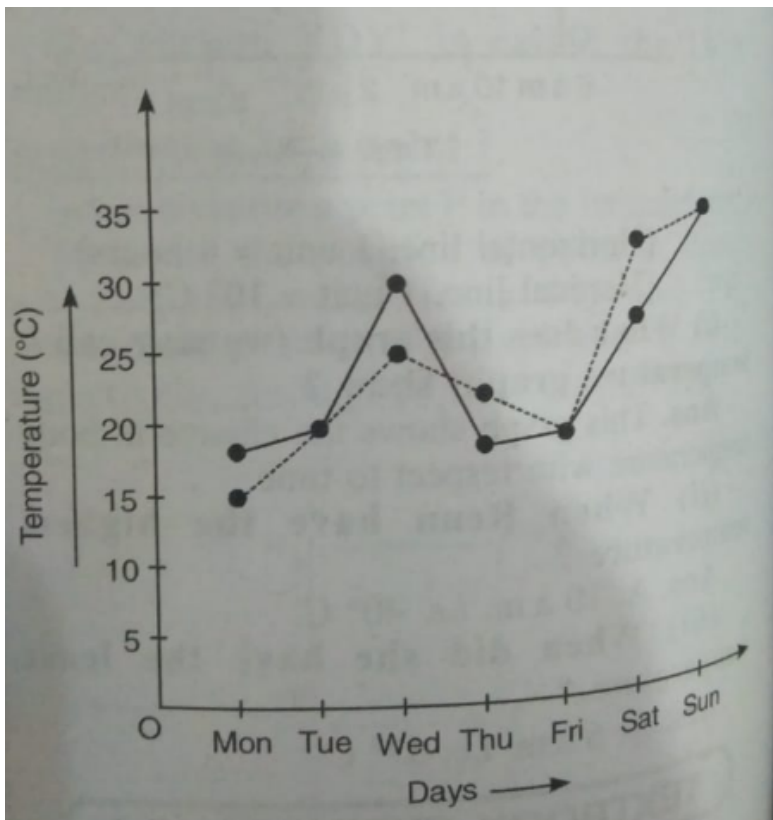
21. The following graph whos the temperature forecast and the actual temperature forecast and the actual temperature for eachday of a week.

What was the minimum actual temperature during the week?

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

On which day did the actual temperature differ the most from the forecast

temperature?
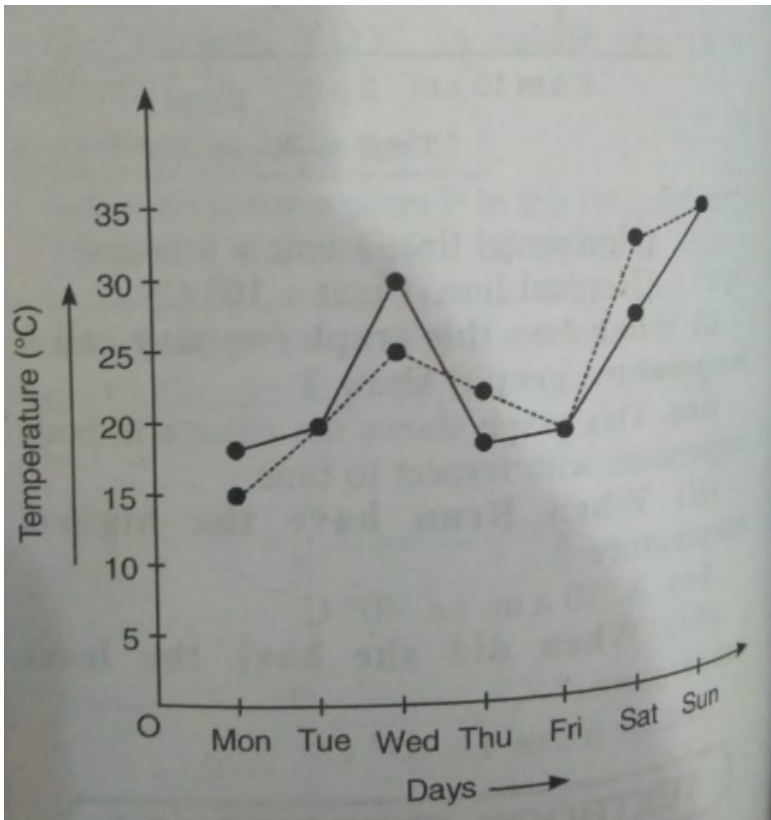
23. Use the tables below to draw linear graphs.

The number of days a hill side city recived

show in different years.

Year	2003	2004	2005	2006
Days	8	10	5	12

24. Use the tables below to draw linear graphs.

Population (in thousads) of men and women

in a village in different years:

Year	2003	2004	2005	2006	2007
Number of Men	12	12.5	13	13.2	13.5
Number of Women	11.3	11.9	13	13.6	12.8

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25. 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:

How much time did the person taken for the travel ?

26. 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:

How much time did the person taken for the travel ?

27. 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:

How for is the place of the merchant from the town ?

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

Did the person stop on his way ?Explain.

29. A courier -person cycles from a town to a neighbouring subrban area to deliver a parcel

to a merchant .His distance from the town at different times is shown by the following graph:

During which period did he ride fastest ?

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

31. Observe the given graph which shows the distance travelled by a car after certain minutes and answer the following questions:

What is the scale on the horizontal and verical line?
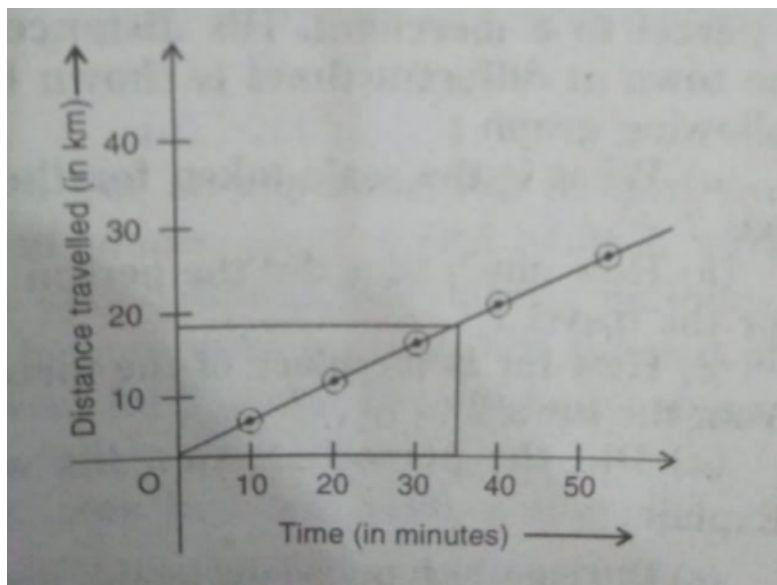
32. Observe the given graph which shows the distance travelled by a car after certain minutes and answer the following questions:

What is the distance covered by the car after 30 minutes?

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33. Observe the given graph which shows the distance travelled by a car after certain

minutes and answer the following questions:

Find thedistance covered between 10 and 20 minutes.
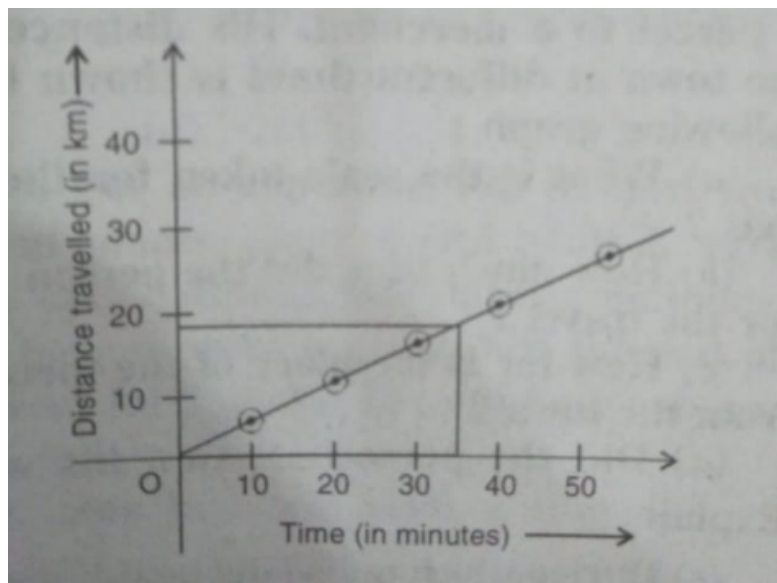
34. Observe the given graph which shows the distance travelled by a car after certain minutes and answer the following questions:

Can you tell from the graph the distance covered by the car after 35 minutes?.
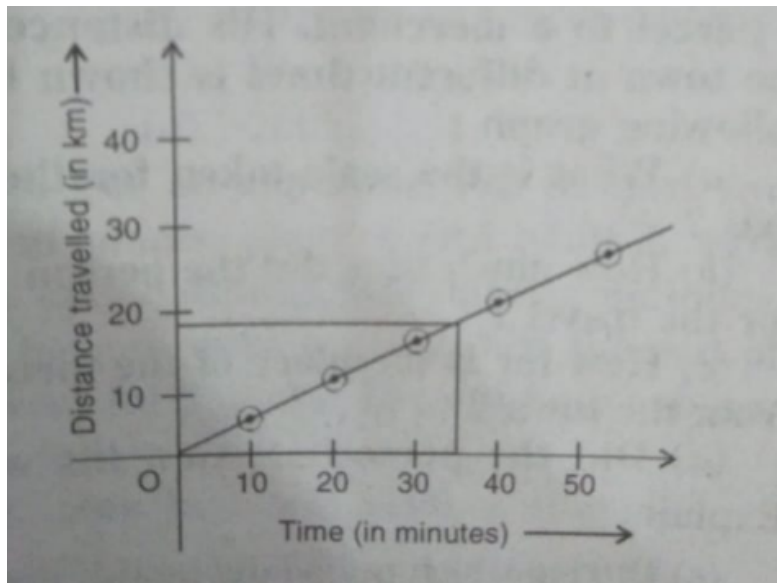
35. Answer the following question looking at the graph.

In which year was the difference in the number of men and women paricipants the least ?

MEN AND WOMEN SPORTS PARTICIPANTS

NUMBER OF STUDENTS

YEARS

MEN ●────●   WOMEN ●─ ─ ─ ─●
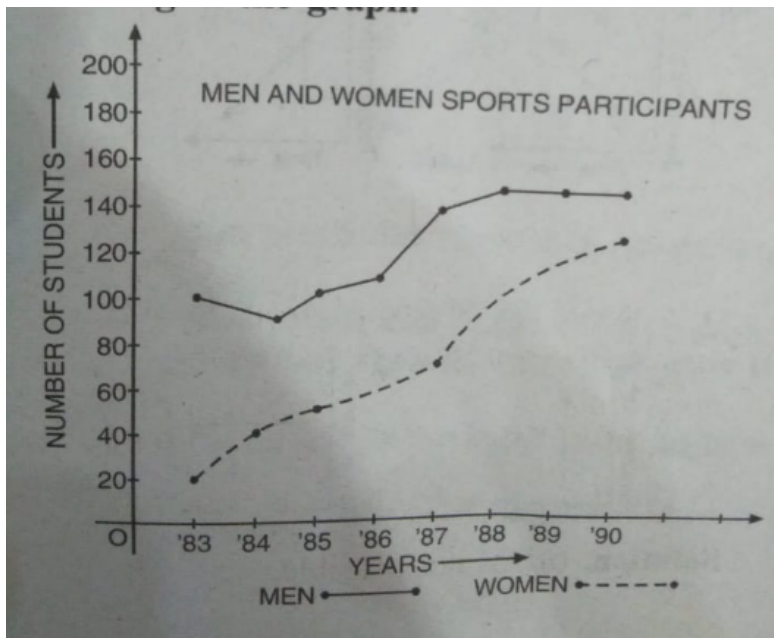
▶ Watch Video Solution

36. Answer the following question looking at the graph.

Between which years did number of women paricipants increase the most ?

MEN AND WOMEN SPORTS PARTICIPANTS

NUMBER OF STUDENTS
200
180
160
140
120
100
80
60
40
20
O

'83 '84 '85 '86 '87 '88 '89 '90
YEARS

MEN ———•   WOMEN •-----•
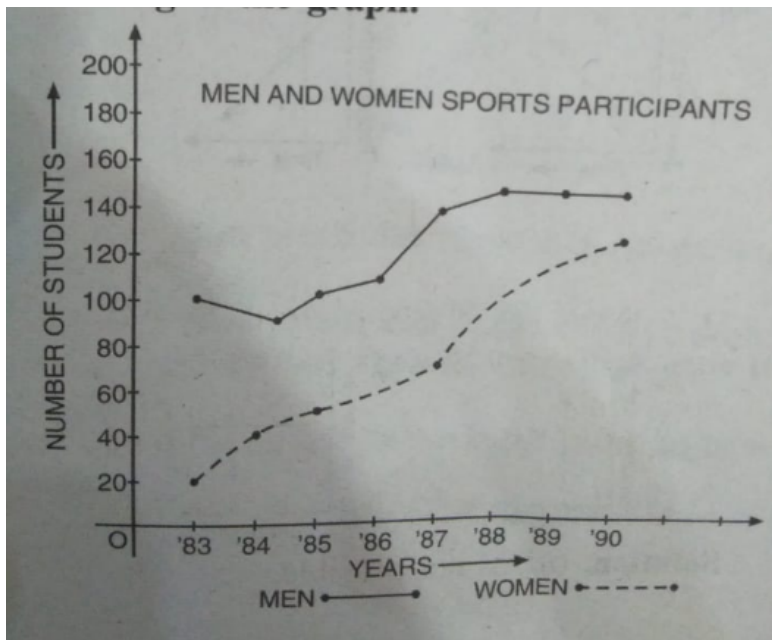
▶ Watch Video Solution

37. The graph in the figure shows the monthly rainfall in a city for the year 2006.

Observe the graph and answer the following questions:

Which was the wettest month?
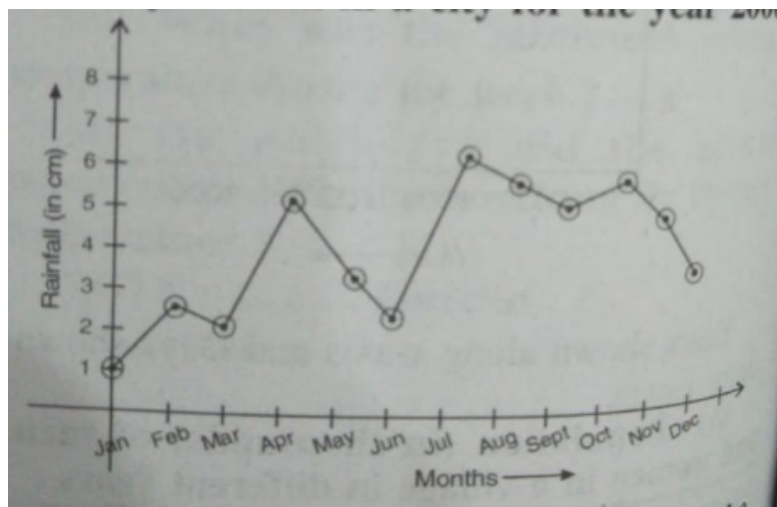
38. The graph in the figure shows the monthly rainfall in a city for the year 2006.

Observe the graph and answer the following questions:

In which month was the rainfall minimum ? How much was it?
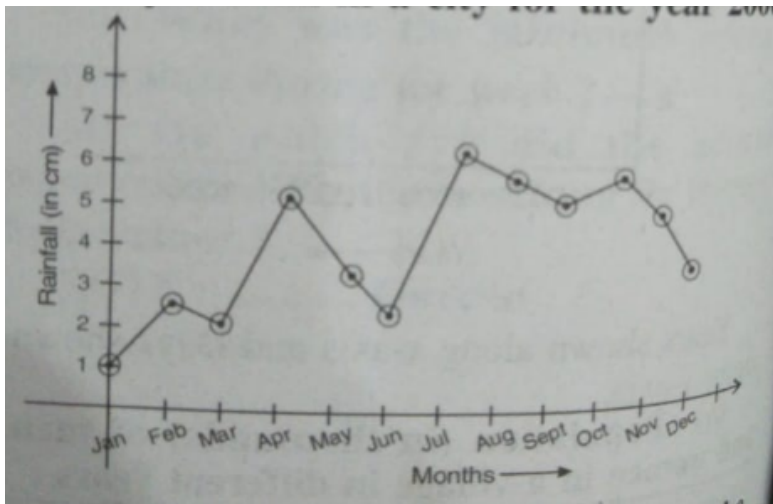
39. The graph in the figure shows the monthly rainfall in a city for the year 2006.

Observe the graph and answer the following questions:

Calculate the total rainfall during the months April to June 2006.

40. Refer to the graph given in fig.

Find the cost of 15.5 litres of Petrol.
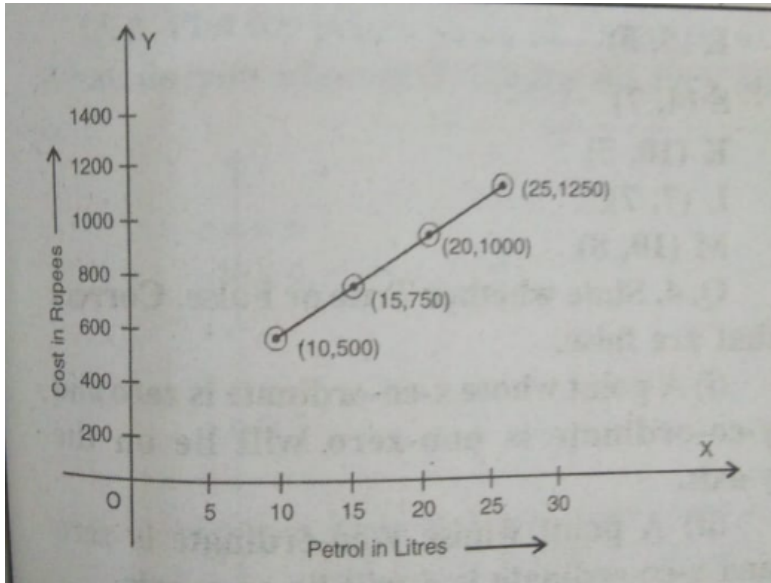
41. Refer to the graph given in fig.

How much petrol can be bought for Rs.600?
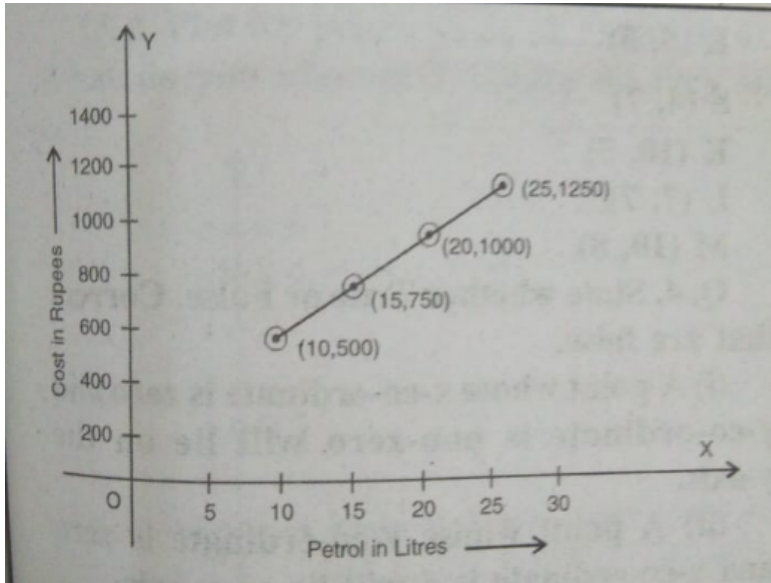
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42. Plot the following points on a graph sheet .Verify if they lie on a line.

A (4,0),B(4,2),C(4,6),D(4,2.5).

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43. Plot the following points on a graph sheet .Verify if they lie on a line.

P(1,1),Q(2,2),R(3,3),S(4,4).

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44. Plot the following points on a graph sheet .Verify if they lie on a line.

K(2,3),L(5,3),M(5,5),N(2,5).

45. Draw the line passing through(2,3) and (3,2).Find the co-ordinates of the points at which this line meets the x-axis and y-axis.

46. Write the co-ordinates of the vertices of each of these adjoining figures.
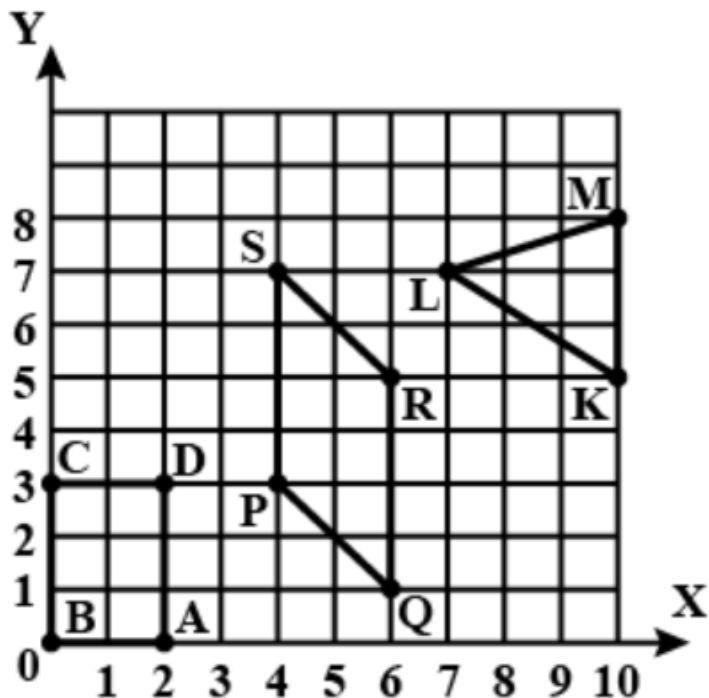
47. State whether True or False.Correct that are false.

A point whose x-co-ordinate is zero and y-co-ordinate is non - zero will lie on the y - axis.

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48. State whether True or False.Correct that are false.

A pont whose y-co-ordinate is zero and x-co-ordinate is 5 will lie on y-axis.

49. State whether True or False.Correct that are false.

The co-ordinates of the origin are (0,0).

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50. Find the co-ordinates of the points A,B,C and D in the given figure.

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51. Mark points E (3,2) and G(0,6) on the graph paper.

52. Find the co-ordinates of the points A,B,C and D in the given figure.

53. Plot the points(0,2),(0,5) and (0,6).what do you observe ?Where do they all lie?
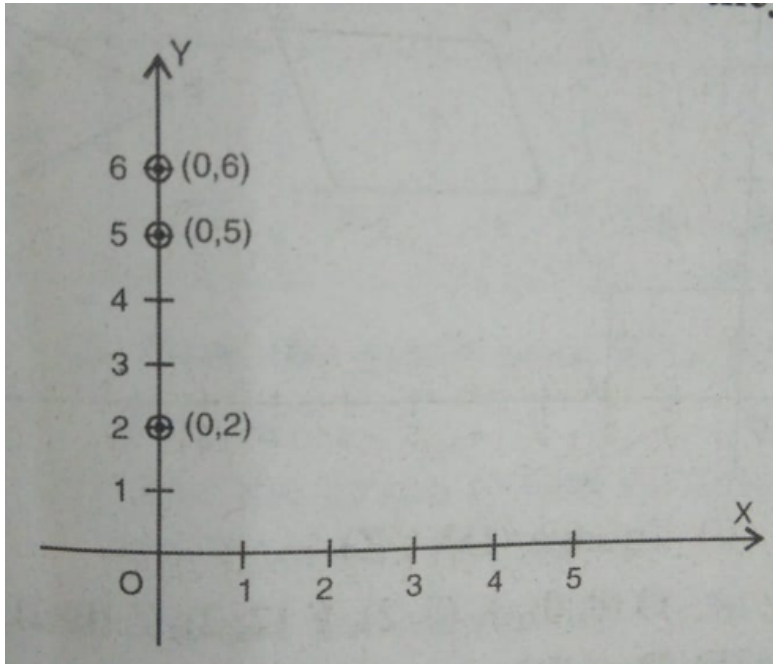
54. Locate the points $(5, 0), (5, 1)$ and $(5, 2)$

.Do they lie on a line.

55. Locate the points:

(1,1),(1,2),(1,3),(1,4).

56. Locate the points: (2,1),(2,2),(2,3),(2,4).

57. Locate the points:(1,3),(2,3),(3,3),(4,4).

58. Locate the points:(1,4),(2,4),(3,4) and (4,4).

59. Plot the each point.Connect the points in order i.e A to B,B to C and so on .A(2,3),B(5,3),C(5,5) and D(2,5).

60. Plot three points such that ,the x-co-ordinate is equal to its y-co-ordinate.Join those pints in pairs.Do they lie on a line passing through the origin.

61. Decide which of the following statements are true and which are false.Give reasons for your answer .

a point whose x co-ordinate is zero ,will lie on the y-axis.

62. Decide which of the following statements are true and which are false.Give reasons for your answer .

A point whose y-co-ordinate is zero,will lie on the x-axis.

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63. Decide which of the following statements are true and which are false.Give reasons for your answer .

The co-ordinates of the origin are (0,0).

▶ **Watch Video Solution**

64. Write the co-ordinates of the vertices of each figure:

Wquare (OXYZ)

O(0,0),X(0,2),Y(2,2),Z(0,2).
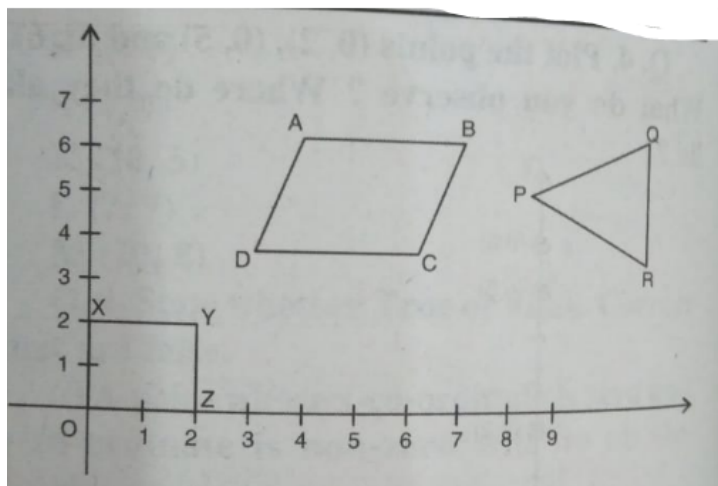
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65. Write the co-ordinates of the vertices of each figure:

Triangle(PQR)

P(7.5,4),Q(9,5),R(9,3).
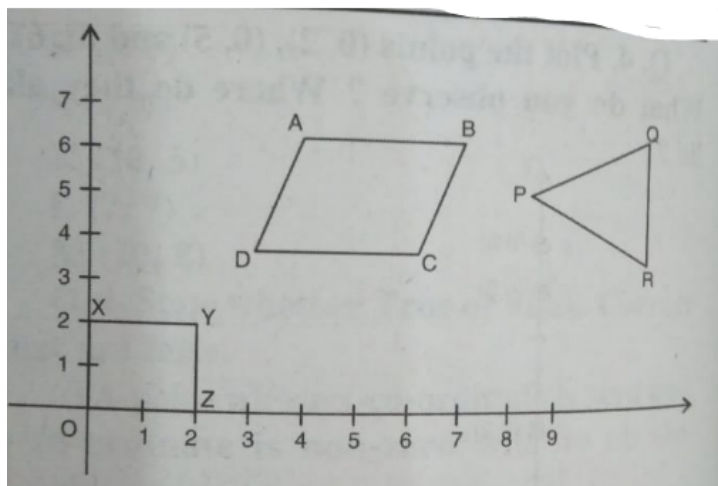
66. Draw the graphs for the following tables of value ,with suitable scales on the axes.

Cost of apples.

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

Distance travelled by a car.

How much distance did the car cover during

the period 7.30a.m. to 8a.m.?

68. Draw the graphs for the following tables of

value ,with suitable scales on the axes.

Distance travelled by a car.

What was the time when the car had covered a

distance of 100 km,since it's start ?

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

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69. Draw the graphs for the following tables of

value ,with suitable scales on the axes.

Interest n deposits for a year.

Does the graph pass thorough the origin?

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

Interest n deposits for a year.

Use the graph to find the interest on Rs.2,500 for a year.

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

Interest n deposits for a year.

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

72. Draw a graph for the following:

Is it a linear graph.

73. Draw a graph for the following:

Side of square (in cm)	2	3	4	5	6
Area (in cm²)	4	9	16	25	36

Is it linear graph.

74. Days of snow in a city:

Year	2003	2004	2005	2006
Days	8	10	5	12

Use the table to draw the graph.

▶ **Watch Video Solution**

75. Temperature readings on Monday.

Time Tem-perature (in °C)	9 am	10 am	11 am	noon	1 pm	2 pm	3 pm
	18	19	22	25	27	24	22

Draw the graph for the above data.

▶ **Watch Video Solution**

76. December weather in a city:

Type of weather	Sunny	Rainy	Cloudy	Snowy
Number of Days	18	4	8	1

Draw the graph of the above data.

▶ **Watch Video Solution**

77. Kilometers in Miles:

Miles	1	5	10	15	20
Kilometers	1.6	8	16	24	32

Draw the graph for the above data.

▶ **Watch Video Solution**

78. Hospital patients discharged with HIV diagnosis:

Draw the graph.

▶ **Watch Video Solution**

79. The following table gives the information regarding the number of persons employed to a piece of work and time taken to complete the work:

Plot a graph of this information.

80. The following table gives the information regarding length of a square and its area. Plot a graph to illustrate this information.

81. The following table shows the sales of a commodity during the years 2000 to 2006.

Draw a graph of this information.

Year	2000	2001	2002	2003	2004	2005	2006
Sales (in lakhs of Rs.)	1.5	1.8	2.4	3.2	5.4	7.8	8.6

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82. Following table lists the length of a square and its corresponding perimeter.

Draw a graph to illustrate this information.

▶ Watch Video Solution

83. The following data provides the information regarding the sales of coloured television sets for a period of 5 year,

Draw a suitable graph to represent the data.

Year	2002	2003	2004	2005	2006
Number of coloured T.V. Sets sold (in thousands)	70	80	85	100	120

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Exercise

1. Plot the points(5,0),(0.5),(2,5),(5,2)and (6,3) in the cartesian plane by using a graph paper.

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2. Plot the points (-4,7),(3,6),(4,-5) in cartesian plane.Use the scale 1 cm = 1 unit.

▶ **Watch Video Solution**

3. What is the name of horizontal and the vertical lines drawn to determine the position of any point in the cartesian plane.

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4. Write the name of the point where x-axis and y-axis interesect.

> ▶ **Watch Video Solution**

5. A survey of 120 school students was done to find which activity they prefer to do in their free time:

Represent this information with the help of graph.

Activity	Playing	Reading	Watching T.V.	
No. of students preferred	45	30	20	
	Listening Music		Painting	
	10		15	

6. Following table shows the number of bicycles manufactured in a factory during the years 1998 to 2002.

Draw a graph to illustrate this information.

Year	1998	1999	2000	2001	2002
No. of bicycles manufactured	800	600	900	1100	1200

> ▶ **Watch Video Solution**

7. A.......... is used to show comparison among categories.The blank space is filled by :

A. Bar-graph

B. Circle-graph

C. Line-graph

D. Histogram.

Answer:

▶ **Watch Video Solution**

8. A .... is used to compare parts of a whole.The blank space is filled by:

A. Bar-graph

B. Line-graph

C. Histogram.

D. Circle-graph.

Answer:

▶ Watch Video Solution

9. A..........is a graph that shows data in intervals.The blank space is filled by:

A. Line-graph

B. Histogram

C. Bar-graph

D. Circle-graph

Answer:

10. A..........displays that changes continously over periods of time.

A. Pie graph

B. Histogram

C. Line-graph

D. Bar-graph.

Answer:

▶ **Watch Video Solution**

11. In order to show the position of a point on the graph paper,we require:

A. x-coordinate

B. y-coordinate

C. x-cordinate and y coordinate

D. None of these.

Answer:

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12. The point were x-axis and y-axis intersect is

called :

A. Mid-point

B. Origibn

C. End point

D. None of these.

Answer:

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