



# MATHS

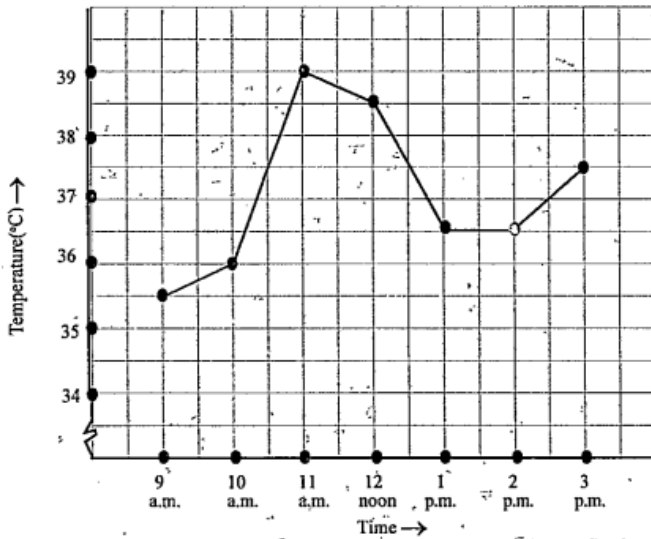
## BOOKS - ASHOK PUBLICATION ASSAM

### Introduction to Graphs

#### Example

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

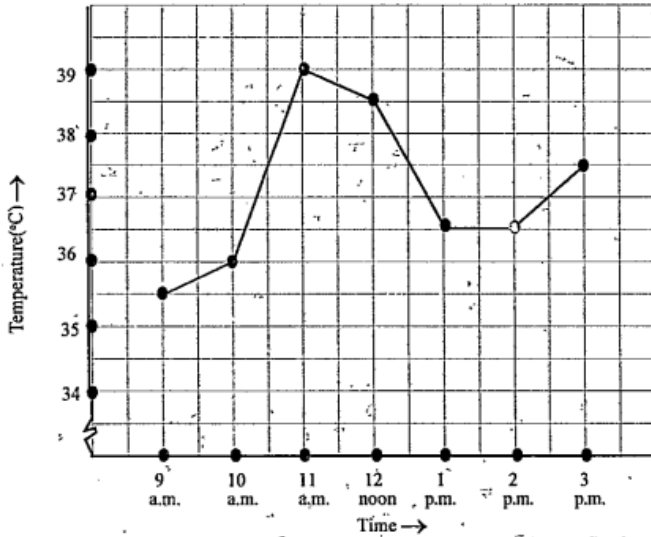
What was the patient's temperature at 1 p.m.?



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

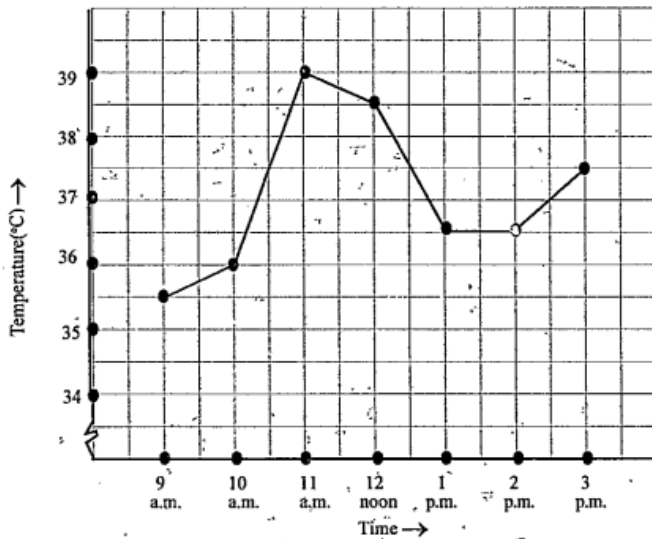
When was the patients temperature  $38.5^{\circ}C$ ?



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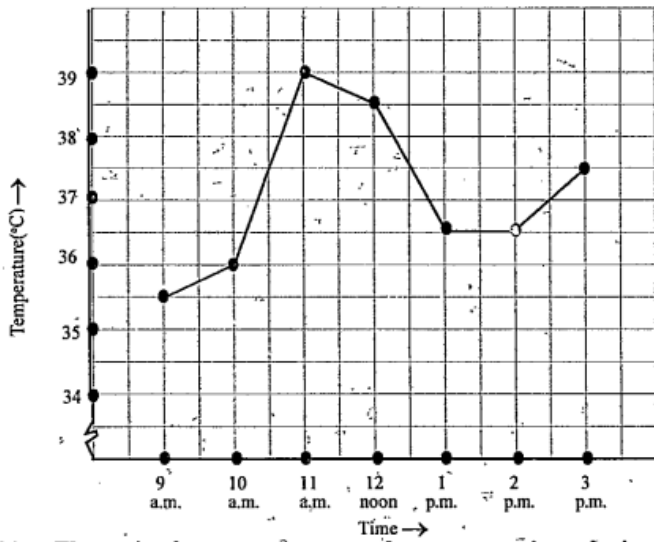
3. The patient's temperature was the same two times during period given. What were these

two times?



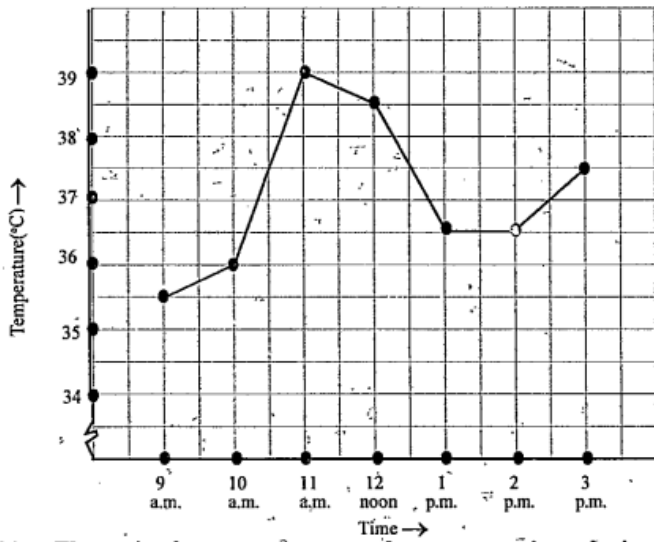
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4. What was the temperature at 1.30 p.m.? How did you arrive at your answer?



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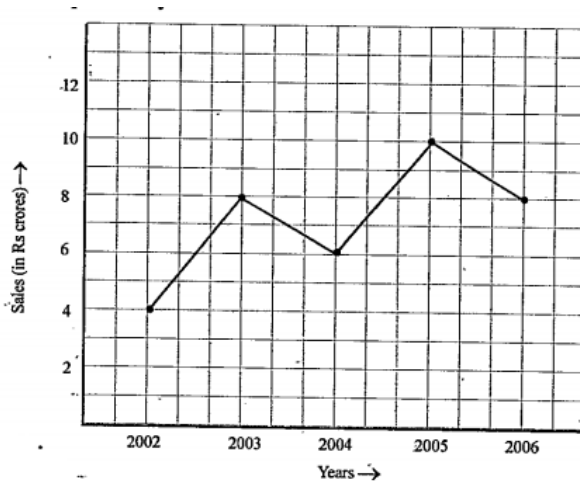
5. During which periods did the patient's temperature showed an upward trend?



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

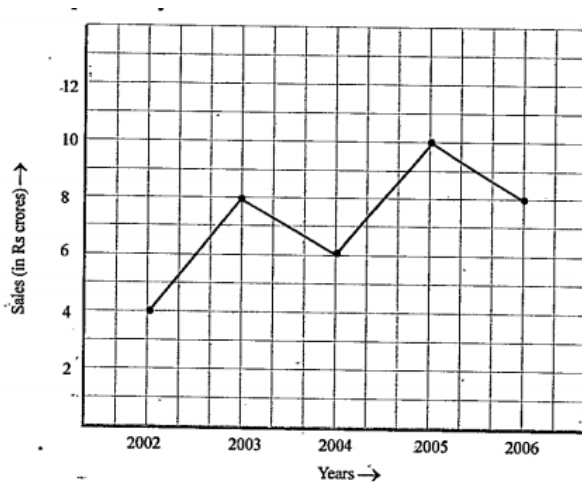
What were the sales in (i) 2002 (ii) 2006 ?



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

What were the sales in (i) 2003 (ii) 2005?



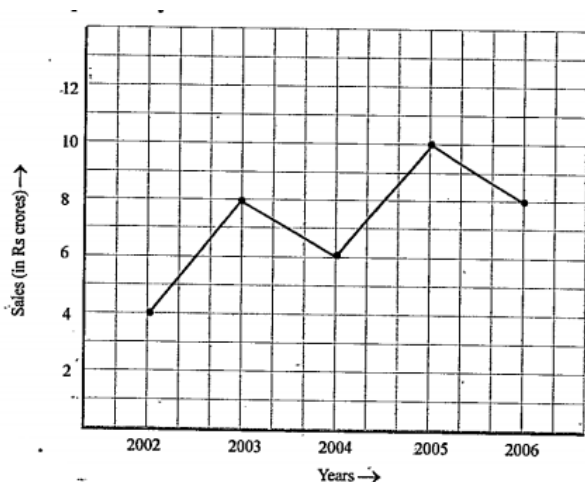
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**8.** The following line graph shows the yearly sales figures for a manufacturing company.

Compute the difference between the sales in



2002 and 2006

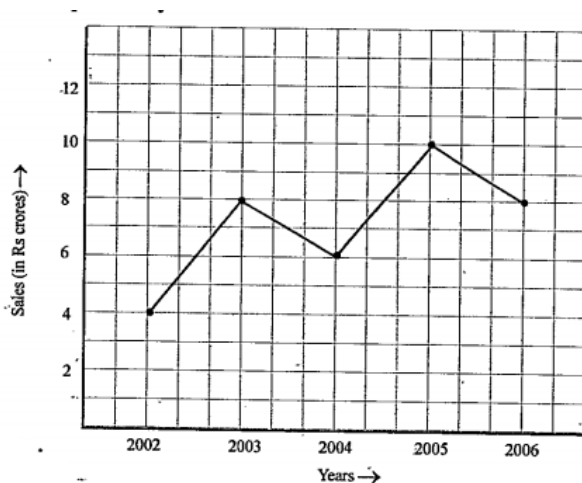


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9. The following line graph shows the yearly sales figures for a manufacturing company.

In which year was there the greatest difference between the sales as compared to its previous

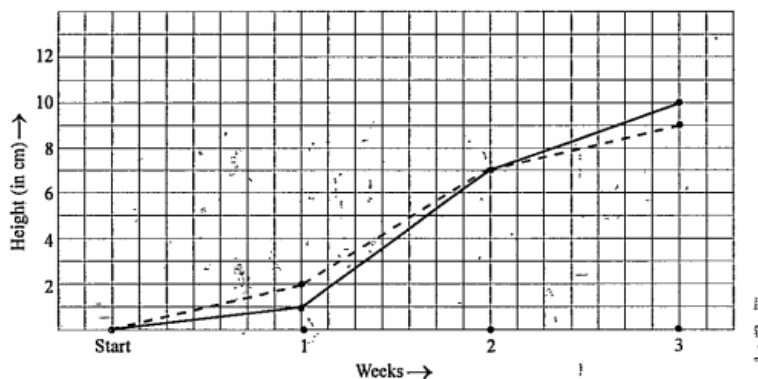
year?



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**10.** 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.



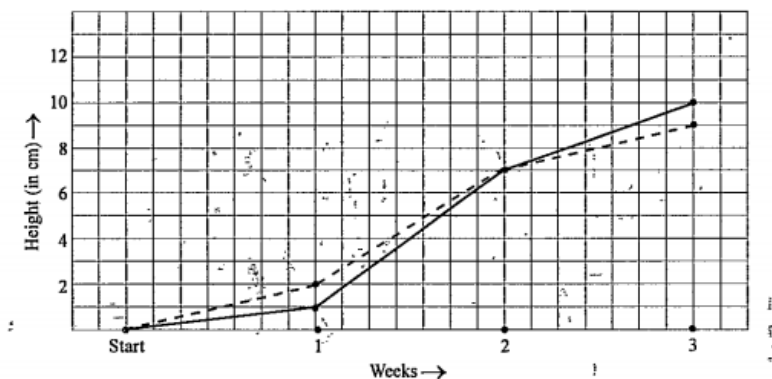
How high was Plant A after (i) 2 weeks (ii) 3 weeks?



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**11.** 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.

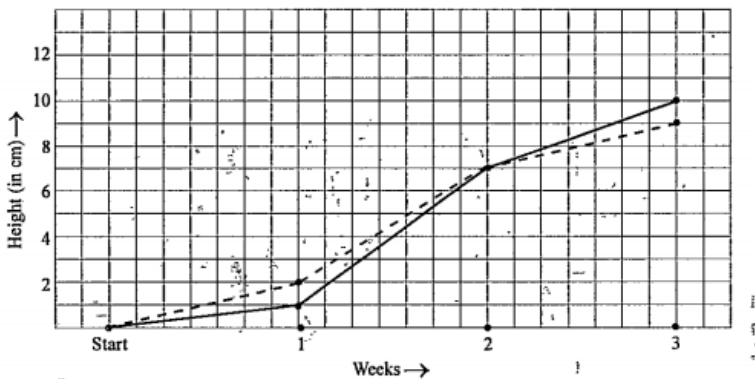


How high was Plant B after (i) 2 weeks (ii) 3 weeks?



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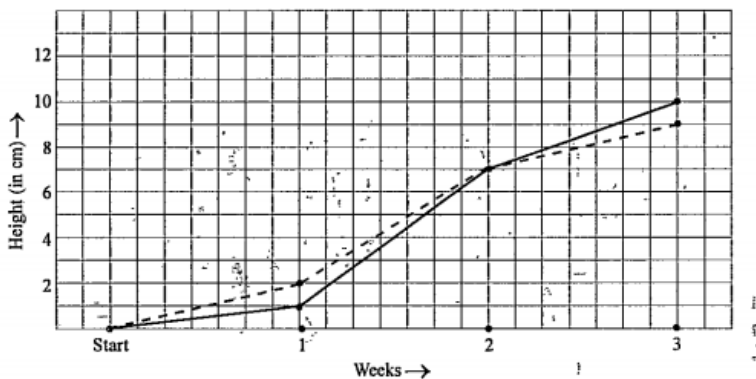
**12.** For an experiment in Botany, two different plants, plant A and plant B were grown under similar laboratory conditions. Their heights were measured at the end of each week for 3 weeks. The results are shown by the following graph.



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



**13.** 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.

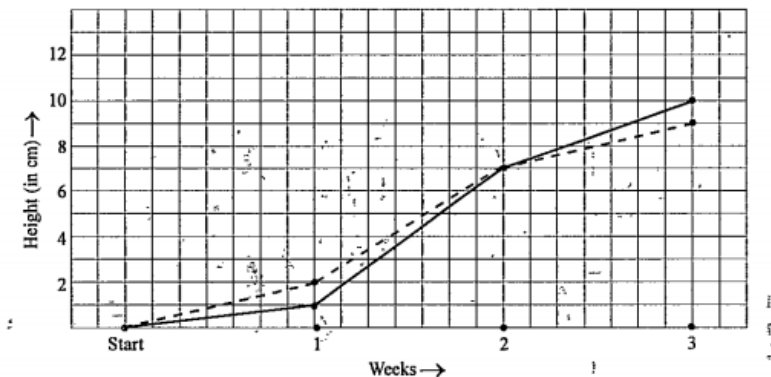


How much did Plant B grow from the end of the 2nd week to the end of the 3rd week?



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**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.



During which week did Plant A grow most?

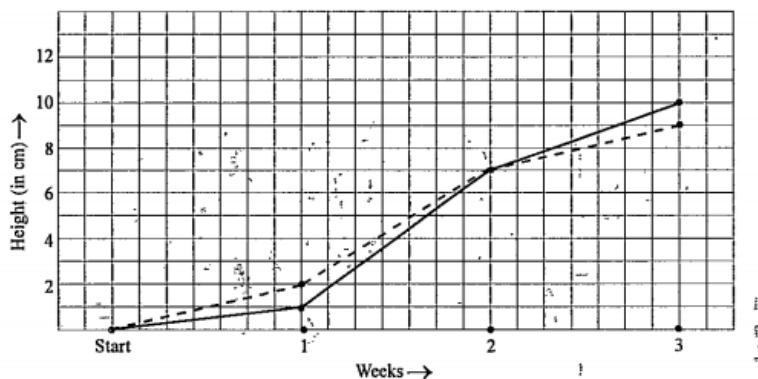


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**15.** For an experiment in Botany, two different plants, plant A and plant B were grown under similar laboratory conditions. Their heights were measured at the end of each week for 3 weeks. The results are shown by the following



graph.



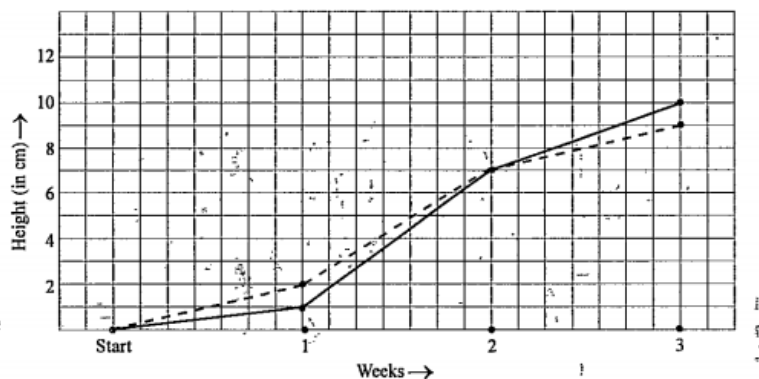
During which week did Plant B grow least?



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**16.** 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.



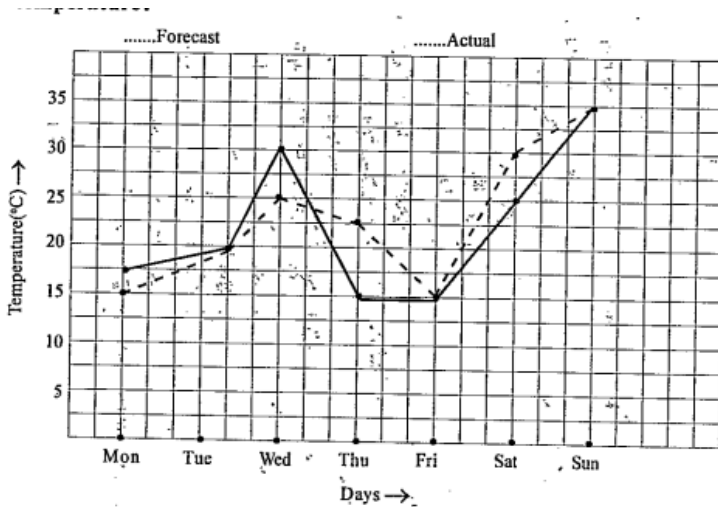
Were two Plants of the same height during any week shown here? Specify.



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17. The following graph shows the temperature forecast and the actual

temperature for each day of a week.



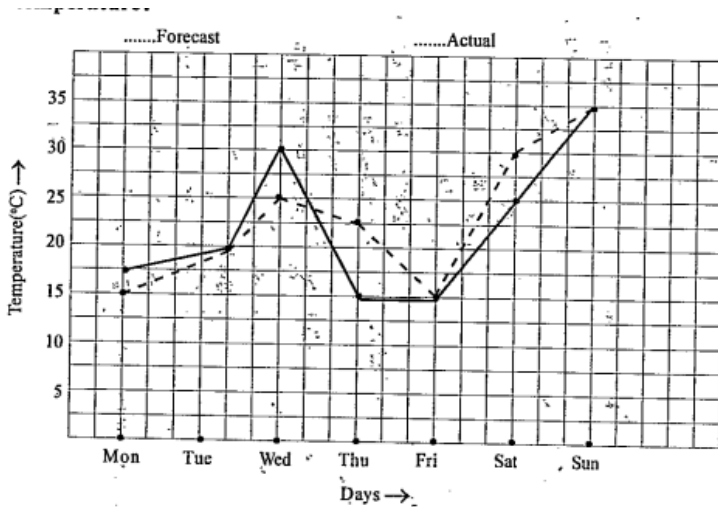
On which days was the forecast temperature the same as the actual temperature?



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18. The following graph shows the temperature forecast and the actual

temperature for each day of a week.



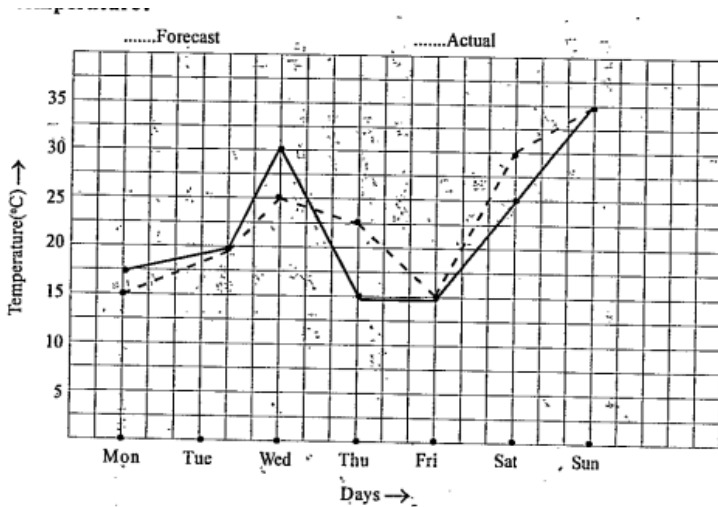
What was the maximum forecast temperature during the week?



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19. The following graph shows the temperature forecast and the actual

temperature for each day of a week.



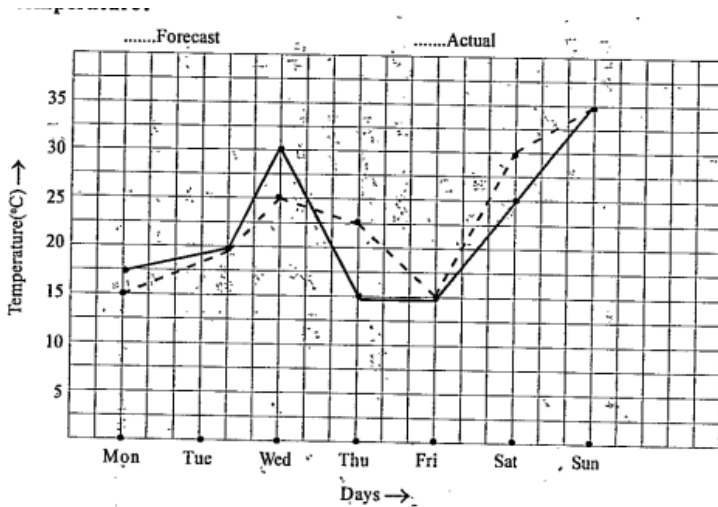
What was the minimum actual temperature during the week?



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20. The following graph shows the 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?



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21. Use the tables below to draw liner graphs.

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

Year	2003	2004	2005	2006
Days	8	10	5	..

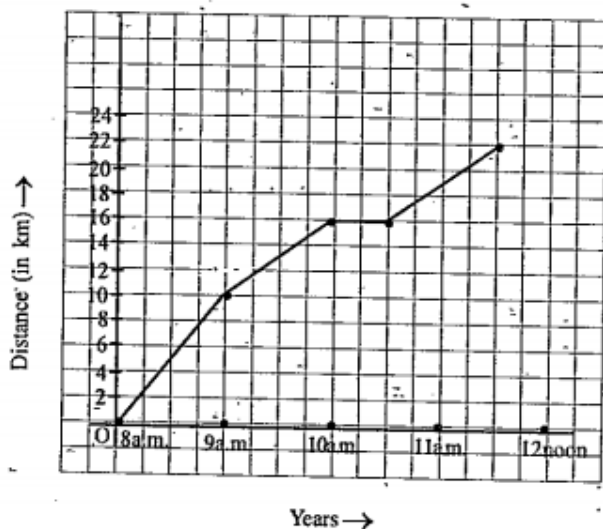


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22. A courier-person cycles from a town to a neighbouring suburban area to deliver a pated to a merchant. His distance from the town at different times is shown by the

following graph.

What is the scale taken for the time axis?



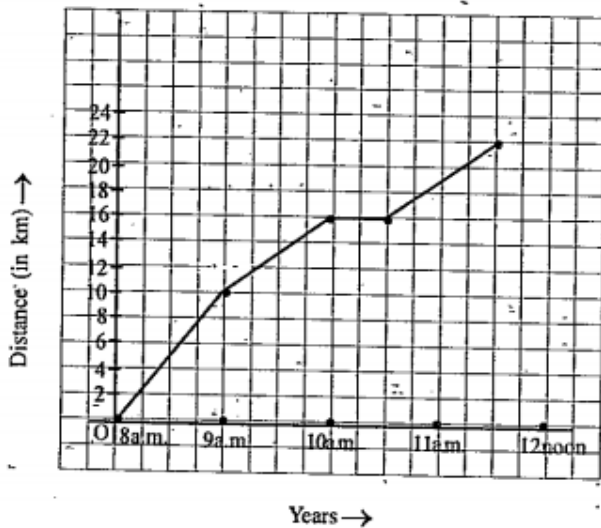
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**23.** A courier-person cycles from a town to a neighbouring suburban area to deliver a



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

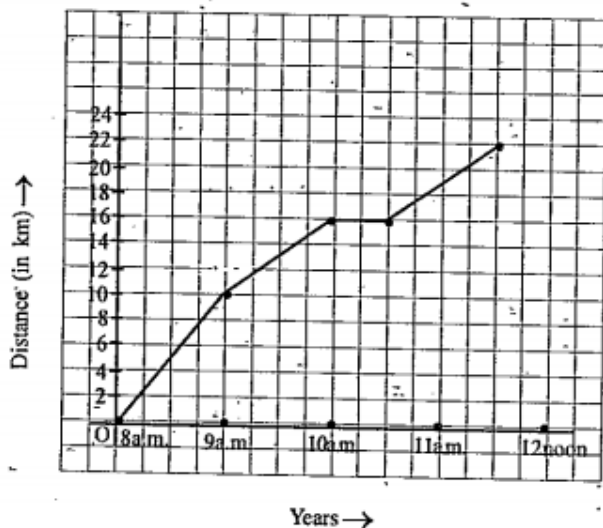
How much time did the person take for the travel?



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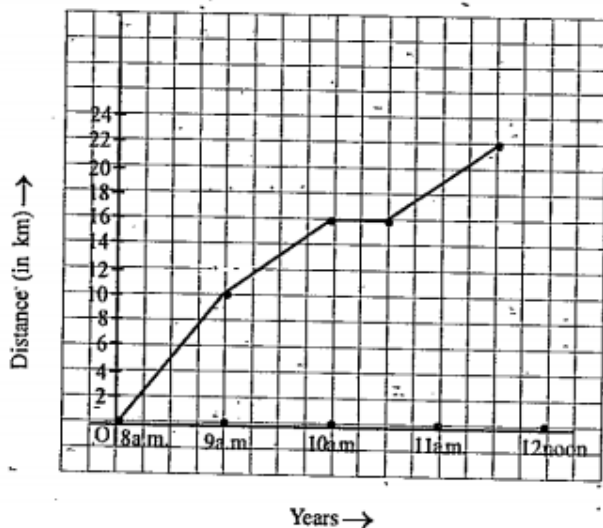
24. A courier-person cycles from a town to a neighbouring suburban area to deliver a parcel to a merchant. His distance from the town at different times is shown by the following graph

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



**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.

Did the person stop on his way? Explain.

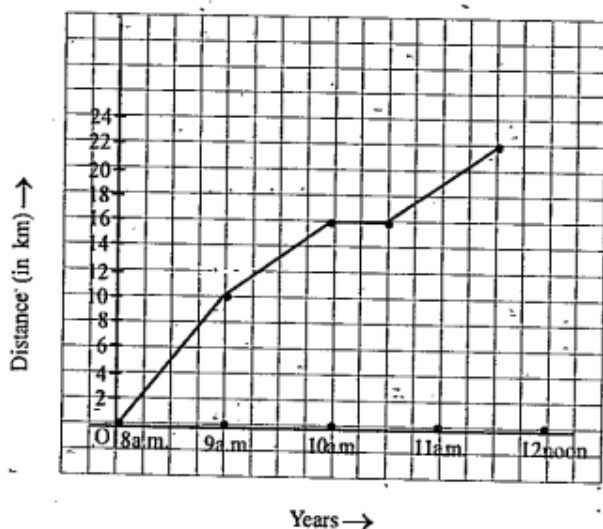


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**26.** A courier-person cycles from a town to a neighbouring suburban area to deliver a parcel to a merchant. His distance from the

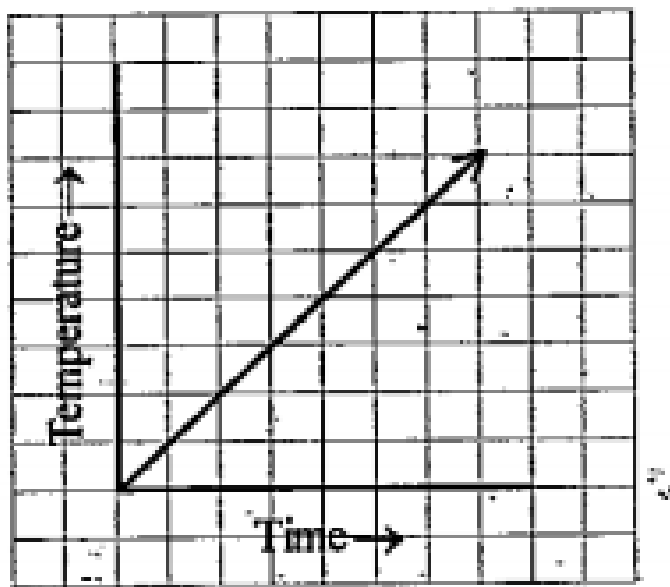
town at different times is shown by the following graph.

During which period did he ride fastest?



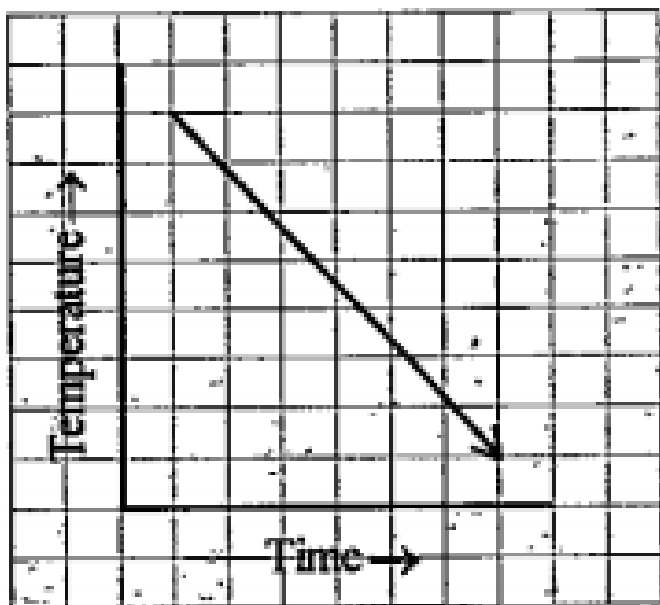
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27. Can there be a time-temperature graph as follows? Justify your answer.



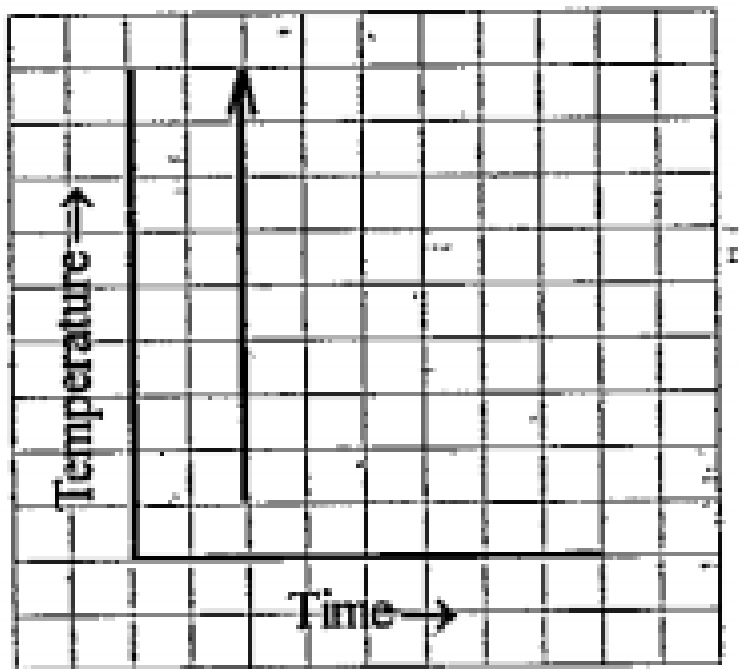
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28. Can there be a time-temperature graph as follows? Justify your answer.



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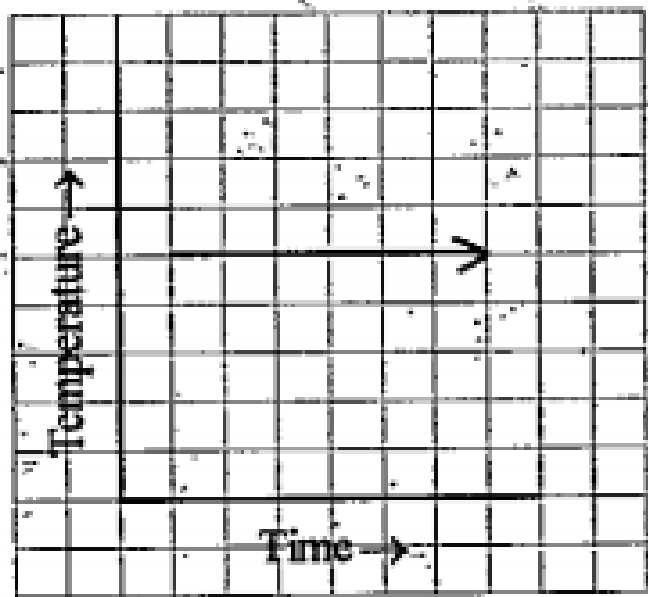
29. Can there be a time-temperature graph as follows? Justify your answer.



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



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**31.** 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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**32.** 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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**33.** Plot the following points on a graph sheet.

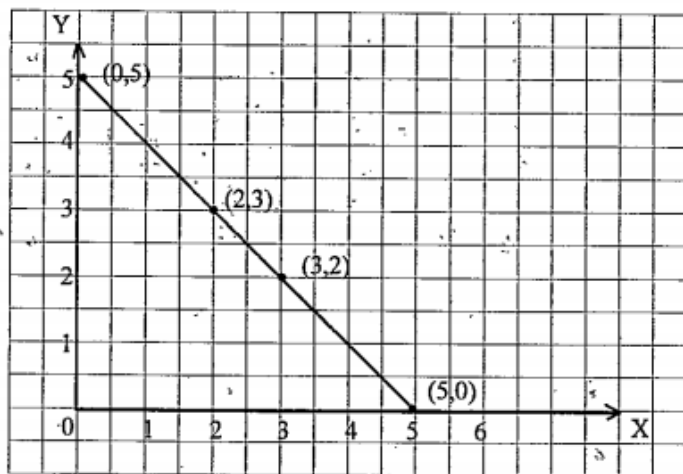
Verify if they lie on a line.

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



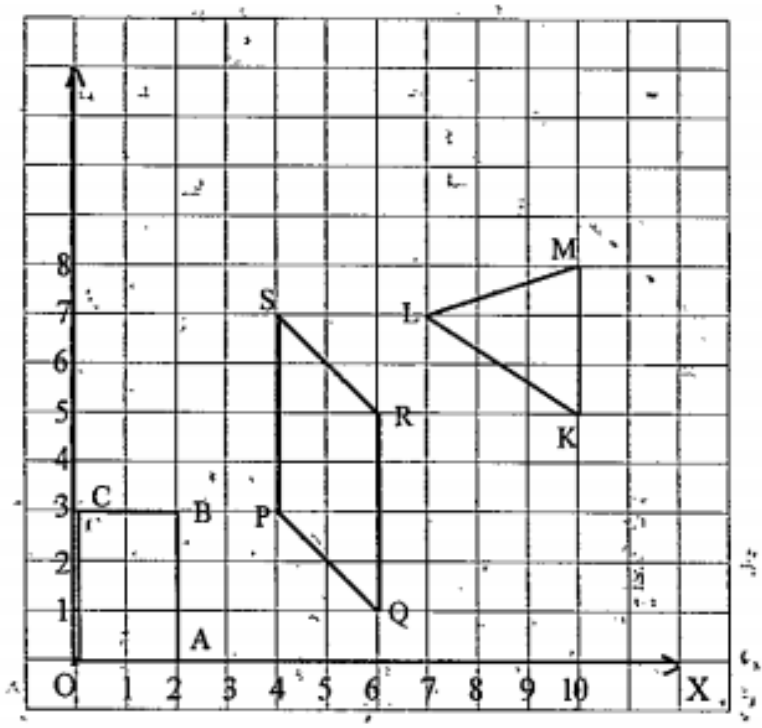
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**34.** Draw the line passing through (2,3) and (3,2). Find the coordinates of the points at which this line meets the x-axis and y-axis



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**35.** Write the coordinates of the vertices of each of these adjoining figures.



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**36.** State whether True or False. Correct that are false.

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



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**37.** State whether True or False. Correct that are false.

A point whose y-coordinate is zero and x-coordinate is 5 will lie on y-axis.



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**38.** State whether True or False. Correct that are false.

The coordinates of the origin are (0,0).



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

Cost of apples

Number of apples	1	2	3	4	5
Cost (in Rs)	5	10	15	20	25



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

Distance travelled by a car.

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

How much distance did the car cover during the period 7.30 a.m. to 8 a.m.?



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

Distance travelled by a car

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

What was the time when the car had covered a distance of 100 km since it's start?



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

Interest on deposits for a year.

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

Does the graph pass through the origin?



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

Interest on deposits for a year.

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

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



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

Interest on deposits for a year.

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

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



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**45.** Draw a graph for the following.

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

Is it a linear graph?



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**46.** Draw a graph for the following.

Side of square (in cm)	2	3	4	5	6
Area (in cm <sup>2</sup> )	4	9	16	25	36

Is it a linear graph?



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**47.** The number of litres of petrol you buy to fill a car's petrol tank will decide the amount you have to pay. Which is the independent variable here? Think about it.



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