

Chapter - 5
Data Handling

Exercise

**In questions 1 to 5, out of the four options, only one is correct.
Write the correct answer.**

1. Using tally marks, which one of the following represents the number eight:

- (A)  ||| (B)  (C)  (D) 

Solution:

Tally mark equivalent to eight is represented by option (D).
So, option (D) is correct.

2. The marks (out of 10) obtained by 28 students in a Mathematics test are listed as below: 8, 1, 2, 6, 5, 5, 5, 0, 1, 9, 7, 8, 0, 5, 8, 3, 0, 8, 10, 10, 3, 4, 8, 7, 8, 9, 2, 0

The number of students who obtained marks more than or equal to 5 is

- (A) 13 (B) 15 (C) 16 (D) 17

Solution:

Given: The marks (out of 10) obtained by 28 students in a Mathematics test are: 8, 1, 2, 6, 5, 5, 5, 0, 1, 9, 7, 8, 0, 5, 8, 3, 0, 8, 10, 10, 3, 4, 8, 7, 8, 9, 2, 0

Now, number of students who obtained marks more than or equal to 5 are: 17

So, correct option is (D).

3. In question 2 above, the number of students who scored marks less than 4 is

- (A) 15 (B) 13 (C) 12 (D) 10

Solution:

First we have to arrange the marks (out of 10) obtained by 28 students in a Mathematics test.

0, 0, 0, 0, 1, 1, 2, 2, 3, 3, 4, 5, 5, 5, 5, 6, 7, 7, 8, 8, 8, 8, 8, 8, 9, 9, 10, 10.

The number of students who scored marks less than 4 is 10.

So, option (D) is correct

4. The choices of the fruits of 42 students in a class are as follows:

A, O, B, M, A, G, B, G, A, G, B, M, A, G, M, A, B, G, M, B, A, O, M, O, G, B, O, M, G, A, A, B, M, O, M, G, B, A, M, O, M, O,

where A, B, G, M and O stand for the fruits Apple, Banana, Grapes, Mango and Orange respectively.

Which two fruits are liked by an equal number of students?

(A) A and M (B) M and B (C) B and O (D) B and G

Solution:

As per given information we have,

Number of students that like Apple = 9

Number of that students like Orange = 7

Number of that students like Banana = 8

Number of that students like Grapes = 8

Number of that students like Mango = 10

So it is clear from the above data that Banana and Grapes are liked by equal number of students.

So option (D) is correct.

5. According to data of question 4, which fruit is liked by most of the students?

(A) O (B) G (C) M (D) A

Solution:

According to given data mango is the fruit which is liked by most of the students.

So, option (C) is correct.

In questions 6 to 13, state whether the given statements are true (T) or false (F).

6. In a bar graph, the width of bars may be unequal.

Solution:

In bar graphs, width of bars is always equal.

So given statement is **False**.

7. In a bar graph, bars of uniform width are drawn vertically only.

Solution:

In a bar graph, bars of uniform width can be vertical as well as horizontal.

So given statement is **False**.

8. In a bar graph, the gap between two consecutive bars may not be the same.

Solution:

The gap between two consecutive bars in a bar graph should always be same.

So given statement is **False**.

9. In a bar graph, each bar (rectangle) represents only one value of the numerical data.

Solution:

Each bar (rectangle) represents only one value of the numerical data in a bar graph.
So given statement is **true**.

10. To represent the population of different towns using bar graph, it is convenient to take one unit length to represent one person.

Solution:

No, in order to represent the population of different towns using bar graph, it is not convenient to take one unit length to represent one person.
So given statement is **False**.

11. Pictographs and bar graphs are pictorial representations of the numerical data.



Solution:

Yes, it is true that pictographs and bar graphs are pictorial representations of the numerical data.
So given statement is **True**.



12. An observation occurring five times in a data is recorded as |||||, using tally marks.

Solution:

In tally marks representation, five is written as IIII.
So given statement is **False**.

13. In a pictograph, if a symbol  represents 50 books in a library shelf, then the symbol  represents 25 books.

Solution:

It is true that in a pictograph, if a symbol  represents 50 books in a library shelf, then the symbol  represents 25 books.
So given statement is **True**.

In questions 14 to 20, fill in the blanks to make the statements true:

14. A _____ is a collection of numbers gathered to give some meaningful information.

Solution:

We know that, Data is a collection of numbers gathered to give some meaningful information.

A data is a collection of numbers gathered to give some meaningful information.

15. The data can be arranged in a tabular form using _____ marks.

Solution:

In tabular form data can be arranged using Tally marks.

The data can be arranged in a tabular form using Tally marks.

16. A _____ represents data through pictures of objects.

Solution:

Pictograph represents data through pictures of objects.

A pictograph represents data through pictures of objects.

17. In a bar graph, _____ can be drawn horizontally or vertically.

Solution:

Bars can be drawn horizontally or vertically in a bar graph.

In a bar graph, Bars can be drawn horizontally or vertically.

18. In a bar graph, bars of _____ width can be drawn horizontally or vertically with _____ spacing between them.


Solution:

Bars of uniform width can be drawn horizontally or vertically with equal spacing between them in a bar graph.



In a bar graph, bars of uniform width can be drawn horizontally or vertically with equal spacing between them.

19. An observation occurring seven times in a data is represented as _____ using tally marks.

Solution:

In tally marks seven is represented as  ll.

An observation occurring seven times in a data is represented as |||| II using tally marks.

20. In a pictograph, if a symbol  represents 20 flowers in a basket then  stands for _____ flowers.

Solution:

In a pictograph, if a symbol  represents 20 flowers in a basket then  stands for 60 flowers.

21. On the scale of 1 unit length = 10 crore, the bar of length 6 units will represent _____ crore and of _____ units will represent 75 crore.

Solution:

If 1 unit length = 10 crore,
Then 6 units = $6 \times 10 = 60$ crore.
Since 10 crore = 1 unit

$$75 \text{ crore} = \frac{75}{10} = 7.5 \text{ units.}$$

On the scale of 1 unit length = 10 crore, the bar of length 6 units will represent 60 crore and of 7.5 units will represent 75 crore.

**22. In an examination, the grades achieved by 30 students of a class are given below. Arrange these grades in a table using tally marks:
B, C, C, E, A, C, B, B, D, D, D, D, B, C, C, C, A, C, B, E, A, D, C, B, E, C, B, E, C, D**

Solution:

Representation of Grades A, B, C, D and E using tally marks is shown below:

Grades	Tally marks	Number of Students
A	III	3
B	IIII II	7
C	IIII IIII	10
D	IIII I	6
E	IIII	4

A = III

B = IIII II

C = IIII IIII

D = IIII I

E = IIII

23. The number of two wheelers owned individually by each of 50 families are listed below. Make a table using tally marks.

1, 1, 2, 1, 1, 1, 2, 1, 2, 1, 0, 1, 1, 2, 3, 1, 2, 1, 1, 2, 1, 2, 3, 1, 0, 2, 1, 0, 2, 1, 2, 1, 2, 1, 1, 4, 1, 3, 1, 1, 2, 1, 1, 1, 1, 2, 3, 2, 1, 1

Find the number of families having two or more, two wheelers.

Solution:

Table using tally marks is shown below:

Number of two wheelers	Tally Marks	No. of Families
0	III	3
1	IIII IIII IIII III	28
2	IIII IIII	14
3	IIII	4
4	I	1
Total		50

Number of families having two or more than two wheelers = 14 + 4 + 1

$$= 19$$

24. The lengths in centimetres (to the nearest centimetre) of 30 carrots are given as follows: 15, 22, 21, 20, 22, 15, 15, 20, 20, 15, 20, 18, 20, 22, 21, 20, 21, 18, 21, 18, 20, 18, 21, 18, 22, 20, 15, 21, 18, 20

Arrange the data given above in a table using tally marks and answer the following questions.

(a) What is the number of carrots which have length more than 20 cm?

(b) Which length of the carrots occur maximum number of times?

Minimum number of times?

Solution:

Given data arranged in a table using tally marks is shown below:

Lengths in cm	Tally Marks	No. of Carrots
15		5
18	1	6
20		9
21	1	6
22		4

(a) The number of carrots which have length more than 20 cm is given by = 6+4
= 10

(b) Length of the carrots occurs maximum number of times is 20 cm and length of the carrots occurs minimum number of times is 22 cm.

25. Thirty students were interviewed to find out what they want to be in future. Their responses are listed as below:

doctor, engineer, doctor, pilot, officer, doctor, engineer, doctor, pilot, officer, pilot, engineer, officer, pilot, doctor, engineer, pilot, officer, doctor, officer, doctor, pilot, engineer, doctor, pilot, officer, doctor, pilot, doctor, engineer

Arrange the data in a table using tally marks.

Solution:

Data arranged in a table using tally marks is shown below:

Responses	Tally Marks	No. of responses
Doctor		10
Engineer	1	6
Pilot		8
Officer	1	6
Total		30

26. Following are the choices of games of 40 students of Class VI:
 football, cricket, football, kho-kho, hockey, cricket, hockey, kho-kho,
 tennis, tennis, cricket, football, football, hockey, kho-kho, football, cricket,
 tennis, football, hockey, kho-kho, football, cricket, cricket, football, hockey,
 kho-kho, tennis, football, hockey, cricket, football, hockey, cricket, football,
 kho-kho, football, cricket, hockey, football.

(a) Arrange the choices of games in a table using tally marks.

(b) Which game is liked by most of the students?

(c) Which game is liked by minimum number of students?

Solution:

(a) Data of choices of games arranged in a table using tally marks is shown below:

Games	Tally Marks	No. of Students
Football	III III III	13
Cricket	III I	9
Kho-kho	III I	6
Hockey	III III	8
Tennis	IIII	4
Total		40

(b) As can be seen from the above data, Football is most liked by the students.

(c) As can be seen from the above data, Tennis is liked by minimum no. of students.








27. Fill in the blanks in the following table which represents shirt size of 40 students of a school.

Shirt size	Tally Marks	Number of students
30	III	3
32	IIII	—
34	I	8
36	IIII II	—
38	IIII I	10
40	I	7

Solution:

Shirt size	Tally Marks	Number of students
30	LII	3
32	III	<u>5</u>
34	III III	8
36	III II	<u>7</u>
38	III III	10
40	III II	7

28. Following pictograph represents some surnames of people listed in the telephone directory of a city

Surname	Number of people  = 100 people
Khan	
Patel	
Rao	
Roy	
Saikia	
Singh	







Observe the pictograph and answer the following questions:

- How many people have surname 'Roy'?
- Which surname appears the maximum number of times in the telephone directory?
- Which surname appears the least number of times in the directory?
- Which two surnames appear an equal number of times?

Solution:

- As observed from the data in total 400 people have surname 'Roy.'
- As observed from the data, 'Patel' surname appears number of times in the telephone directory.
- As observed from the data, 'Saikia' surname appears number of times in the telephone directory.
- As observed from the data, 'Roy' and 'Rao' surname appears equal number of times in the telephone directory.

29. Students of Class VI in a school were given a task to count the number of articles made of different materials in the school. The information collected by them is represented as follows:

Material used	Articles
	 = 20 articles
Wood	
Glass	
Metal	
Rubber	
Plastic	







Observe the pictograph and answer the following questions:

- Which material is used in maximum number of articles?
- Which material is used in minimum number of articles?
- Which material is used in exactly half the number of articles as those made up of metal?
- What is the total number of articles counted by the students?

Solution:

- (a) As observed from the given data, material which is used in maximum number of articles is Metal.
- (b) As observed from the given data, material which is used in minimum number of articles is Glass.
- (c) As observed from the given data, material which is used in exactly half the number of articles as those made up of metal is Rubber.
- (d) The total number of articles counted by the students is 160.

30. The number of scouts in a school is depicted by the following pictograph:

Class	Number of scouts
	 = 10 scouts
VI	
VII	
VIII	
IX	
X	

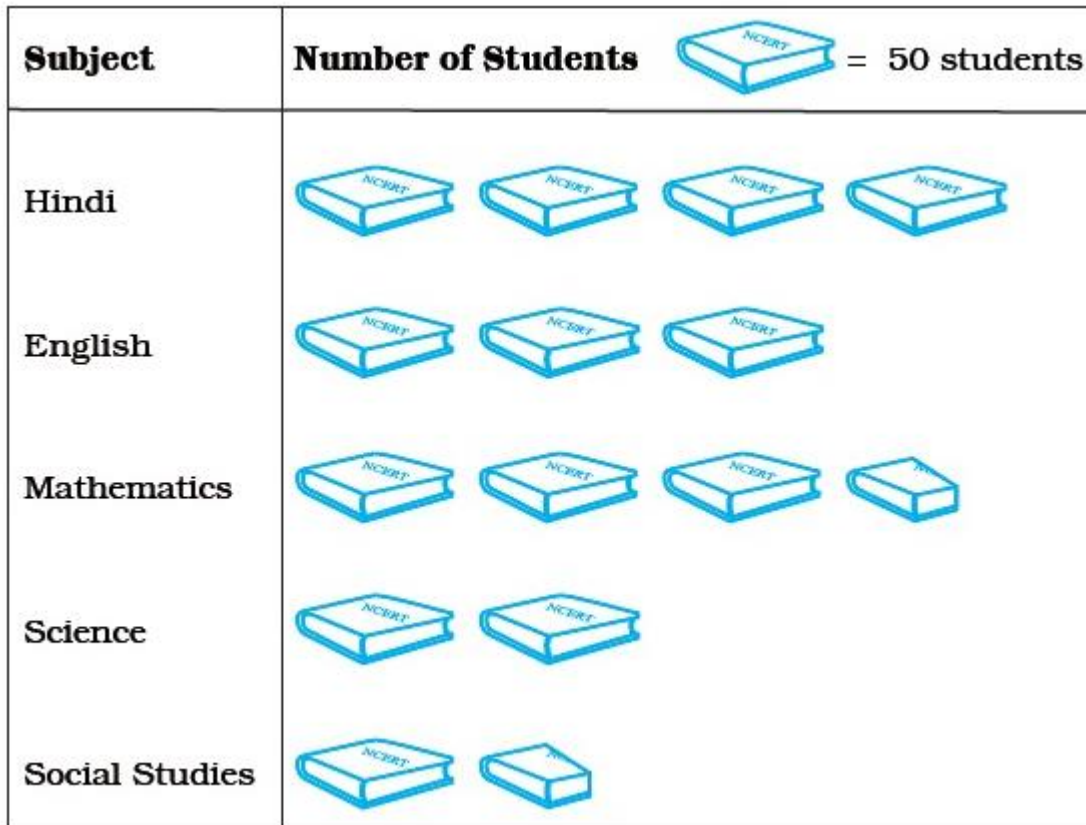
Observe the pictograph and answer the following questions:

- (a) Which class has the minimum number of scouts?
- (b) Which class has the maximum number of scouts?
- (c) How many scouts are there in Class VI?
- (d) Which class has exactly four times the scouts as that of Class X?
- (e) What is the total number of scouts in the Classes VI to X?

Solution:

- (a) As observed from the given data, Class which has minimum number of scouts is Class X.
- (b) As observed from the given data, Class which has maximum number of scouts is Class VIII.
- (c) As observed from the given data, total no. of scouts in class VI is 40.
- (d) As observed from the given data, class which has exactly four times the scouts as that of Class X is Class VI.
- (e) As observed from the given data, the total number of scouts in the Classes VI to X is 160.

31. A survey was carried out in a certain school to find out the popular school subjects among students of Classes VI to VIII. The data in this regard is displayed as pictograph given below:



- Which subject is most popular among the students?
- How many students like Mathematics?
- Find the number of students who like subjects other than Mathematics and Science.


Solution:







(a) As observed from the given data, subject which is most popular among the students is Hindi.

(b) As observed from the given data, total no. of students that liked mathematics 175.

(c) As observed from the given data, number of students who like subjects other than Mathematics and Science is: $200 + 150 + 75 = 425$

32. The following pictograph depicts the information about the areas in sqkm (to nearest hundred) of some districts of Chhattisgarh State:

District	Area (in km ²)  = 1000sqkm
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Raigarh	
Rajnandgaon	
Koria	
Mahasamund	
Kabirdham	
Jashpur	

- (a) What is the area of Koria district?
(b) Which two districts have the same area?
(c) How many districts have area more than 5000 square kilometres?

Solution:

- (a) As per given information, the area of Koria district is 6000 sq km.
(b) As per given information, two districts that have the same area of 6500 sq km are Raigarh and Jashpur.
(c) As per given information no. of districts have area more than 5000 square kilometres is 4 and are Raigarh, Rajnandgaon, Koria and Jashpur.

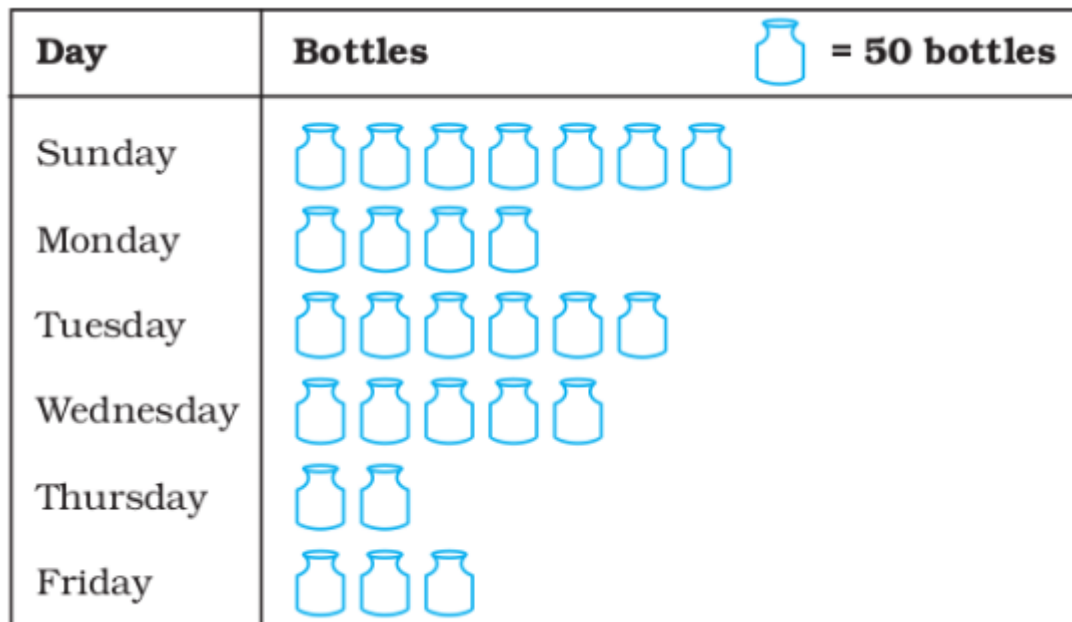
33. The number of bottles of cold drinks sold by a shopkeeper on six consecutive days is as follows:

Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Number of bottle	350	200	300	250	100	150

Prepare a pictograph of the data using one symbol to represent 50 bottles.

Solution:

Pictograph of the data using one symbol to represent 50 bottles is shown below:









34. The following table gives information about the circulation of newspapers (dailies) in a town in five languages.

Language	English	Hindi	Tamil	Punjabi	Gujrati
Number of newspapers	5000	8500	500	2500	1000

Prepare a pictograph of the above data, using a symbol of your choice, each representing 1000 newspapers.

Solution:

Pictograph of the data, using a symbol of your choice, each representing 1000 newspapers is shown below:

Language	News paper  = 1000 news papers
English	
Hindi	
Tamil	
Punjabi	
Gujarati	

35. Annual expenditure of a company in the year 2007-2008 is given below:

Items	Expenditure (Rs in lakh)
Salaries of employees	65
Advertisement	10
Purchase of machinery	85
Electricity and water	15
Transportation	25
Other expenses	30

Prepare a pictograph of the above data using an appropriate symbol to represent Rs 10 lakh.

Solution:

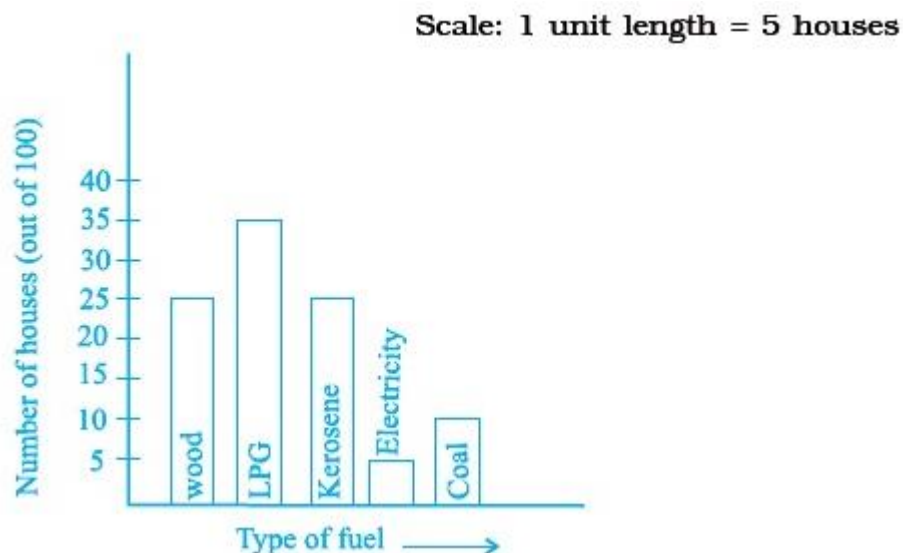
Pictograph of the above data using an appropriate symbol to represent Rs 10 lakh is shown below:

Items	Expenditure (Rs. in lakh) ☺ = Rs. 10 lakh
Salaries of employees	☺☺☺☺☺☺☺☺
Advertisement	☺
Purchase of machinery	☺☺☺☺☺☺☺☺☺
Electricity and water	☺☺
Transportation	☺☺☺
Other expenses	☺☺☺

36. The following bar graph shows the number of houses (out of 100) in a town using different types of fuels for cooking.

Read the bar graph and answer the following questions: Scale: 1 unit length = 5 houses

- (a) Which fuel is used in maximum number of houses?
 (b) How many houses are using coal as fuel?
 (c) Suppose that the total number of houses in the town is 1 lakh. From the above graph estimate the number of houses using electricity.



Solution:

- (a) As per given information, Fuel which is used in maximum number of houses is LPG.

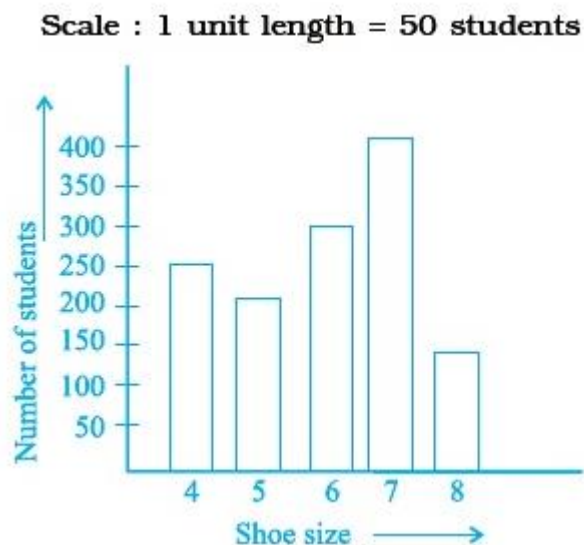
(b) As per given information, no. of houses that are using coal as fuel are 10.

(c) As per given information there are 5 houses using electricity out of 100 and so, out of 1 lakh the electricity will be used by $\frac{5}{100} \times 100000$.
= 5000 houses.

37. The following bar graph represents the data for different sizes of shoes worn by the students in a school. Read the graph and answer the following questions.

Scale: 1 unit length = 50 students

- (a) Find the number of students whose shoe sizes have been collected.
- (b) What is the number of students wearing shoe size 6?
- (c) What are the different sizes of the shoes worn by the students?
- (d) Which shoe size is worn by the maximum number of students?
- (e) Which shoe size is worn by minimum number of students?
- (f) State whether true or false: The total number of students wearing shoe sizes 5 and 8 is the same as the number of students wearing shoe size 6.



Solution:

(a) As per given information, total number of students whose shoe sizes have been collected is given as: $250 + 200 + 300 + 400 + 150 = 1300$

(b) As per given information, number of students wearing shoe size 6 is 300.

(c) As per given information, different sizes of the shoes worn by the students are 4, 5, 6, 7 and 8 respectively.

(d) As per given information, shoe size which is worn by the maximum number of students is 7.

(e) As per given information, shoe size which is worn by the minimum number of students is 8.

(f) As per given information the given statement is false as number of students wearing shoe size 5 and 8 is 350 and the number of students wearing shoe size 6 is 300 respectively.

38. The following graph gives the information about the number of railway tickets sold for different cities on a railway ticket counter between 6.00 am to 10.00 am. Read the bar graph and answer the following questions.

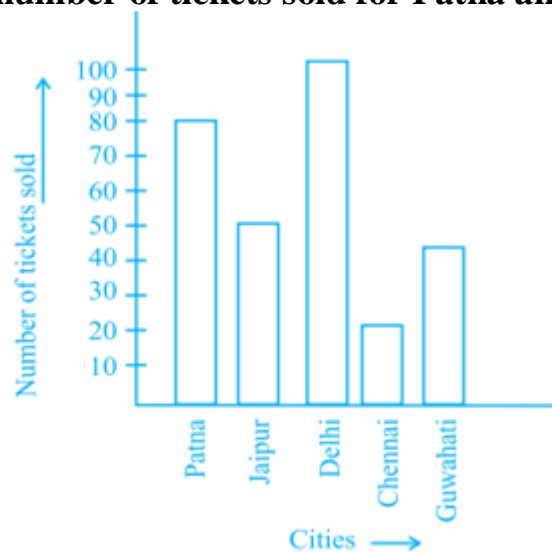
(a) How many tickets were sold in all?

(b) For which city were the maximum number of tickets sold?

(c) For which city were the minimum number of tickets sold?

(d) Name the cities for which the number of tickets sold is more than 20.

(e) Fill in the blanks: Number of tickets sold for Delhi and Jaipur together exceeds the total number of tickets sold for Patna and Chennai by _____.



Solution:

(a) As per given information, total number of tickets sold is given as
 $= 80 + 50 + 100 + 20 + 45$
 $= 295$

(b) As per given information, city for which maximum number of tickets were sold is Delhi.

(c) As per given information, city for which minimum number of tickets were sold is Chennai.

(d) As per given information, cities for which the number of tickets sold is more than 20 are: Patna, Jaipur, Delhi and Guwahati.

(e) As per given information, tickets sold for Delhi and Jaipur exceeds the tickets sold for Patna and Chennai by $150 - 100 = 50$.

Number of tickets sold for Delhi and Jaipur together exceeds the total number of tickets sold for Patna and Chennai by 50.

39. The bar graph given below represents approximate length (in kilometres) of some National Highways in India. Study the bar graph and answer the following questions:

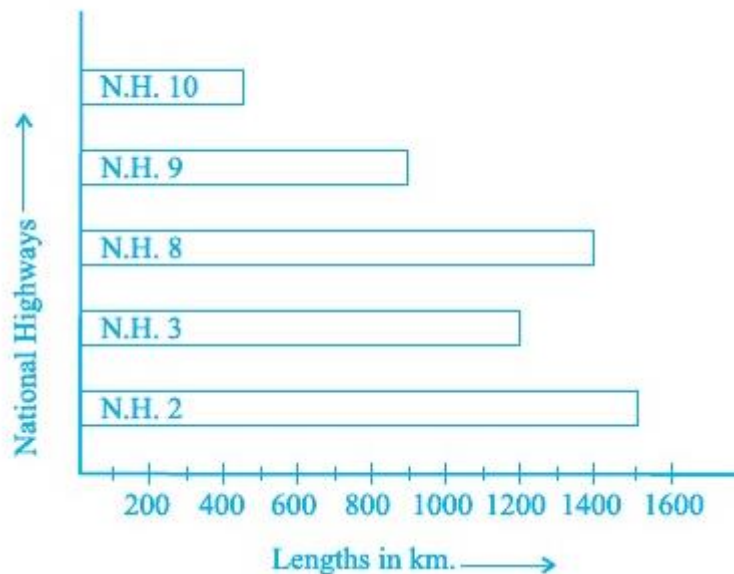
Scale : 1 unit length = 200km

(a) Which National Highway (N.H.) is the longest among the above?

(b) Which National Highway is the shortest among the above?

(c) What is the length of National Highway 9?

(d) Length of which National Highway is about three times the National Highway 10?



Solution:

(a) As per given information, the longest National Highway is N.H. 2.

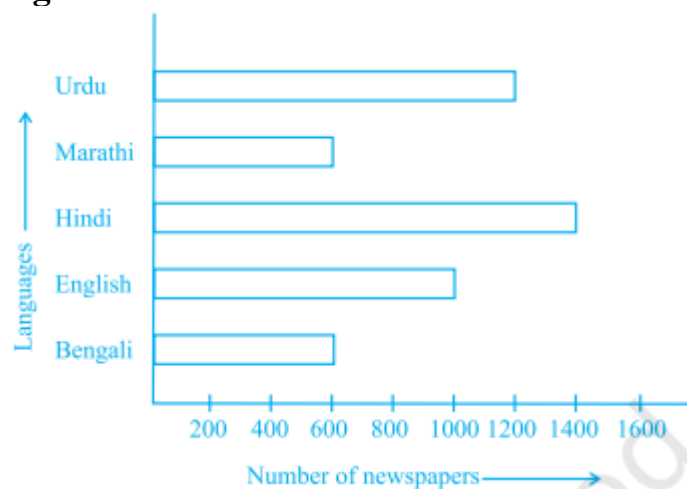
(b) As per given information, the shortest National Highway among the given ones is N.H. 10.

(c) As per given information, length of National Highway 9 is 900 km.

(d) As per given information, length of National Highway 10 = 450 km and length of National Highway 8 = 1400 km. So, length of National Highway 8 is about three times the National Highway 10.

40. The bar graph given below represents the circulation of newspapers in different languages in a town. Study the bar graph and answer the following questions:

- (a) What is the circulation of English newspaper?
- (b) Name the two languages in which circulation of newspaper is the same.
- (c) By how much is the circulation of newspaper in Hindi more than the newspaper in Bengali?



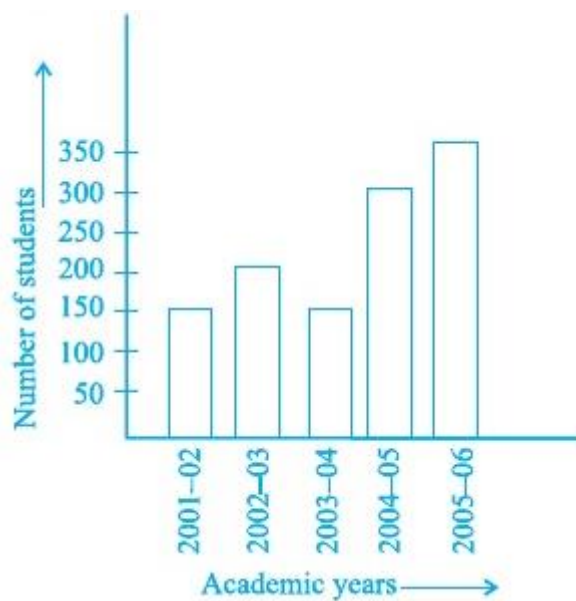
Solution:

- (a) As per given information, the circulation of English newspaper is 1000.
- (b) As per given information, two languages in which the circulation of newspaper is the same are Bengali and Marathi.
- (c) As per given information, the circulation of newspaper in Hindi is more than the newspaper in Bengali by 800 newspaper.

41. Read the bar graph given below and answer the following questions:

Scale : 1 unit = 50 students

- (a) What information is given by the bar graph?
- (b) In which year is the number of students maximum?
- (c) In which year is the number of students twice as that of 2001-02?
- (d) In which year did the number of students decrease as compared to previous year?
- (e) In which year is the increase in number of students maximum as compared to the previous year?



Solution:

- (a) As per given information, the bar graph shows the number of students in different academic years.
- (b) As per given information, the number of students is maximum in year 2005-06.
- (c) As per given information, number of students is twice as that of year 2001-02 is in 2004-05 respectively.
- (d) As per given information, the number of students decreased as compared to previous year was in year 2003-04.
- (e) As per given information, year in which increase in number of students is maximum as compared to the previous year is 2004-05 respectively.

42. The lengths in km (rounded to nearest hundred) of some major rivers of India is given below:

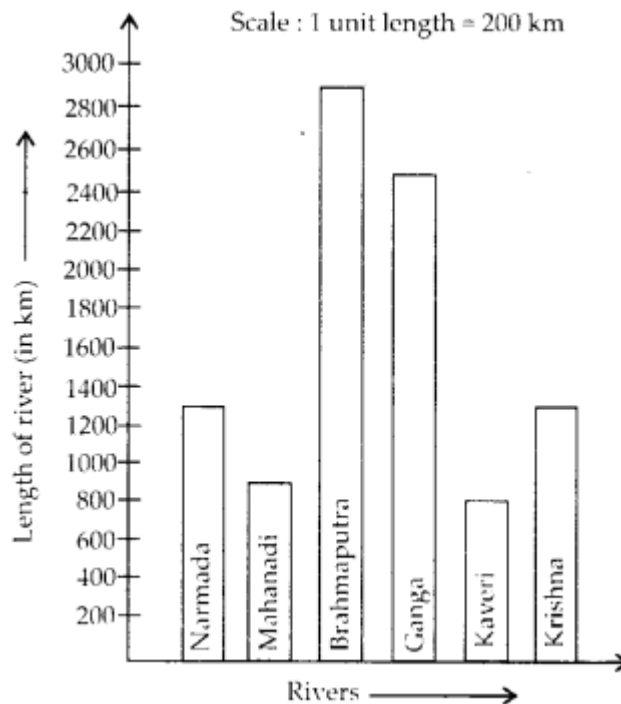
River	Length (in km)
Narmada	1300
Mahanadi	900
Brahmputra	2900
Ganga	2500
Kaveri	800

Krishna	1300
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Draw a bar graph to represent the above information.

Solution:

Graph displaying given data is shown below:



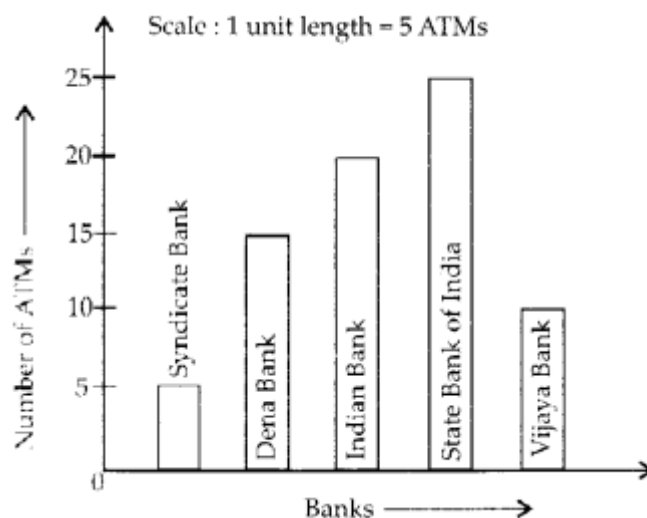
43. The number of ATMs of different banks in a city is shown below:

Bank	Number of ATMs
Syndicate Bank	5
Dena Bank	15
Indian Bank	20
State Bank of India	25
Vijaya Bank	10

Draw a bar graph to represent the above information by choosing the scale of your choice.

Solution:

Bar graph displaying given information is shown below:



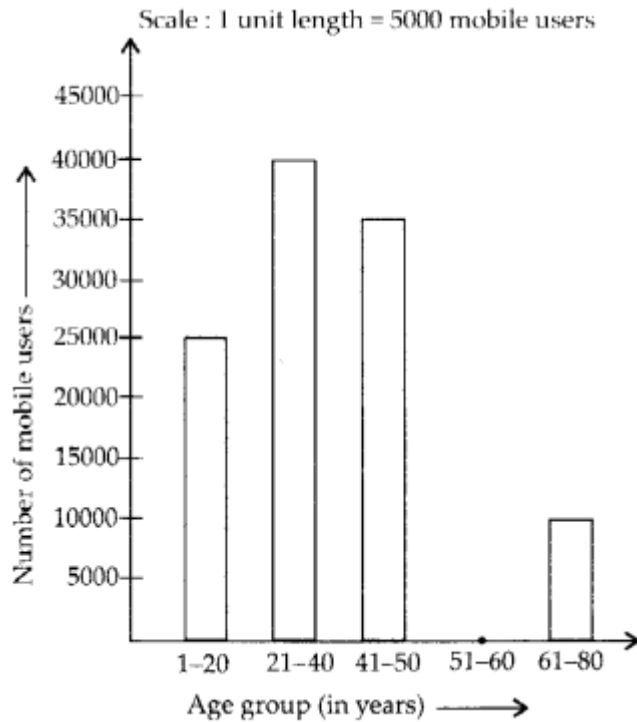
44. Number of mobile phone users in various age groups in a city is listed below:

Age group (in years)	Number of mobile users
1-20	25000
21-40	40000
41-50	35000
61-80	10000

Draw a bar graph to represent the above information.

Solution:

Bar Graph displaying above information is shown below:



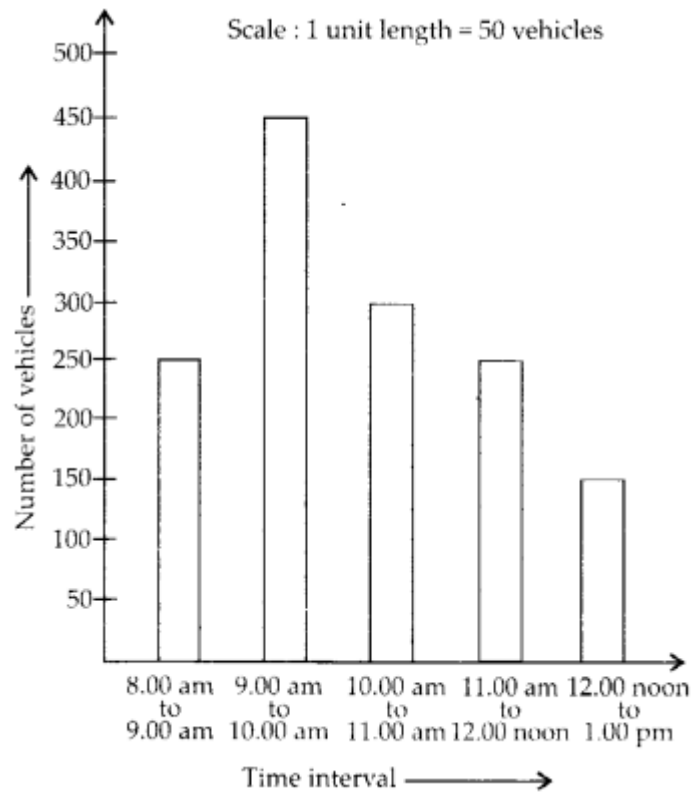
45. The following table gives the number of vehicles passing through a toll gate, every hour from 8.00 am. to 1.00 pm:

Time Interval	8.00 to 9.00	9.00 to 10.00	10.00 to 11.00	11.00 to 12.00	12.00 to 1.00
Number of vehicles	250	450	300	250	150

Draw a bar graph representing the above data.

Solution:

Bar Graph displaying above information is shown below:



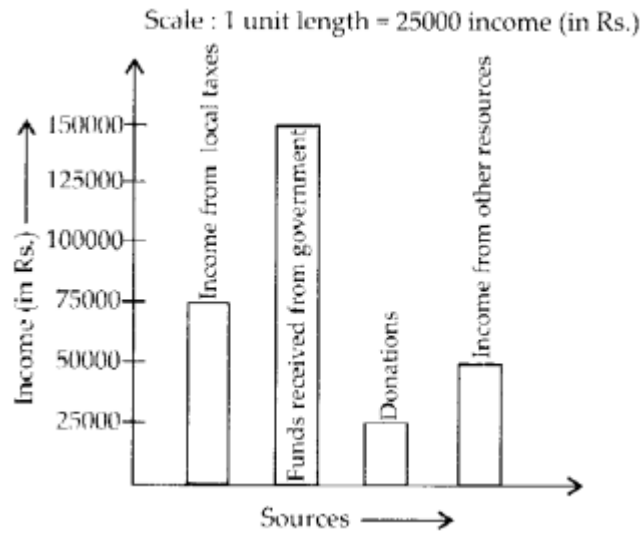
46. The following table represents income of a Gram Panchayat from different sources in a particular year:

Sources	Income (in Rs.)
Income from local taxes	75000
Funds received from government	150000
Donations	25000
Income from other resources	50000

Draw a bar graph to represent the above information.

Solution:

Bar Graph displaying above information is shown below:



47. The following table gives the data of number of schools (stage-wise) of a country in the year 2002

Stage	Number of schools (in thousands)
Primary	80
Upper Primary	55
Secondary	30
Higher Secondary	20

Draw a bar graph to represent the above data:

Solution:

Bar Graph displaying above information is shown below:



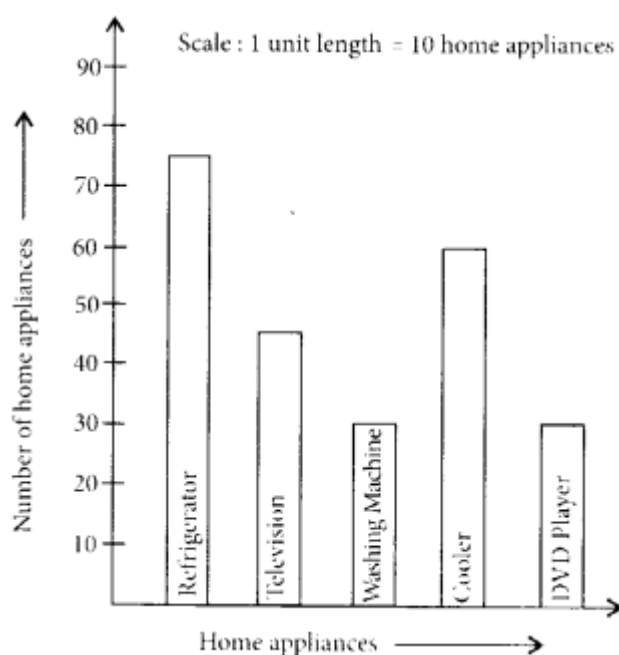
48. Home appliances sold by a shop in one month are given as below:

Home appliance	Number of home appliances
Refrigerator	75
Television	45
Washing Machine	30
Cooler	60
DVD Player	30

Draw a bar graph to represent the above information.

Solution:

Bar Graph displaying above information is shown below:



49. In a botanical garden, the number of different types of plants are found as follows:

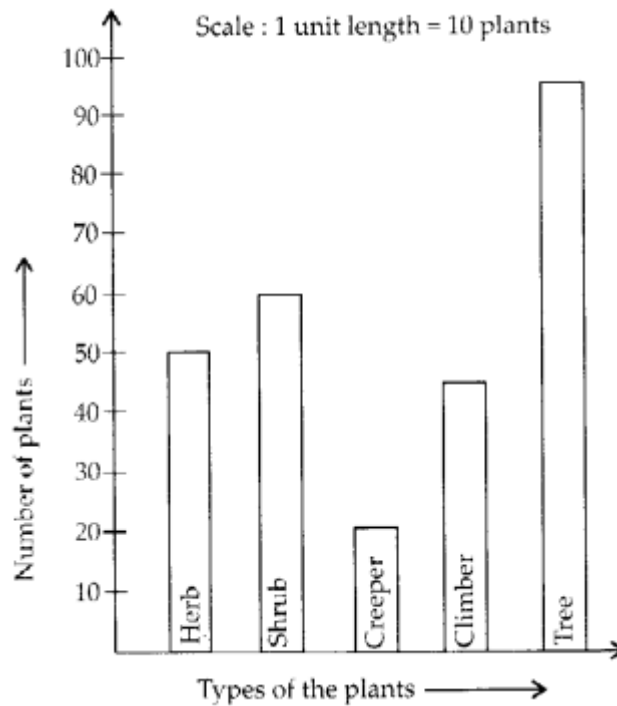
Type of the plant	Number of plants
Herb	50
Shrub	60
Creeper	20
Climber	45
Tree	95

Draw a bar graph to represent the above information and answer the following questions: (a) Which type of plant is maximum in number in the garden?

(b) Which type of plant is minimum in number in the garden?

Solution:

Bar Graph displaying above information is shown below:

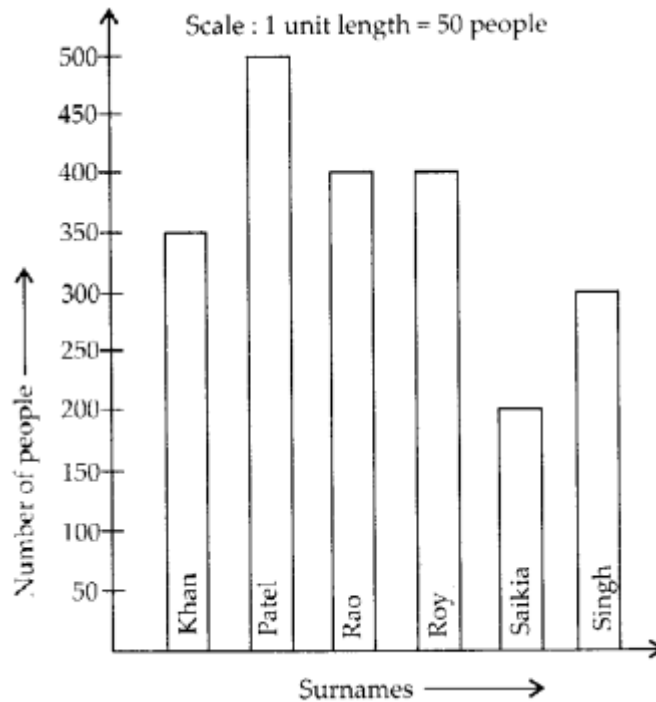


- (a) Type of plant which is maximum in number in the garden is Tree.
- (b) Type of plant which is minimum in number in the garden is Creeper.

50. Prepare a bar graph of the data given in question 28.

Solution:
































Bar Graph displaying information given in question 28 is shown below:



51. Refer to question 39. Prepare a pictograph of the data by taking a suitable symbol to represent 200 kilometers.

Solution:
































Pictograph displaying information provided in question 39 is shown below:

National Highways	Lengths (in km)  = 200 km
N.H. 2	        
N.H. 3	     
N.H. 8	      
N.H. 9	    
N.H. 10	  

52. Prepare a pictograph of the information given in question 38.

Solution:

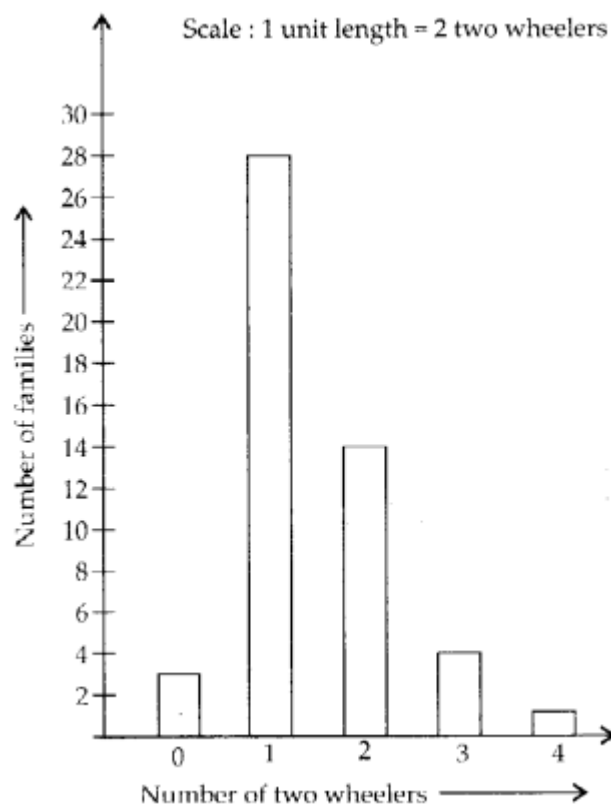
Pictograph displaying information provided in question 38 is shown below:

Cities	Number of tickets sold	 = 10 tickets
Patna	       	
Jaipur	    	
Delhi	         	
Chennai	 	
Guwahati	    	

53. Refer to question 23. Prepare a bar graph of the data.

Solution:

Bar Graph displaying information provided in question 23 is shown below:



















54. The following table shows the area of the land on which different crops were grown.

Crop	Area of land (in million hectares)
Rice	50
Wheat	30
Pulses	20
Sugarcane	25
Cotton	15

Prepare a pictograph by choosing a suitable symbol to represent 10 million hectares.

Solution:

Pictograph displaying information provided in question 54 is shown below:

Crop	Area of land (in million hectares)	 = 10 million hectares
Rice	    	
Wheat	  	
Pulses	 	
Sugarcane	  	
Cotton	 	

55. Refer to question 54. Prepare a bar graph of the data.

Solution:

Bar Graph displaying information provided in question 54 is shown below:

