CLASS 6TH

MATHS

CHAPTER- 9th

Data Handling

EXERCISE- 9.1

NCERT SOLUTION

1. In a Mathematics test, the following marks were obtained by 40 students. Arrange these marks in a table using tally marks.

8	1	3	7	6	5	5	4	4	2
4	9	5	3	7	1	6	5	2	7
7	3	8	4	2	8	9	5	8	6
7	4	5	6	9	6	4	4	6	6

(a) Find how many students obtained marks equal to or more than 7.

(b) How many students obtained marks below 4?

Ans.

Marks	Tally Marks	No. of students
1	| |	2
2	| | |	3
3	| | |	3
4	𝍸 | |	7
5	𝍸 |	6
6	𝍸 | |	7
7	𝍸	5
8	| | | |	4
9	| | |	3
Total		40

(a) Number of students obtained marks equal to or more than $7 = 5 + 4 + 3 = 12$.

(b) Number of students obtained marks below $4 = 2 + 3 + 3 = 8$.

2. Following is the choice of sweets of 30 students of Class VI.

Ladoo, Barfi, Ladoo, Jalebi, Ladoo, Rasgulla, Jalebi, Ladoo, Barfi, Rasgulla, Ladoo, Jalebi, Jalebi, Rasgulla, Ladoo, Rasgulla, Jalebi, Ladoo, Rasgulla, Ladoo, Ladoo, Barfi, Rasgulla, Rasgulla, Jalebi, Rasgulla, Ladoo, Rasgulla, Jalebi, Ladoo.

(a) Arrange the names of sweets in a table using tally marks.

(b) Which sweet is preferred by most of the students?

Ans.

(a)

Sweets	Tally marks	Number of students
Ladoo	𝍸 𝍸 I	*11*
Barfi	III	*3*
Jalebi	𝍸 II	*7*
Rasgulla	𝍸 𝍸	*9*
Total		*30*

(b) Ladoo is preferred by most of the students i.e., 11 students.

3. Catherine threw a dice 40 times and noted the number appearing each time as shown below:

1	3	5	6	6	3	5	4	1	6
2	5	3	4	6	1	5	5	6	1
1	2	2	3	5	2	4	5	5	6
5	1	6	2	3	5	2	4	1	5

Make a table and enter the data using tally marks. Find the number that appeared.

(a) The minimum number of times

(b) The maximum number of times

(c) Find those numbers that appear an equal number of times.

Ans.

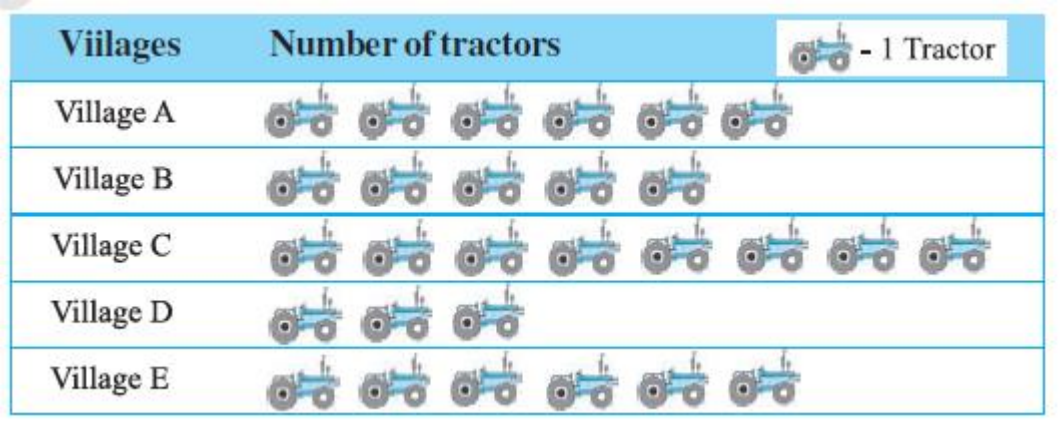
Number on the dice	Tally Marks	No. of students
1	𝍸 II	7
2	𝍸 I	6
3	𝍸	5
4	IIII	4
5	𝍸 𝍸 I	11
6	𝍸 II	7
Total		40

(a) Number 4 appeared minimum number of times.

(b) Number 5 appeared maximum number of times.

(c) Number 1 and 6 appeared for same number of times i.e., 7.

4. Following pictograph shows the number of tractors in five villages.



Observe the pictograph and answer the following questions.

(i) Which village has the minimum number of tractors?

Ans.

Village D has the minimum number of tractors, i.e., 3.

(ii) Which village has the maximum number of tractors?

Ans.

Village C has the maximum number of tractors, i.e., 8.

(iii) How many more tractors village C has as compared to village B.

Ans.

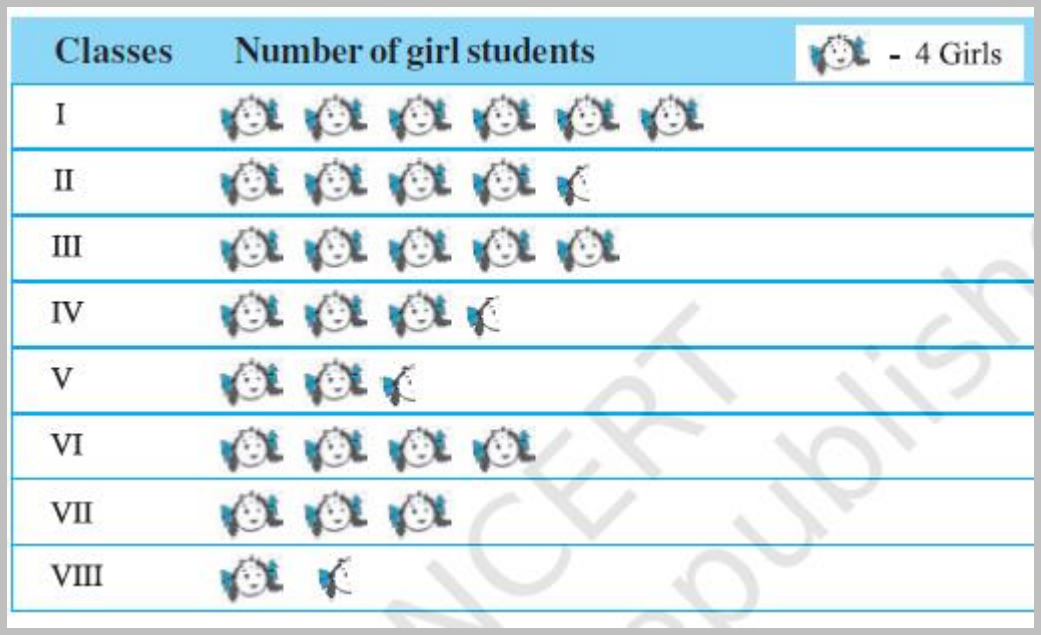
Village C has 3 tractor more than that of village B.

(iv) What is the total number of tractors in all the five villages?

Ans.

Total Number of tractors in all the villages is 28.

5. The number of girl students in each class of a co-educational middle school is depicted by the pictograph:



Observe this pictograph and answer the following questions:

(a) Which class has the minimum number of girl students?

Ans.

Class VII has the minimum number of Students.

$1 \times 4 + \frac{1}{2} \times 4 = 4 + 2 = 6$

(b) Is the number of girls in Class VI less than the number of girls in Class V?

Ans.

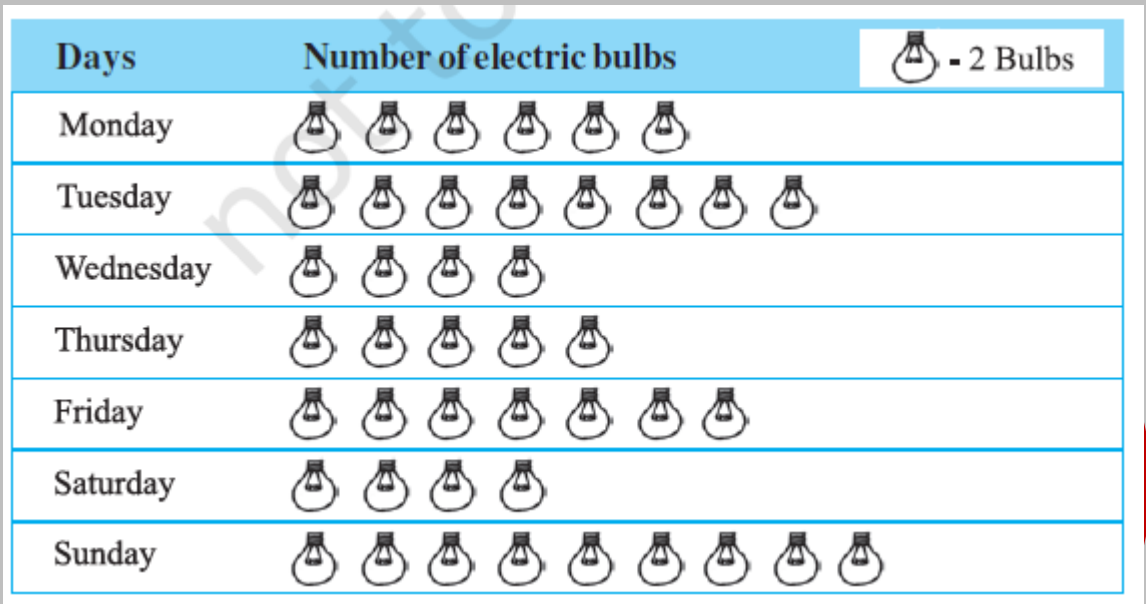
No, number of girls in Class VI is 4 x 4 = 16 and number of girls in Class V $=2\frac{1}{2}$ x 4 =10

(c) How many girls are there in Class VII?

Ans.

Number of girls in class VII = 3 x 4 = 12

6. The sale of electric bulbs on different days of a week is shown below:



Observe the pictograph and answer the following questions:

(a) How many bulbs were sold on Friday?

Ans.

Number of Bulb sold on Friday = 7x 2 = 14

(b) On which day were the maximum number of bulbs sold?

Ans.

Maximum number of bulb sold were on Sunday, i.e., 9 x 2 = 18

(c) On which of the days same number of bulbs were sold?

Ans.

Same number of bulbs were sold on Wednesday and Saturday i.e., 4 x 2 = 8.

(d) On which of the days minimum number of bulbs were sold?

Ans.

Minimum number of Bulb were sold on Wednesday and Saturday, i.e., 4 x 2 = 8

(e) If one big carton can hold 9 bulbs. How many cartons were needed in the given week?

Ans.

Total Number of Bulb sold in the week = 43 x 2 = 86

Number of Bulb in one cartoon = 9

Number of Cartoon needed in the given week = $\frac{86}{9}$ = 10 (approx).

7. In a village six fruit merchants sold the following number of fruit baskets in a particular season:

Name of fruit merchants	Number of fruit baskets (🧺 - 100 Fruit baskets)
Rahim	🧺🧺🧺🧺
Lakhanpal	🧺🧺🧺🧺🧺🧺
Anwar	🧺🧺🧺🧺🧺🧺🧺
Martin	🧺🧺🧺🧺🧺🧺🧺🧺🧺🧺
Ranjit Singh	🧺🧺🧺🧺🧺🧺🧺🧺
Joseph	🧺🧺🧺🧺🧺

Observe this pictograph and answer the following questions:

(a) Which merchant sold the maximum number of baskets?

Ans.

Maximum number of Basket were sold by Martin.

(b) How many fruit baskets were sold by Anwar?
Ans.
Number of Basket sold by Anwar = 100 x 7 = 700.

(c) The merchants who have sold 600 or more number of baskets are planning to buy a godown for the next season. Can you name them?
Ans.
Anwar, Martin and Ranjit singh

EXERCISE- 9.2

NCERT SOLUTION

1. Total number of animals in five villages are as follows:
Village A: 80
Village B: 120
Village C: 90
Village D: 40
Village E: 60
Prepare a pictograph of these animals using one symbol ⊗ to represent 10 animals and answer the following questions:
(a) How many symbols represent animals of village E?
(b) Which village has the maximum number of animals?
(c) Which village has more animals: village A or village C?
Ans.

Villages	Number of Animals ⊗ = 10 animals
A	⊗⊗⊗⊗⊗⊗⊗
B	⊗⊗⊗⊗⊗⊗⊗⊗⊗⊗
C	⊗⊗⊗⊗⊗⊗⊗⊗
D	⊗⊗⊗⊗
E	⊗⊗⊗⊗⊗⊗

Ans.

(a) Six symbols represent animals of Village E.

(b) Village B has maximum number of animals, i.e., 120

(c) Village C has the more number of animals.

2. Total number of students of a school in different years is shown in the following table:

Years	Number of Students
1996	400
1998	535
2000	472
2002	600
2004	623

A. Prepare a pictograph of students using one symbol to represent 100 students and answer the following questions:

(a) How many symbols represent total number of students in the year 2002?

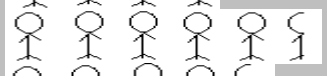
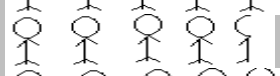
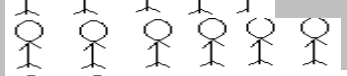
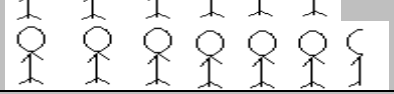
(b) How many symbols represent total number of students for the year 1998?

B. Prepare another pictograph of students using any other symbol each representing 50 students.

Which pictograph do you find more informative?

Ans.

(A)

Years	Number of Students
1996	
1998	
2000	
2002	
2004	

(a) Six symbols represent total number of students in the year 2002.

(b) Five complete and 1 half symbol represent total number of students for the year 1998.

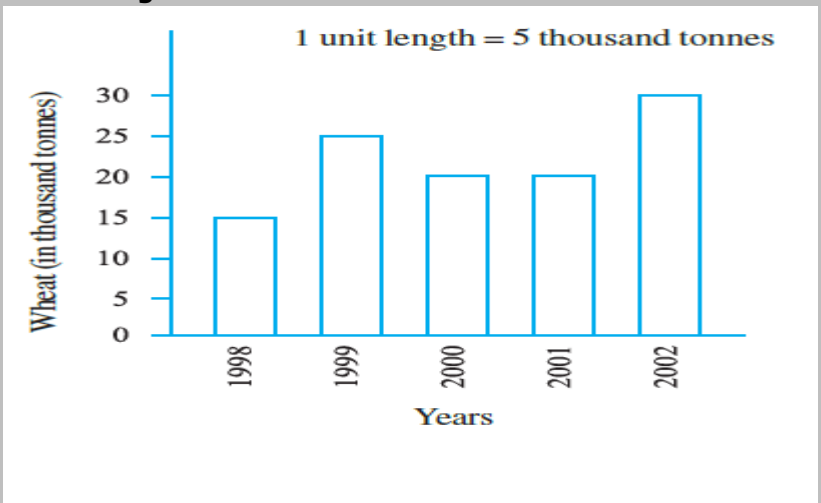
(B)

Years	Number of Students ⊗ = 50 students
1996	⊗⊗⊗⊗⊗⊗⊗
1998	⊗⊗⊗⊗⊗⊗⊗⊗⊗ ◔
2000	⊗⊗⊗⊗⊗⊗⊗⊗ ◖
2002	⊗⊗⊗⊗⊗⊗⊗⊗⊗⊗
2004	⊗⊗⊗⊗⊗⊗⊗⊗⊗⊗ ◔

EXERCISE- 9.3

NCERT SOLUTION

1. The bar graph given below shows the amount of wheat purchased by government during the year 1998–2002. Read the bar graph and write down your observations. In which year was

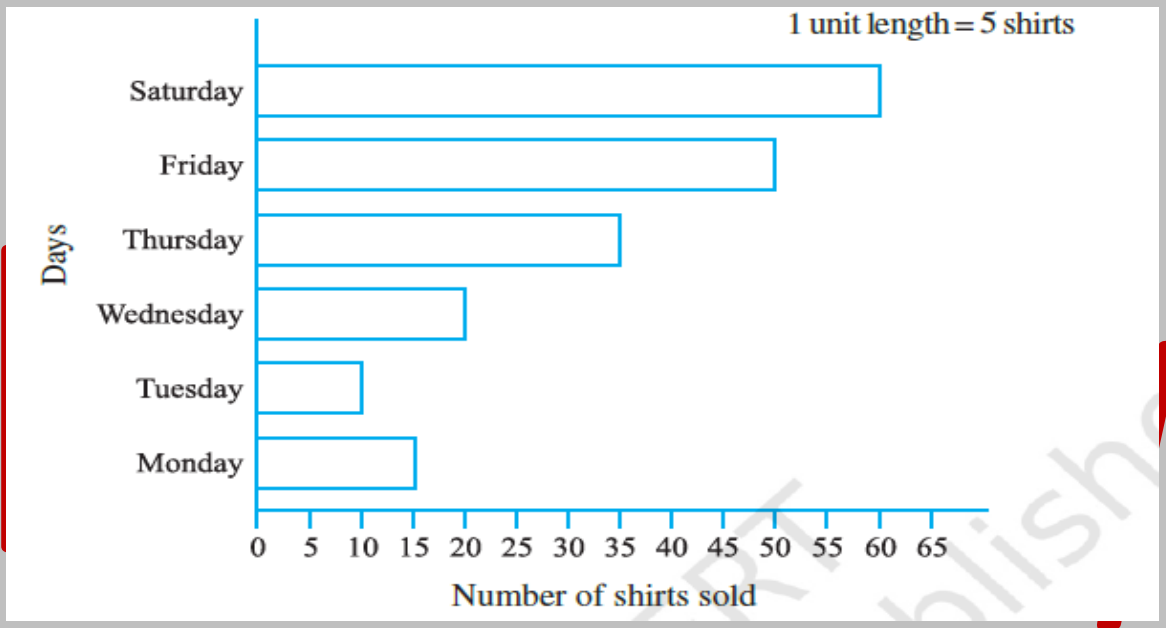


(a) The wheat production maximum?

Ans.
The production of wheat was maximum in 2002.

(b) The wheat production minimum?
Ans.
The production of wheat was minimum in 1998.

2. Observe this bar graph which is showing the sale of shirts in a readymade shop from Monday to Saturday.



Now answer the following questions:
(a) What information does the above bar graph give?
Ans.
The Bar graph shows the sale of shirts in a readymade shop from Monday to Saturday.

(b) What is the scale chosen on the horizontal line representing number of shirts?
Ans.
1unit = 5 shirts

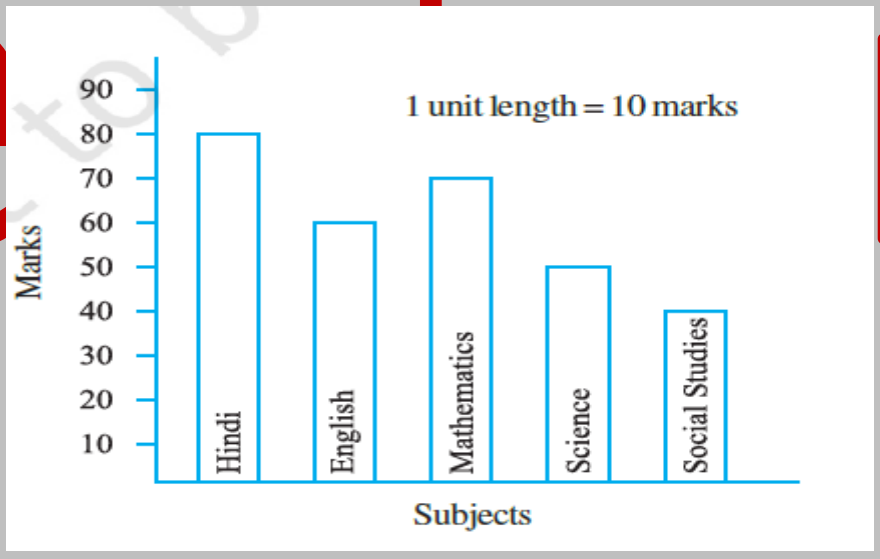
(c) On which day were the maximum number of shirts sold? How many shirts were sold on that day?

Ans.
The maximum number of shirts were sold on Saturday, 60 shirts were sold on that day.

(d) On which day were the minimum number of shirts sold?
Ans.
Minimum number of shirts were sold on Tuesday.

(e) How many shirts were sold on Thursday?
Ans.
35 Shirts were sold on Thursday.

3. Observe this bar graph which shows the marks obtained by Aziz in half-yearly examination in different subjects. Answer the given questions.



(a) What information does the bar graph give?
Ans.
This bar graph shows the marks obtained by Aziz in half-yearly examination in different subjects.

(b) Name the subject in which Aziz scored maximum marks.
Ans.
Aziz scored maximum marks in Hindi.

(c) Name the subject in which he has scored minimum marks.

Ans.

Aziz scored minimum marks in Social Studies.

(d) State the name of the subjects and marks obtained in each of them.

Ans.

Hindi 80; English 60; Mathematics 70; Science 50; Social Studies 40.

EXERCISE- 9.4

NCERT SOLUTION

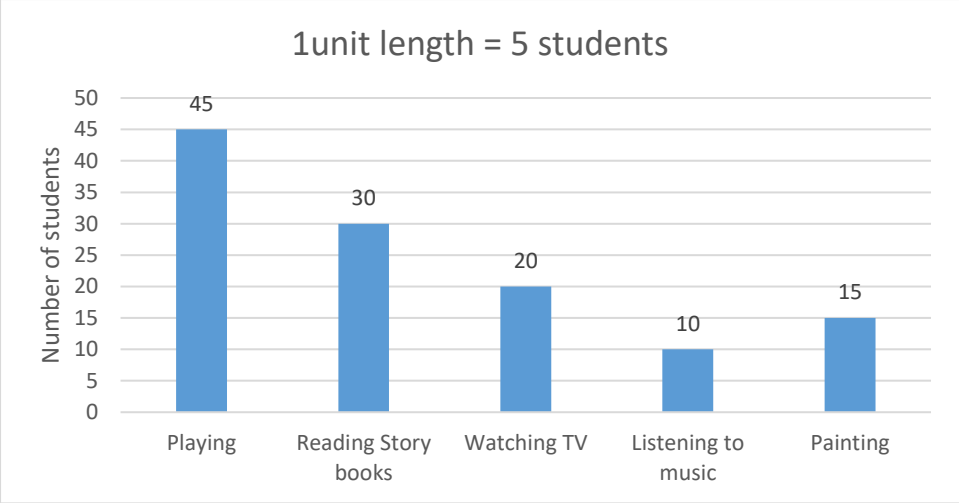
1. A survey of 120 school students was done to find which activity they prefer to do in their free time.

Preferred Activity	Number of Students
Playing	45
Reading Story books	30
Watching TV	20
Listening to music	10
Painting	15

Draw a bar graph to illustrate the above data taking scale of 1 unit length = 5 students.

Which activity is preferred by most of the students other than playing?

Ans.



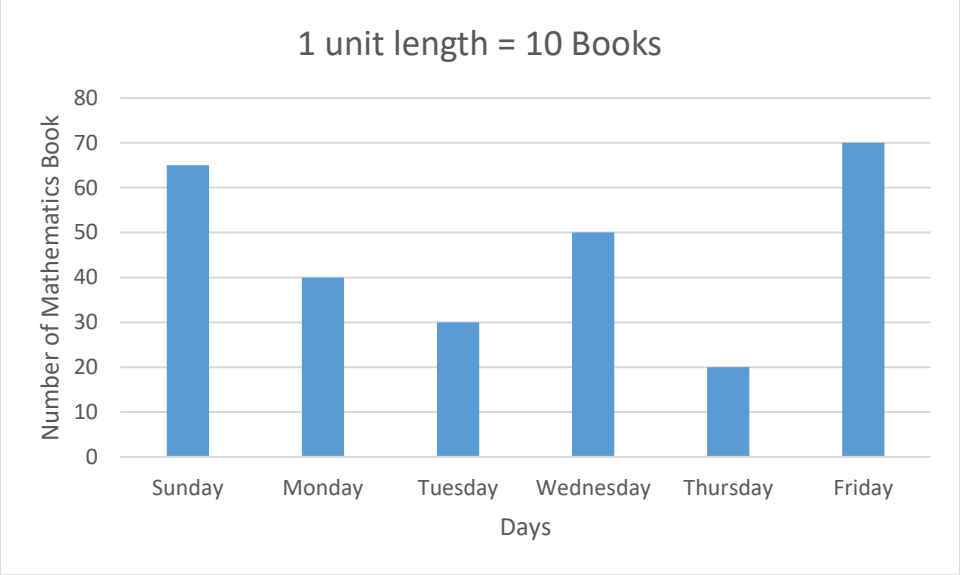
Reading Story Books preferred by most of the students other than playing.

2. The number of Mathematics books sold by a shopkeeper on six consecutive days is shown below:

Days	Number of Books Sold
Sunday	65
Monday	40
Tuesday	30
Wednesday	50
Thursday	20
Friday	70

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

Ans.



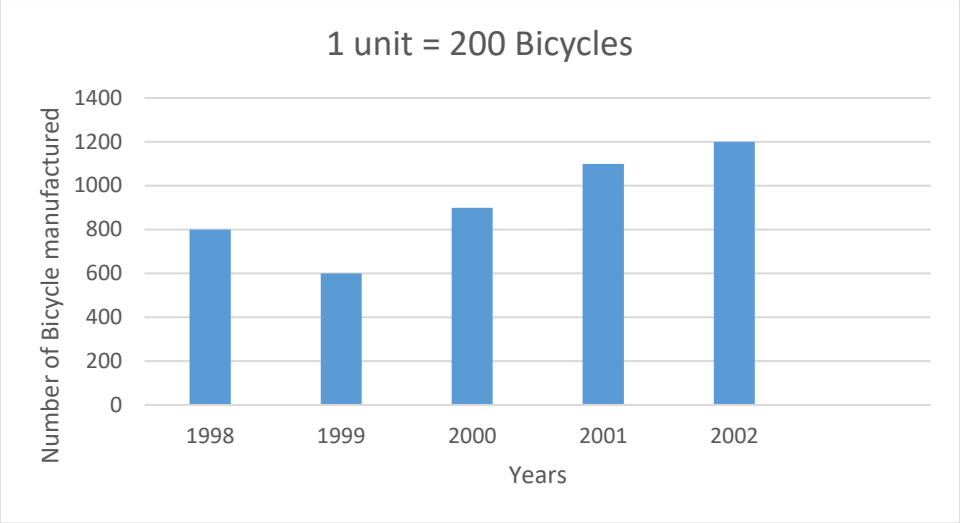
3. Following table shows the number of bicycles manufactured in a factory during the years 1998 to 2002. Illustrate this data using a bar graph. Choose a scale of your choice.

Years	Number of Bicycles manufactured
1998	800
1999	600
2000	900
2001	1100
2002	1200

(a) In which year were the maximum number of bicycles manufactured?

(b) In which year were the minimum number of bicycles manufactured?

Ans.



(a) The maximum bicycle were manufactured in the year 2002.

(b) The minimum bicycle were manufactured in the year 1999.

4. Number of persons in various age groups in a town is given in the following table.

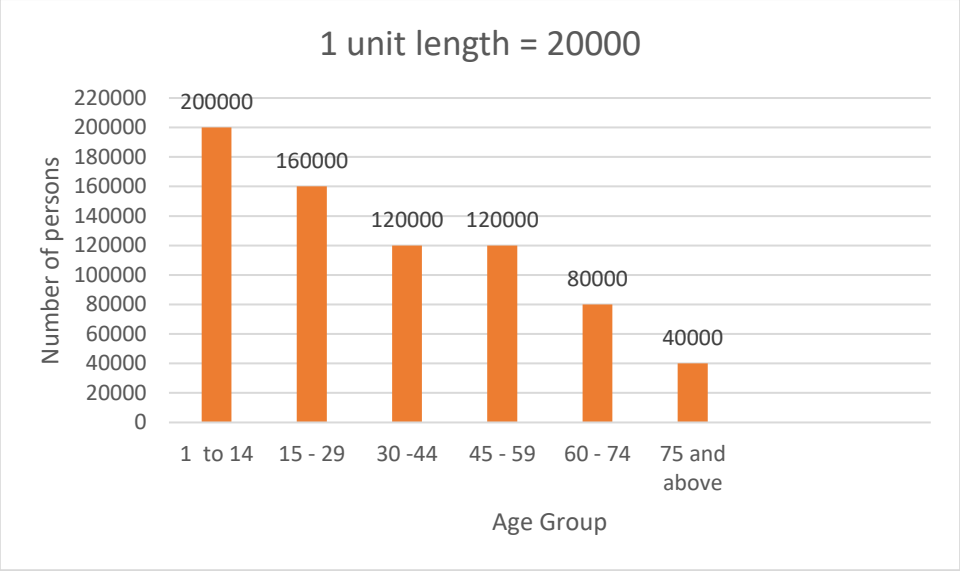
Age Group (in Years)	Number of Persons
1-14	2 lakhs
15-29	1 lakh 60 thousand
30-44	1 lakh 20 thousand
45-59	1 lakh 20 thousand
60-74	80 thousand
75 and above	40 thousand

Draw a bar graph to represent the above information and answer the following questions. (Take 1 unit length = 20 thousands)

(a) Which two age groups have same population?

(b) All persons in the age group of 60 and above are called senior citizens. How many senior citizens are there in the town?

Ans.



(a) Group 30 - 44 and 45 – 59 have same population

(b) 80,000 + 40,000 = 1, 20, 000 senior citizens are there in town.