

Exercise 9.1

Question 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?

Answer:

By observing the marks scored by 40 students in the test, we can construct the table as follows.

Mark	Tally mark	Number of Students
1	II	2
2	III	3
3	III	3
4	NI II	7
5	NI I	6
6	NI II	7
7	NI	5
8	IIII	4

9	III	3
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(a) The students who obtained their marks equal to or more than 7 are the students who obtained their marks as either of 7, 8, and 9. Hence, number of these students = $5 + 4 + 3 = 12$

(b) The students who obtained their marks below 4 are the students who obtained their marks as either of 1, 2, and 3.

Hence, number of these students = $2 + 3 + 3 = 8$

Question 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?

Answer:

By observing the choices of sweets of 30 students, we can construct the table as below.

(a)

Sweet	Tally mark	Number of students
Ladoo		11
Barfi		3
Jalebi		7

Rasgulla		9
		30

(b) Ladoo is the most preferred sweet as the most number of students (i.e., 11) prefer Ladoo.

Question 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.

Answer:

Number	Tally mark	Number of times
1		7
2		6
3		5

4		4
5		11
6		7






























(a) The number which appeared the minimum number of times (i.e., 4 times) is 4.

(b) The number which appeared the maximum number of times (i.e., 11 times) is 5.

(c) 1 and 6 are the numbers which appear for the same number of times (i.e., 7 times).

Question 4:

Following pictograph shows the number of tractors in five villages.

Village	Number of tractors  – 1 tractor
Village A	     
Village B	    
Village C	       
Village D	  
Village E	     

Observe the pictograph and answer the following questions.

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

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

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

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

Answer:

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



















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






(iii) Number of more tractors that village C has = $8 - 5 = 3$

(iv) Total number of tractors in all these villages = $6 + 5 + 8 + 3 + 6 = 28$

Question 5:

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

Class	Number of girl students  – 4 girls
I	     
II	    
III	    
IV	

	
V	
VI	
VII	
VIII	

Observe this pictograph and answer the following questions:

- Which class has the minimum number of girl students?
- Is the number of girls in Class **VI** less than the number of girls in Class **V**?
- How many girls are there in Class **VII**?

Answer:

From the above table, it can be concluded that in classes I, II, III, IV, V ,VI, VII, VIII, there are 24, 18, 20, 14, 10 , 16, 12, 6 girls respectively.

- Class **VIII** has the minimum number of girls, i.e., only 6 girls.
- No. In class V and VI, there are 10 and 16 girls respectively. Clearly, the number of girls is more in class VI than that in class V.

(c) There are 12 girls in class VII.

Question 6:

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

Day	Number of electric bulbs  – 2 bulbs
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	








What can we conclude from the said pictograph?

Answer:

- (a) Number of bulbs sold on Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday are 12, 16, 8, 10, 14, 8, and 18 respectively.
- (b) The maximum numbers of bulbs (i.e., 18) were sold on Sunday.
- (c) Equal numbers of bulbs (i.e., 8) were sold on Wednesday and Saturday.
- (d) The minimum numbers of bulbs (i.e., 8) were sold on Wednesday and Saturday.
- (e) Total bulbs sold in the week = $12 + 16 + 8 + 10 + 14 + 8 + 18 = 86$

Question 7:

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

Name of fruit merchant	Number of fruit baskets  – 100 fruit baskets
Rahim	
Lakhanpal	
Anwar	
Martin	
Ranjit Singh	
Joseph	

Observe this pictograph and answer the following question:

- (a) Which merchant sold the maximum number of baskets?
- (b) How many fruit baskets were sold by Anwar?
- (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?

Answer:

From the above pictograph, it can be observed that the number of fruit baskets sold by Rahim, Lakhanpal, Anwar, Martin, Ranjit Singh, and Joseph are 400, 550, 700, 950, 800, and 450 respectively.

- (a) Martin sold the maximum number of baskets, i.e., 950.
- (b) Anwar sold 700 baskets.
- (c) Anwar, Martin, and Ranjit Singh are the three merchants who have sold more than 600 baskets. Therefore, they are planning to buy a godown for the next season.

Exercise 9.2

Question 1:

Total number of animals in five villages are as follows:

Village A : 80 Villages B : 120

Village C : 90 Village D : 40

Village E : 60

Prepare a pictograph of these animals using one symbol \otimes 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?

Answer:

The pictograph for the given data can be drawn as follows.


Village	Number of animals
	\otimes – 10 animals
Village A	$\otimes \otimes \otimes \otimes \otimes \otimes \otimes \otimes$
Village B	$\otimes \otimes \otimes \otimes \otimes \otimes \otimes \otimes \otimes \otimes \otimes \otimes$
Village C	$\otimes \otimes \otimes \otimes \otimes \otimes \otimes \otimes \otimes$
Village D	$\otimes \otimes \otimes \otimes$
Village E	$\otimes \otimes \otimes \otimes \otimes \otimes$

- (a) 6 symbols will represent animals of village E as there were 60 animals in this village.
- (b) Village B has the maximum number of animals i.e., 120.
- (c) Village A and C have 80 and 90 animals in it. Clearly, Village C has more animals.

Question 2:

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

Year	Number of students
1996	400
1998	535
2000	472
2002	600
2004	623





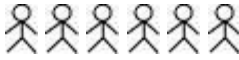

A. Prepare a pictograph of students using one symbol  to represent 100 students and answer the following questions:

- (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?

Answer:

A.

 – 100 Students	
1996	
1998	
2000	
2002	
2004	

- (a) 6 symbols represent the total number of students in the year 2002.

(b) 5 complete and 1 incomplete symbols represent the total number of students in the year 1998.

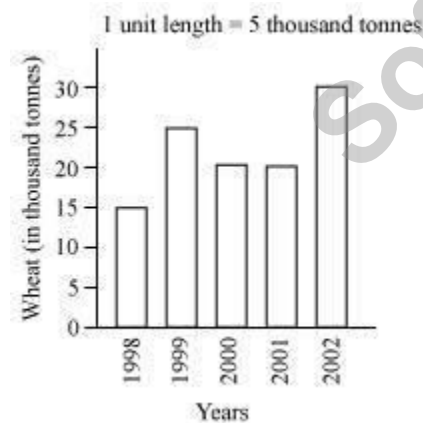
B. Second pictograph is more informative.

⊗ – 50 Students	
1996	⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗
1998	⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗
2000	⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗
2002	⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗
2004	⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗

Exercise 9.3

Question 1:

The bar graph given alongside 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?

(b) the wheat production minimum?

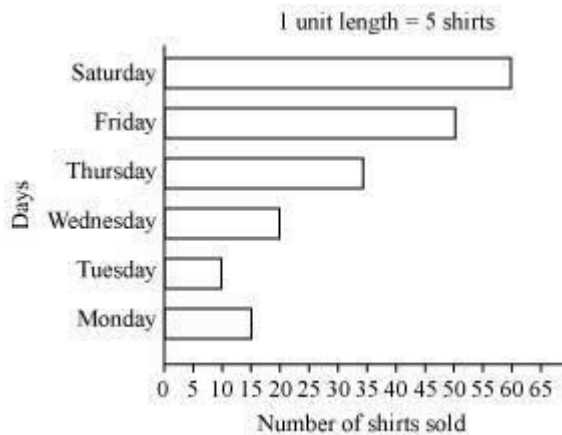
Answer:

(a) The wheat production was maximum in year 2002.

(b) The wheat production was minimum in year 1998.

Question 2:

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



Now answer the following questions:

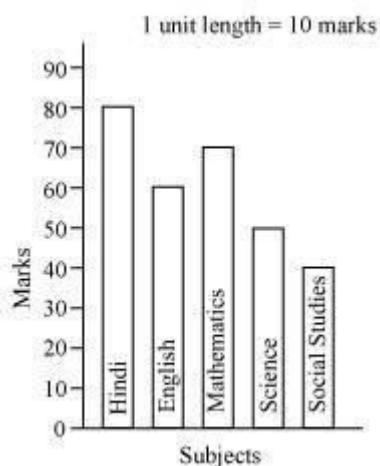
- (a) What information does the above bar graph give?
- (b) What is the scale chosen on the horizontal line representing number of shirts?
- (c) On which day was the maximum number of shirts sold? How many shirts were sold on that day?
- (d) On which day was the minimum number shirts sold?
- (e) How many shirts were sold on Thursday?

Answer:

- (a) This bar graph represents the number of shirts sold from Monday to Saturday.
- (b) 1 unit = 5 shirts
- (c) The number of shirts sold on Saturday was the maximum, i.e., 60.
- (d) The number of shirts sold on Tuesday was the minimum, i.e., 10.
- (e) 35 shirts were sold on Tuesday.

Question 3:

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



Answer the given questions.

- What information does the bar graph give?
- Name the subject in which Aziz scored maximum marks.
- Name the subject in which he has scored minimum marks.
- State the name of the subjects and marks obtained in each of them.

Answer:

- This graph shows the marks obtained by Aziz in different subjects.
- In Hindi, Aziz scored maximum marks i.e., 80.
- In Social studies, Aziz scored minimum marks i.e., 40.
- Hindi – 80 English – 60 Maths – 70

Science – 50 Social studies – 40

Exercise 9.4

Question 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

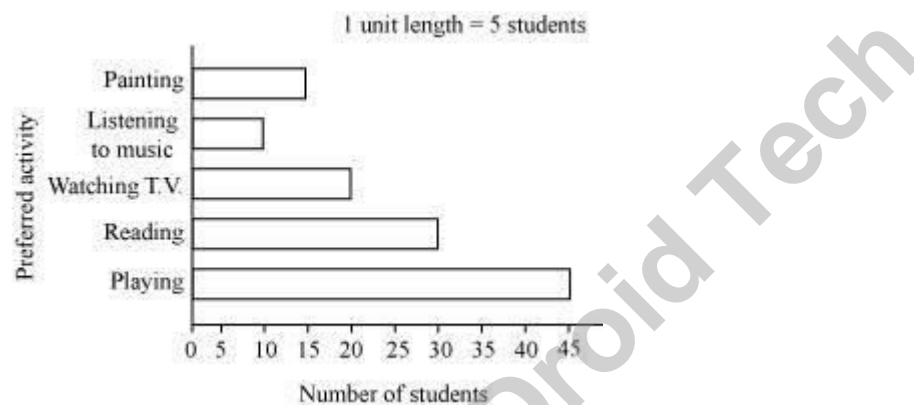
Watching TV	20
Listening to music	10
Painting	15

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?

Answer:

By taking a scale of 1 unit length = 5 students, a bar graph of the above given data can be drawn as follows.



The activity that is preferred by most of the students, other than playing, is reading story books.

Question 2:

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

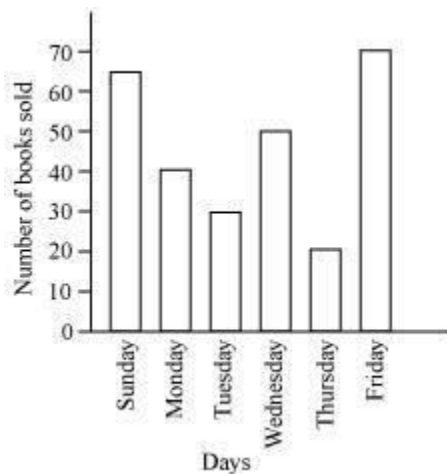
Days	Number of books sold
Sunday	65
Monday	40
Tuesday	30
Wednesday	50

Thursday	20
Friday	70

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

Answer:

By taking a scale of 1 unit length = 10 books, a bar graph of the above given data can be drawn as follows.



Question 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.

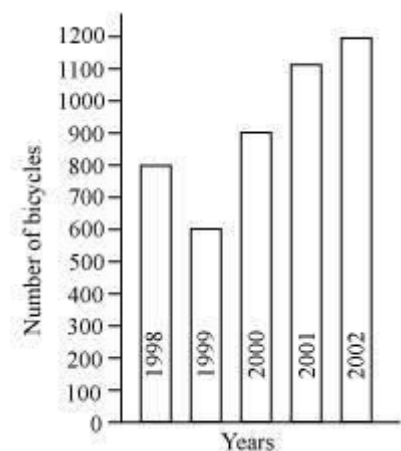
Years	Number of bicycles manufactured
1998	800
1999	600
2000	900
2001	1100
2002	1200

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

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

Answer:

By taking a scale of 1 unit length = 100 bicycles, a bar graph of the above given data can be drawn as follows.



(a) The number of bicycles manufactured in 2002 was the maximum, i.e., 1200.

(b) The number of bicycles manufactured in 1999 was the minimum, i.e., 600.

Question 4:

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

Age group	1 – 14	15 – 29	30 – 44	45 – 59	60 – 74	75 and above
Number of persons	2 lakhs	1 lakhs 60 thousands	1 lakh 20 thousands	1 lakh 20 thousands	80 Thousands	40 Thousands

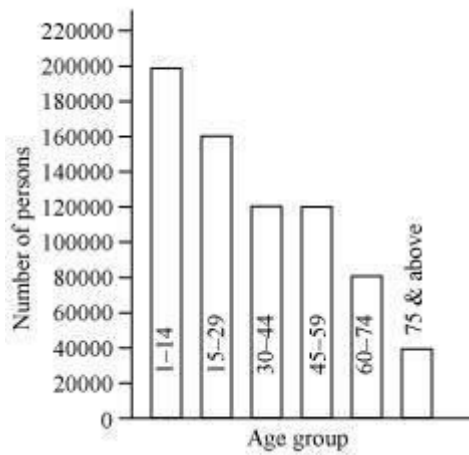
Draw a bar graph to represent the above information and answer the following questions. (take 1 unit length = 20 thousands)

(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?

Answer:

By taking a scale of 1 unit length = 20 thousands, a bar graph of the above given data can be drawn as follows.



(a) 30 – 44 and 45 – 59 are the two age groups which have the same population.

(b) It can be inferred that senior citizens are the people who are either from age group 60 – 74 or from age group 75 and above.

Hence, number of senior citizens = 80,000 + 40,000

= 1 lakh 20 thousand

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