

MATHEMATICS

CHAPTER-9 DATA HANDLING (Class – VI)

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 1:

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

(a) Twelve students

(b) Eight students

Question 2:

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

Ladoo, Barfi, Ladoo, jalebi, Ladoo, Rashulla, Jalebi, Ladoo, Barfi, Rasgulla, Ladoo, Jalebi, Jalebi, Rashulla, 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 2:

(a) Table using tally marks:

| Sweets | Tally Marks | No. of students |
|----------|-------------|-----------------|
| Ladoo | | 11 |
| Barfi | | 3 |
| Jalebi | | 7 |
| Rasgulla | | 9 |
| | | 30 |

(b) Ladoo. Because 11 students prefer eat.

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.

- The minimum number of times.
- The maximum number of times.
- Find those numbers that appear an equal number of times.







Answer 3:

| Numbers | Tally Marks | How many times? |
|---------|-------------|-----------------|
| 1 | | 7 |
| 2 | | 6 |
| 3 | | 5 |
| 4 | | 4 |
| 5 | | 11 |
| 6 | | 7 |

- The minimum number of times = 4
- The maximum number of times = 5
- 1 and 6

Question 4:

Following pictograph shows the number of tractors in five villages:

| Villages | 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 4:

- (i) Village D
- (ii) Village C
- (iii) 3
- (iv) 28

Question 5:

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

| Classes | Number of girl students |  - 4 Girls |
|---------|---|--|
| I |  | |
| II |  | |
| III |  | |
| IV |  | |
| V |  | |
| VI |  | |
| VII |  | |
| VIII |  | |

Observe this pictograph and answer the following questions:

- (a) Which class has the minimum number of girl students?
- (b) Is the number of girls in class VI less than the number of girls in class V?
- (c) How many girls are there in class VII?

Answer 5:









(a) Class VIII

(b) No

(c) $3 \times 4 = 12$ girls

Question 6:

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

| Days | Number of electric bulbs  - 2 Bulbs |
|-----------|--|
| Monday |  |
| Tuesday |  |
| Wednesday |  |
| Thursday |  |
| Friday |  |
| Saturday |  |
| Sunday |  |

Observe the pictograph and answer the following questions:








- (a) How many bulbs were sold on Friday?
- (b) On which day were the maximum number of bulbs sold?
- (c) On which of the days same number of bulbs were sold?
- (d) On which of the days minimum number of bulbs were sold?
- (e) If one big carton can hold 9 bulbs. How many cartons were needed in the given week?

Answer 6:

- (a) Number of bulbs sold on Friday are 14.
- (b) Maximum number of bulbs (18) were sold on Sunday.
- (c) Same number of bulbs (8) were sold on Wednesday and Saturday.
- (d) Then minimum number of bulbs (8) were sold on Wednesday and Saturday.
- (e) The total number of bulbs sold in the given week were 86.
So the number of carton required to hold 86 bulb = $86/9 \approx 10$.
Hence, 10 cartons required to hold the bulbs.

Question 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?
- (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 7:

- (a) Martin
- (b) $7 \times 100 = 700$ fruit basket
- (c) Anwar, Martin, Ranjit Singh



Exercise 9.2

Question 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 \otimes to represent 10 animals and answer the following questions:

- How many symbols represent animals of village E?
- Which village has the maximum number of animals?
- Which village has more animals: village A or village C?

Answer 1:




- 6
- Village B
- Village C has more animals than Village A

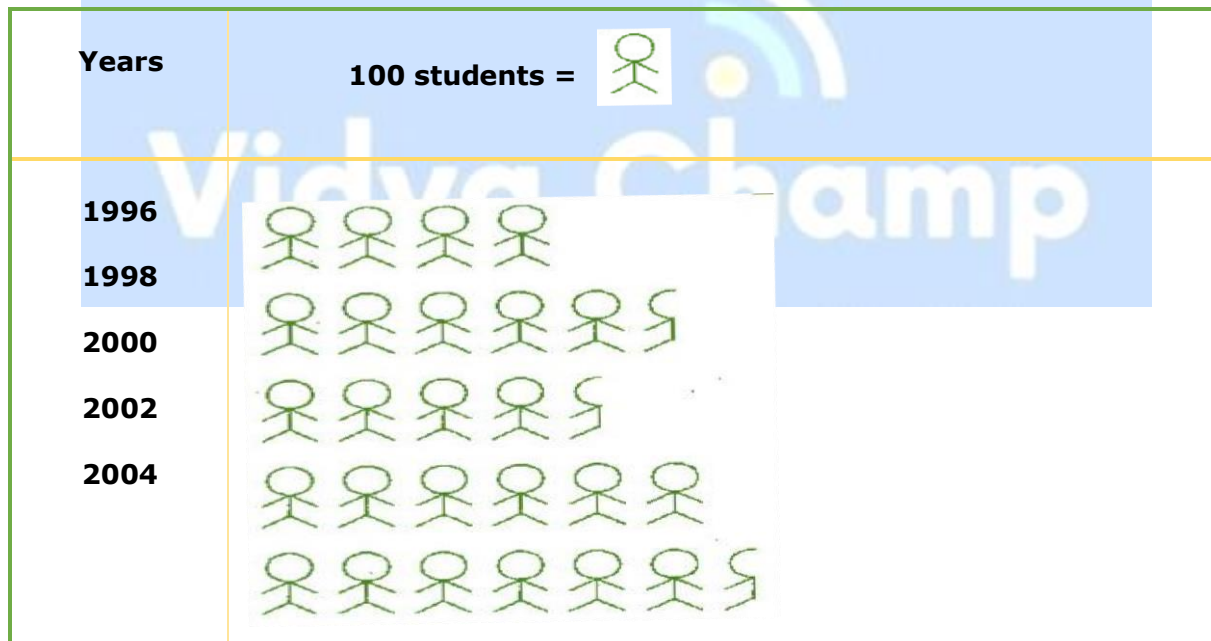
Question 2:

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 |

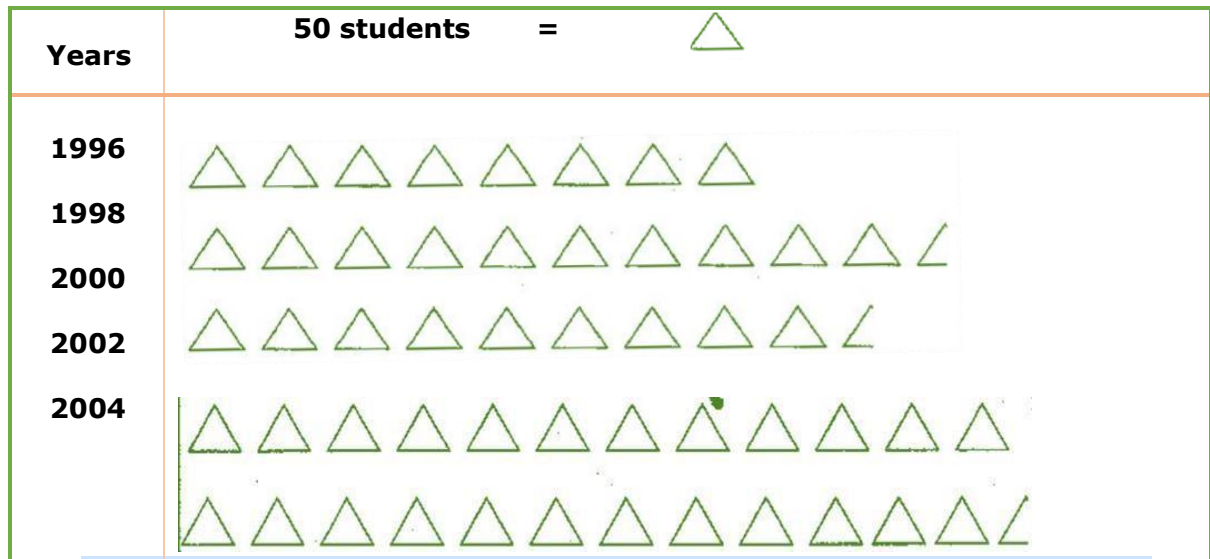
- A. Prepare a pictograph of students using one symbol  to represent 100 students and answer the following questions:
- (a) How many symbols represent total number of students in the year 2002?
 - (b) How many symbols represent total number of students for the year 1998?
- B. Prepare another pictograph of students using any other symbol each representing 50 students. Which pictograph do you find more informative?

Answer 2:

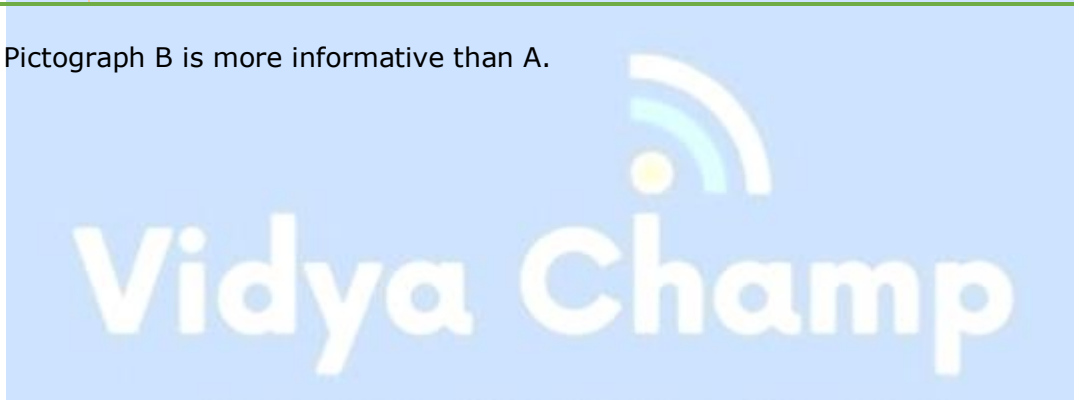


- (a) 6
- (b) Five completed and one incomplete.

B.



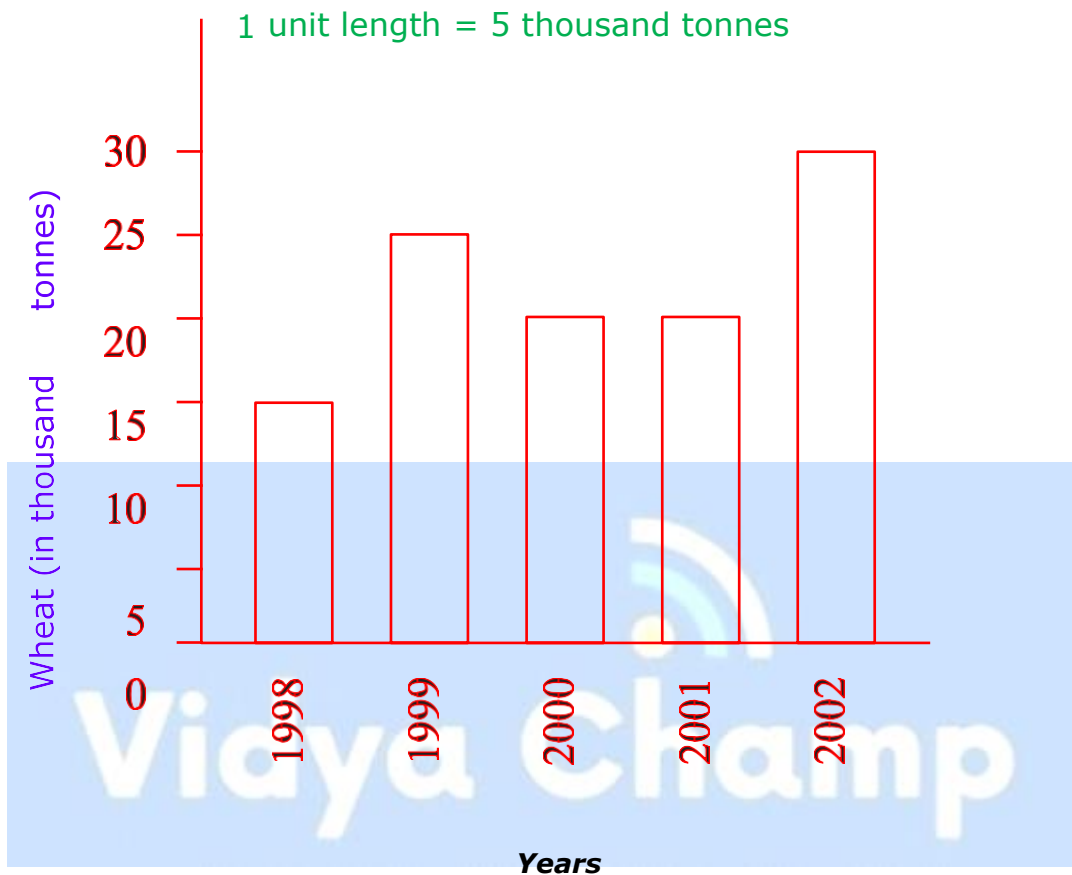
Pictograph B is more informative than A.



Exercise 9.3

Question 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.

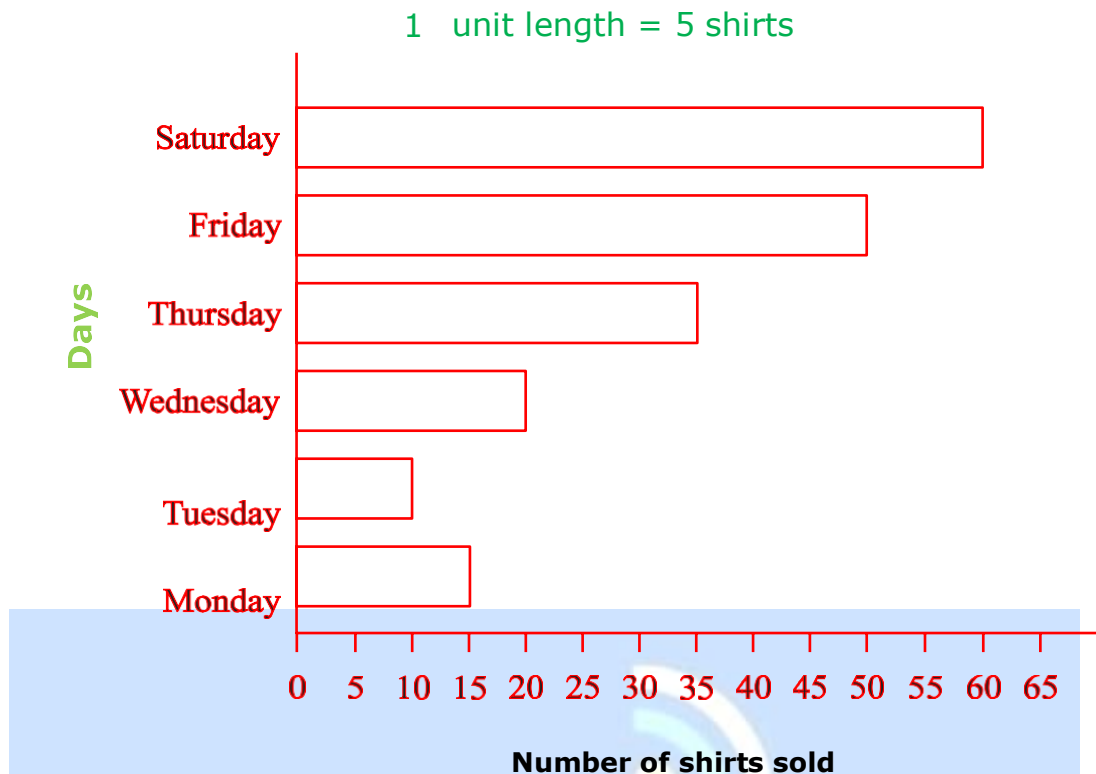
- In which year was the wheat production maximum?
- In which year was the wheat production minimum?

Answer 1:

- In 2002, production of wheat was maximum.
- In 1998, production of wheat was minimum.

Question 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:

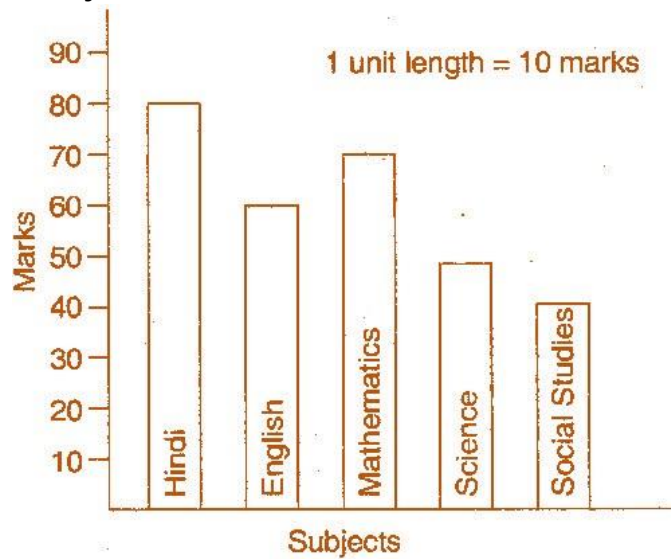
- (a) What information does the above bar graph give?
- (b) What is the scale chosen on the horizontal line representing number of shirts?
- (c) On which day were the maximum number of shirts sold? How many shirts were sold on that day?
- (d) On which day were the minimum number of shirts sold?
- (e)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

Answer 2:

- (a) The bar graph shows the sale of shirt in a readymade shop from Monday to Saturday.
- (b) 1 unit = 5 shirts
- (c) On Saturday, maximum number of shirts, 60 shirts were sold.
- (d) On Tuesday, minimum number of shirts were sold.
- (e) On Tuesday, 35 shirts were sold.

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 3:

- The bar graph shows the marks obtained by Aziz in half yearly examination in different subjects.
- Hindi.
- Social Studies.
- Hindi 80, English 60, Mathematics 70, Science 50, Social Studies 40.

Exercise 9.4

Question 1:

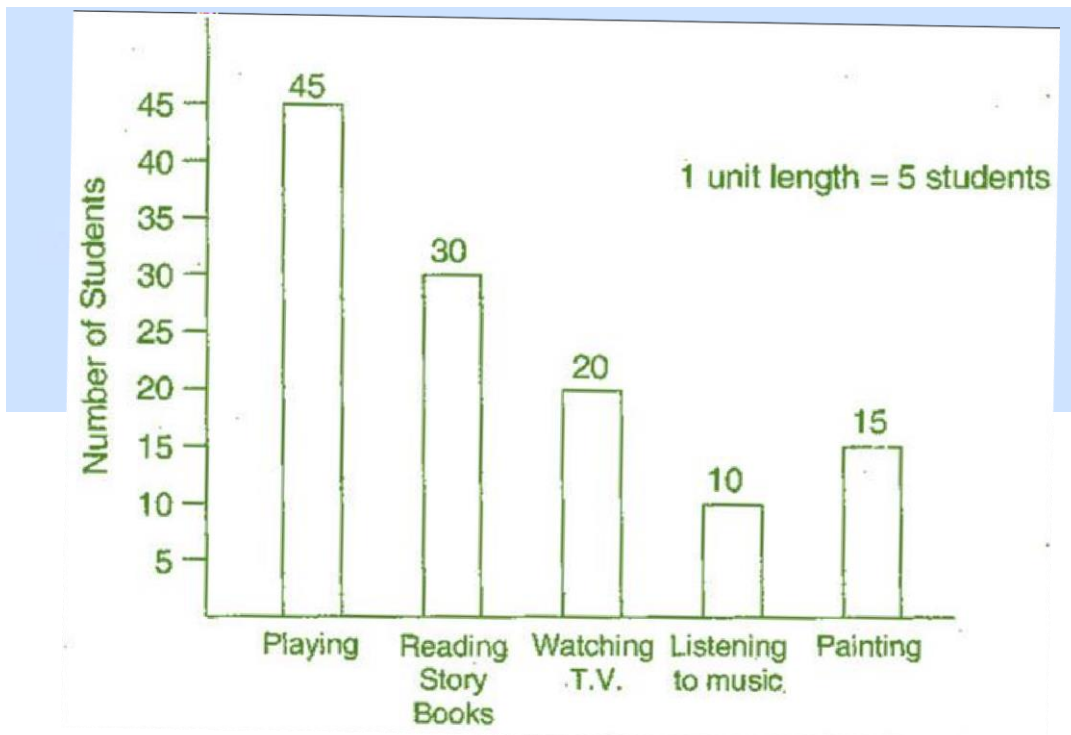
A survey of 120 school students was done to find which activity they prefer to do in their free time:

| 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 1:



Reading story books is preferred by most of the students other than playing.

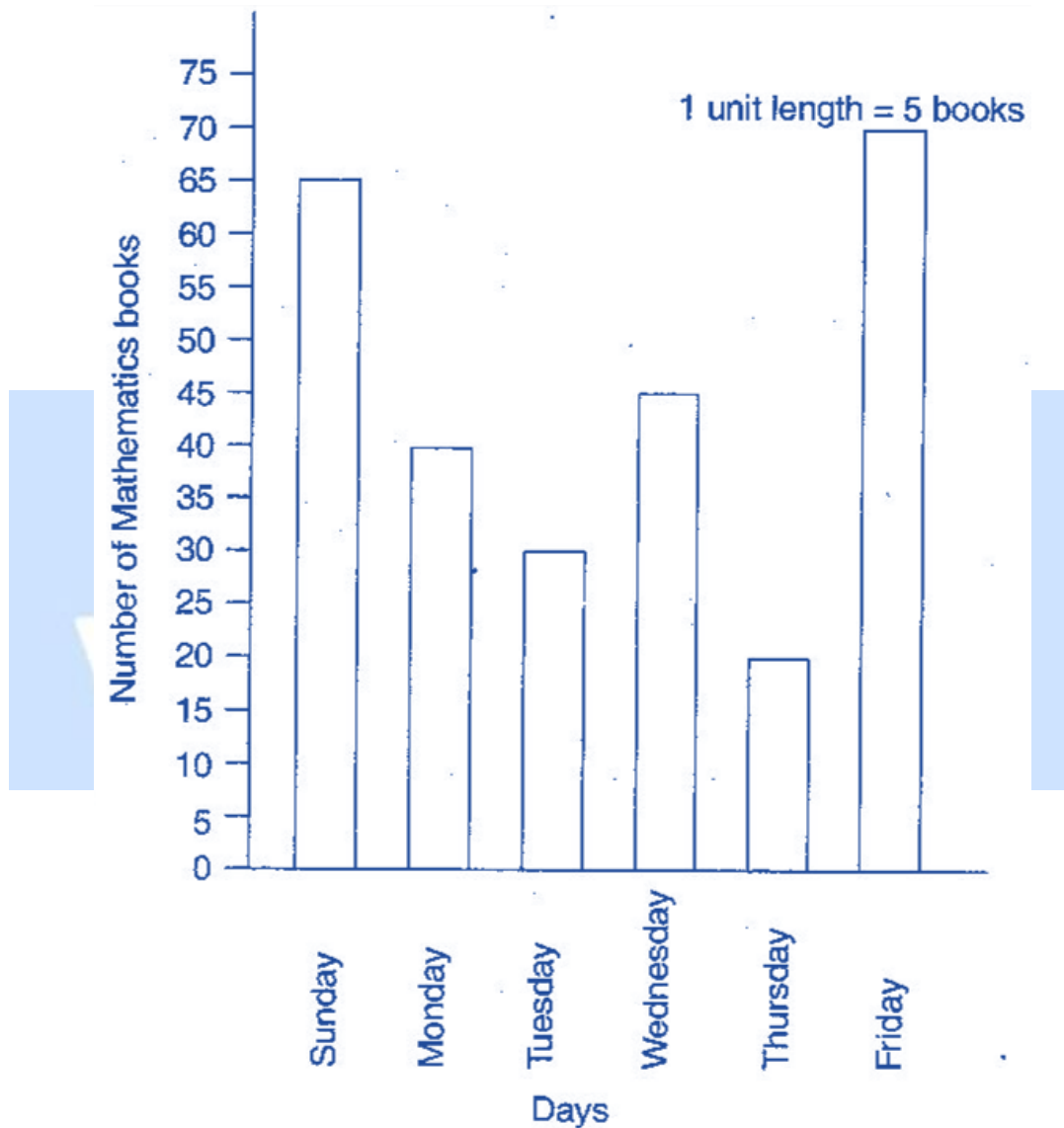
Question 2:

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

| Days | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday |
|-------------------|--------|--------|---------|-----------|----------|--------|
| No. of books sold | 65 | 40 | 30 | 50 | 20 | 70 |

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

Answer 2:



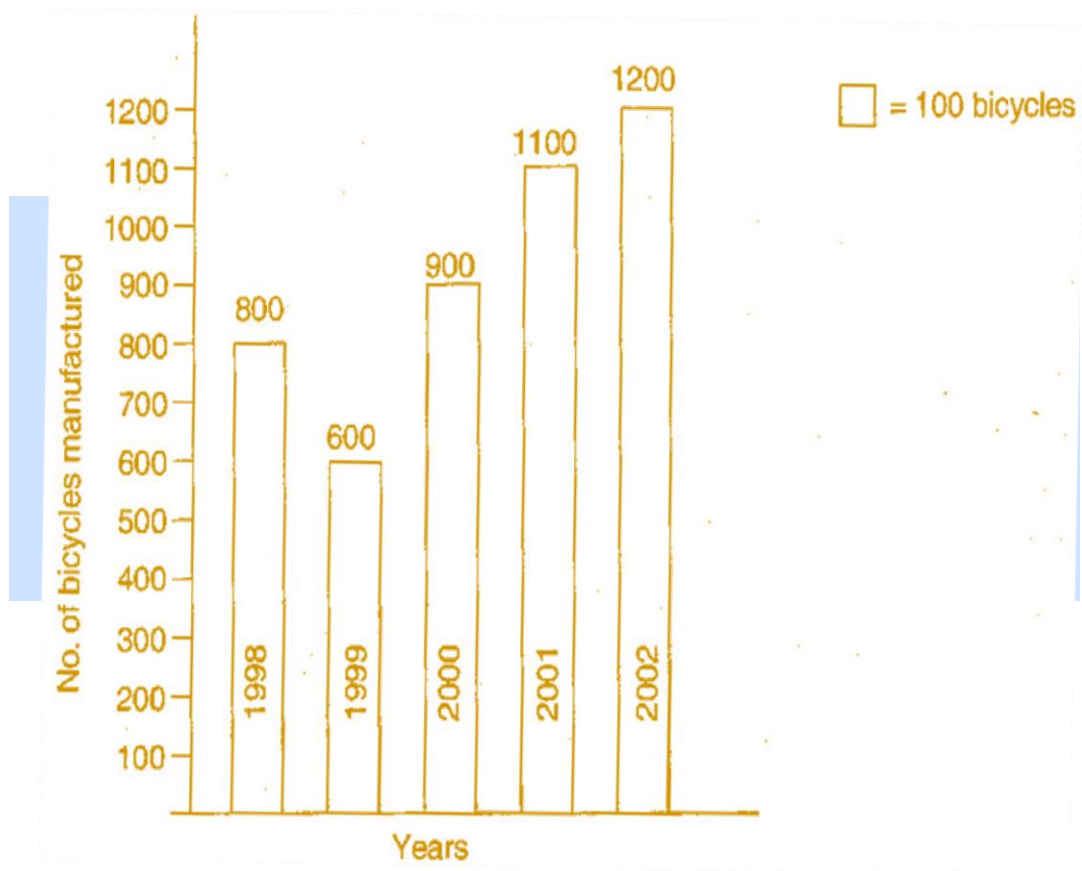
Question 3:

Following shows the number of bicycles manufactured in a factory during the year 1998 to 2002. Illustrate this data using a bar graph. Choose a scale 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 manufactures?
- (b) In which year were the minimum number of bicycles manufactured?

Answer 3:



- (a) The maximum number of bicycles manufactures in 2002.
- (b) The minimum number of bicycles manufactured in 1999.

Question 4:

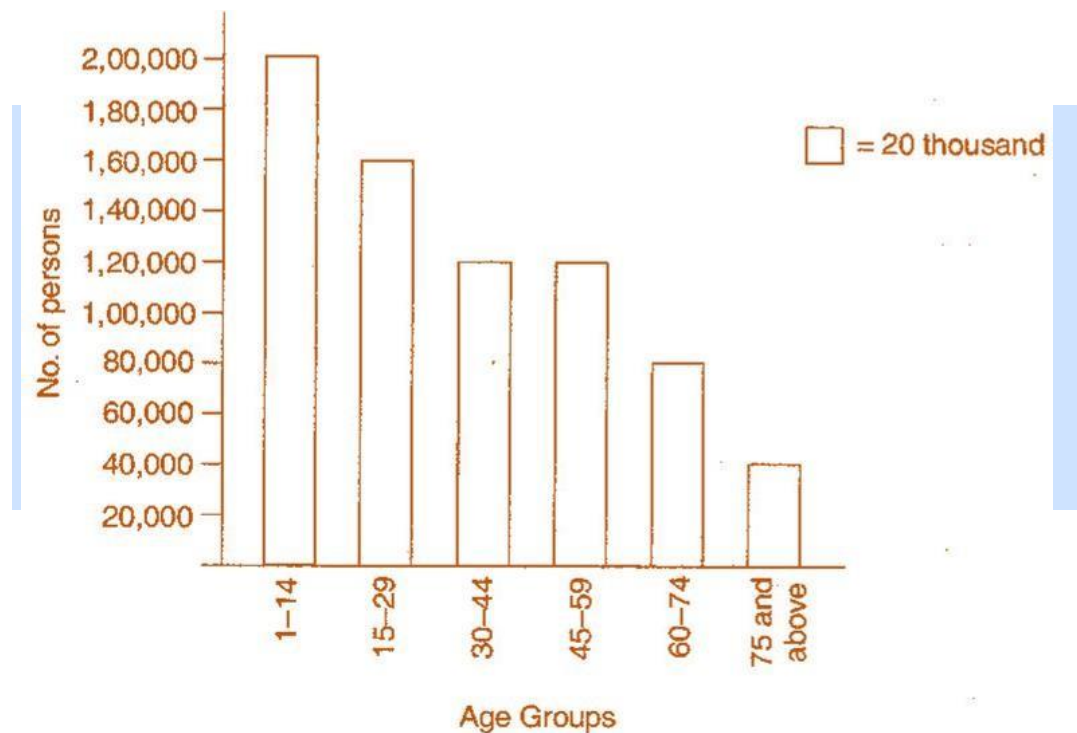
Number of persons in various age groups in a town is given in the following table:

| Age Group | Number of persons |
|--------------|---------------------|
| 1 - 14 | 2 Lakhs |
| 15 - 29 | 1 lakh 60 thousands |
| 30 - 44 | 1 lakh 20 thousands |
| 45 - 59 | 1 lakh 20 thousands |
| 60 - 74 | 80 thousands |
| 75 and above | 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 4:



- (a) Group 30 - 44 and group 45 - 59 have same population.
(b) $80,000 + 40,000 = 1,20,000$ senior citizens are there in the town.