



पुर्णमा International School
Shree Swaminarayan Gurukul, Zundal

Grade -6
MATHS
Specimen
copy
Year 21-22

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CHAPTER – 9

Data Handling

- **Data:** A collection of numbers gathered to give some information.
- **Recording Data:** Data can be collected from different sources.
- **Pictograph:** The representation of data through pictures of objects. It helps answer the questions on the data at a glance.
- **Bar Graph:** Pictorial representation of numerical data in the form of bars (rectangles) of equal width and varying heights.
- We have seen that data is a collection of numbers gathered to give some information.
- To get a particular information from the given data quickly, the data can be arranged in a tabular form using tally marks.
- We learnt how a pictograph represents data in the form of pictures, objects or parts of objects. We have also seen how to interpret a pictograph and answer the related questions.
- We have drawn pictographs using symbols to represent a certain number of items or things.
- We have discussed how to represent data by using a bar diagram or a bar graph. In a bar graph, bars of uniform width are drawn horizontally or vertically with equal spacing between them. The length of each bar gives the required information.
- To do this we also discussed the process of choosing a scale for the graph. For example, 1 unit = 100 students. We have also practiced reading a given bar graph. We have seen how interpretations from the same can be made.

Ex: 9.1

1(1). In a Mathematics test, the 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

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

Sol. By observing the above-given marks of 40 students, the table can be constructed as follows:

Marks	Tally mark	Number of Students
1		2
2		3
3		3
4		7
5		6
6		7
7		5
8		4
9		3

Students who have scored marks equal to and more than 7 = Number of students with marks 7 +
Number of students with marks 8 + Number of students with marks 9
= 5 + 4 + 3 = 12

1(2). In a Mathematics test, the 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

How many students obtained marks below 4?

Sol. By observing the given marks of 40 students, we can construct the table as follows:

Marks	Tally mark	Number of Students
1		2
2		3
3		3

4		7
5		6
6		7
7		5
8		4
9		3

Students who have scored marks less than 4 = Number of students with marks 1 + Number of students with marks 2 + Number of students with marks 3
 $= 2 + 3 + 3 = 8$

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.

- Arrange the name of sweets in a table using tally marks.
- Which sweet is preferred by most of the students?

Sol. i.

Sweet	Tally Marks	Number of students
Ladoo		11
Barfi		3
Jalebi		7
Rasgulla		9

- Ladoo is preferred by most of the students.

3(1). 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.

Sol. The above-given data is represented in the table as follows:

Number	Tally Mark	Number of times
1		7
2		6

3		5
4		4
5		11
6		7

From the above table, the number which appeared the minimum number of times is 4.

3(2). 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 maximum number of times.

Sol. The above-given data can be represented in table as follows:

Number	Tally Mark	Number of times
1		7
2		6
3		5
4		4
5		11
6		7

From the above table, the number which appeared the maximum number of times is 5.

3(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 those numbers that appear an equal number of times.

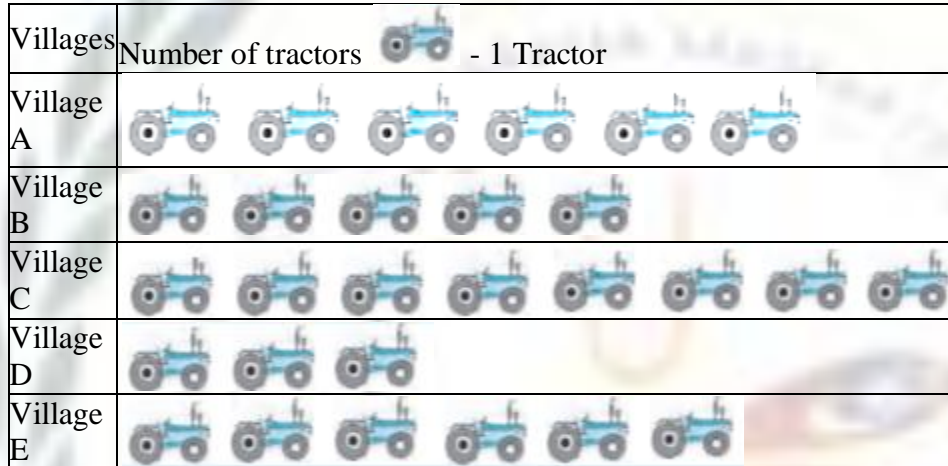
Sol. Given data can be represented in the table is as follows:

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

4		4
5	 	11
6	 	7

From the above table, there are two numbers which appear for the same number of times and these are 1 and 6.

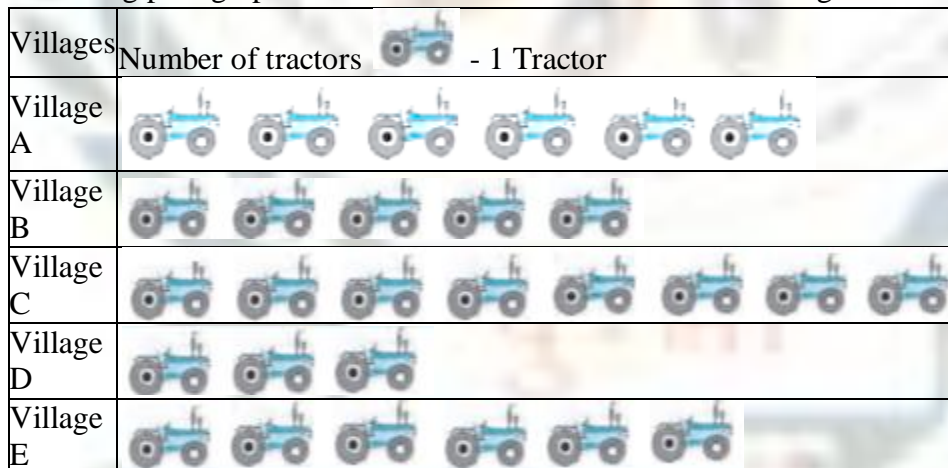
4(1). Following pictograph shows the number of tractors in five villages:



Which village has the minimum number of tractors?

Sol. From the above pictograph, Village D has the minimum number of tractors as this village has only 3 tractors.







4(2). Following pictograph shows the number of tractors in five villages:



Which village has the maximum number of tractors?

Sol. From the above pictograph, Village C has the maximum number of tractors as this village has 8 tractors.

4(3). 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	

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

Sol. From the given pictograph, we have,

Number of more tractors that village C has as compared to B = $8 - 5 = 3$

4(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	






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

Sol. From the above pictograph, we have,

Total number of tractors in all given villages = $6 + 5 + 8 + 3 + 6 = 28$

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

Classes	Number of girls students  - 4 Girls
I	
II	
III	








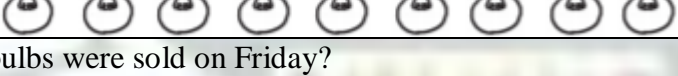
IV	
V	
VI	
VII	
VIII	

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?

- Sol.**
- Class VIII has the minimum no. of girl students.
 - No! the number of girls in class VI is not less than the number of girls in class V.
 - Number of girls in class VII = $3 \times 4 = 12$.

6(1). 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	

How many bulbs were sold on Friday?





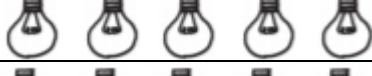


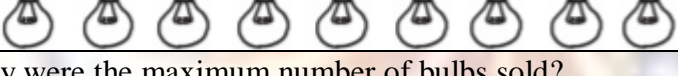
Sol. Firstly, there are following number of bulbs on different days of the week:

Days	Number of electric bulbs
Monday	$6 \times 2 = 12$
Tuesday	$8 \times 2 = 16$

Wednesday	$4 \times 2 = 8$
Thursday	$5 \times 2 = 10$
Friday	$7 \times 2 = 14$
Saturday	$4 \times 2 = 8$
Sunday	$9 \times 2 = 18$

Therefore 14 bulbs were sold on Friday.





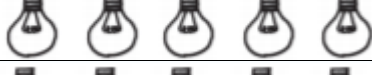


6(2). The sale of electric bulbs on different days of a week is shown below:

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

On which day were the maximum number of bulbs sold?

Sol. From the given pictograph and above table, we have,
Maximum number of bulbs = 18 were sold on Sunday.

6(3). The sale of electric bulbs on different days of a week is shown below:




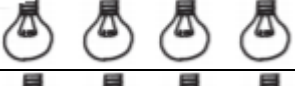
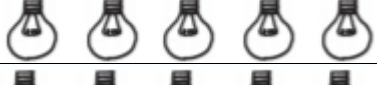



Days	Number of electric bulbs  - 2 Bulbs
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

Sunday	
--------	---

On which of the days same number of bulbs were sold?

Sol. From the given pictograph and table, an equal number of bulbs i.e, 8, were sold on Wednesday and Saturday.







6(4). 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	

On which of the days minimum number of bulbs were sold?

Sol. From the given pictograph and table, minimum number of bulbs were sold on Wednesday and Saturday i.e. 8

6(5). 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	

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

Sol. From the above given table, we have,

Total number of bulbs sold in a week = $12 + 16 + 8 + 10 + 14 + 8 + 18 = 86$

9 bulbs can be in = 1 carton






1 bulb can be in = $\frac{1}{9}$ carton

86 bulbs can be in = $86 \times \frac{1}{9} = 9.55$ cartons

As number of cartons cannot be in decimal.

Therefore, 10 cartons will be needed.

7(1). In a village six fruit merchants sold the number of fruit baskets in a particular season:

Number of fruit merchants	Number of fruit baskets  - 100 Fruit baskets
Rahim	
Lakhanpal	
Anwar	
Martin	
Ranjit Singh	
Joseph	








Observe this pictograph and answer the question: Which merchant sold the maximum number of baskets?

Sol. From the above-given pictograph following table is constructed as follows:

Number of fruit merchants	Number of fruit baskets
Rahim	400
Lakhanpal	550
Anwar	700
Martin	950
Ranjit Singh	800
Joseph	450

Therefore, from the above table, Martin sold the maximum number of baskets i.e. 950

7(2). In a village six fruit merchants sold the number of fruit baskets in a particular season:

Number of fruit merchants	Number of fruit baskets  - 100 Fruit baskets
Rahim	
Lakhanpal	
Anwar	
Martin	
Ranjit Singh	
Joseph	








Observe this pictograph and answer the question: How many fruit baskets were sold by Anwar?

Sol. From the above-given pictograph following table is constructed as below:

Number of fruit merchants	Number of fruit baskets
Rahim	400
Lakhanpal	550
Anwar	700
Martin	950
Ranjit Singh	800
Joseph	450

Therefore, Total number of fruit baskets sold by Anwar is 700.

7(3). In a village six fruit merchants sold the number of fruit baskets in a particular season:

Number of fruit merchants	Number of fruit baskets  - 100 Fruit baskets
Rahim	
Lakhanpal	
Anwar	
Martin	
Ranjit Singh	
Joseph	

Observe this pictograph and answer the question:

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?

Sol. From the above-given pictograph following table is constructed:

Number of fruit merchants	Number of fruit baskets
Rahim	400
Lakhanpal	550
Anwar	700
Martin	950
Ranjit Singh	800
Joseph	450

The merchants who have sold more than 600 baskets are Anwar, Martin and Ranjit.

Ex. 9.2

1(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 $\otimes\otimes$ to represent 10 animals and answer the question:

How many symbols represent animals of village E?

Sol. We can prepare the pictograph of the given data as follows:

Village	No. of animals($\otimes\otimes = 10$ animals)
Village A	$\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes$
Village B	\otimes
Village C	$\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes$
Village D	$\otimes\otimes\otimes\otimes\otimes\otimes\otimes$
Village E	$\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes$

Given that,

$\otimes\otimes = 10$ animals

And, it is given that, Village E has 60 animals

Therefore, 6 symbols ($\otimes\otimes$) will represent the animals of village E.

1(2). 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 $\otimes\otimes$ to represent 10 animals and answer the question:

Which village has the maximum number of animals?

Sol. We can prepare the pictograph of the given data as follows:

Village	No. of animals($\otimes\otimes = 10$ animals)
Village A	$\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes$
Village B	\otimes
Village C	\otimes
Village D	$\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes$
Village E	$\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes$

Here,

Maximum numbers of symbols ($\otimes\otimes$) are there in the section of village B

And,

$\otimes\otimes = 10$ animals

Hence, Village B has a maximum number of animals.

1(3). 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 $\otimes\otimes$ to represent 10 animals and answer the question:

Which village has more animals : village A or village C?

Sol. We can prepare the pictograph of the given data as follows:

Village	No. of animals($\otimes\otimes = 10$ animals)
Village A	$\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes$
Village B	\otimes
Village C	\otimes
Village D	$\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes$
Village E	$\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes\otimes$

Here,

Village A has 8 symbols ($\otimes\otimes$)

And, Village C has 9 symbols ($\otimes\otimes$)


Now, we know that,

⊗⊗ = 10 animals






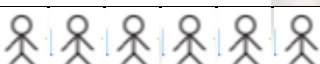
Therefore,
village C has more animals in it.

2(1). 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

Prepare a pictograph of students using one symbol  to represent 100 students and answer the question:
How many symbols represent total number of students in the year 2002?

Sol. We can prepare the pictograph of the given data as follows:

Year	Number of students () = 100 students
1996	
1998	
2000	
2002	
2004	

Here,

 = 100 students,


And, it is given that, In the year 2002, there were 600 students

Hence,

6 symbols will represent the students of the year 2002.

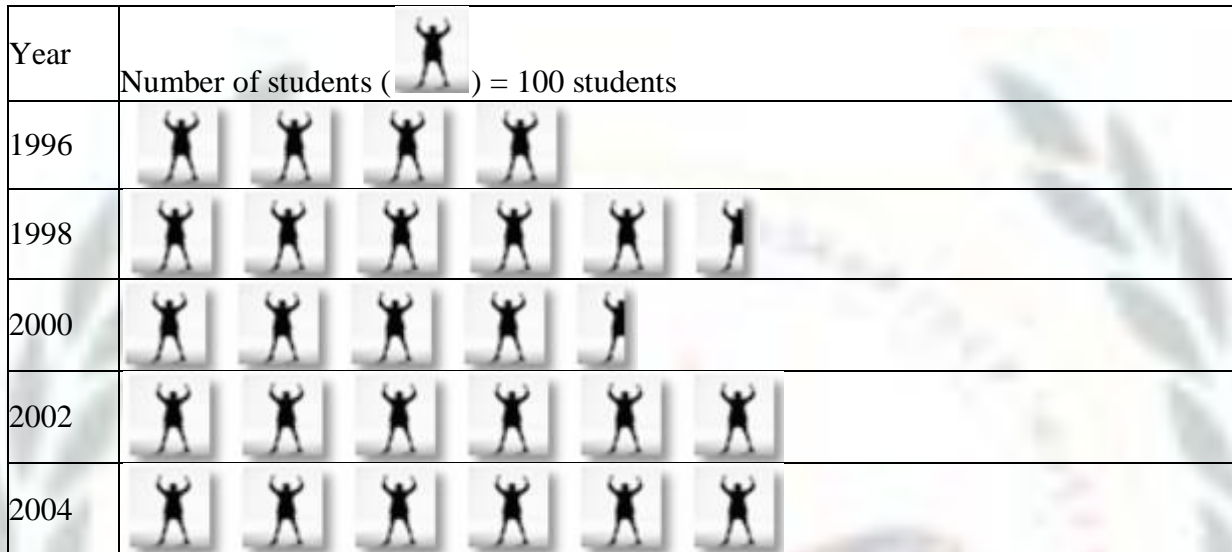
2(2). Total number of students of a school in different years is shown in the following table

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


Prepare a pictograph of students using one symbol  to represent 100 students and answer the question:

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

Sol. We can prepare the pictograph of the given data as follows:



Here,

 = 100 students.

Also, it is given that, in the year 1998, there were 535 students.

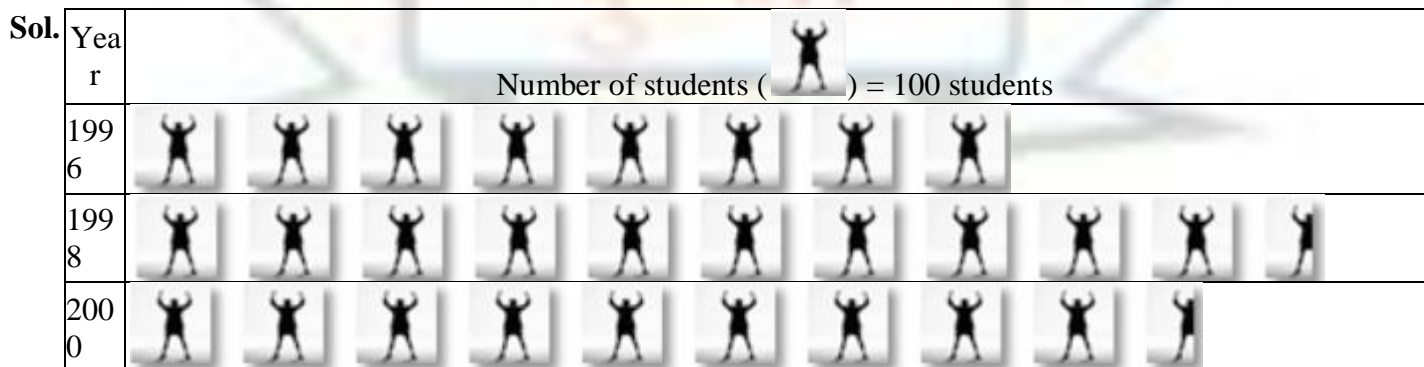
Hence,

5 complete and one incomplete symbol will represent the students of the year 1998.

2(3). 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

Prepare another pictograph of students using any other symbol each representing 50 students. Which pictograph do you find more informative?

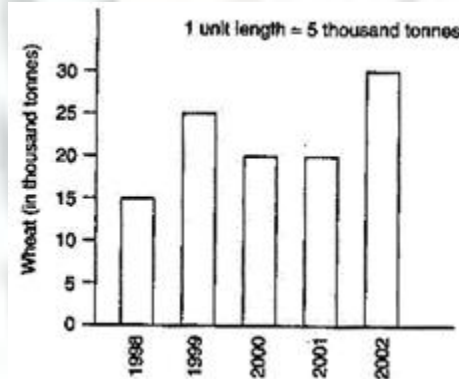




Hence, we can observe that the second pictograph is more informative.

Ex. 9.3

- The bar graph given alongside shows the amount of wheat purchased by government during the year 1998-2002:

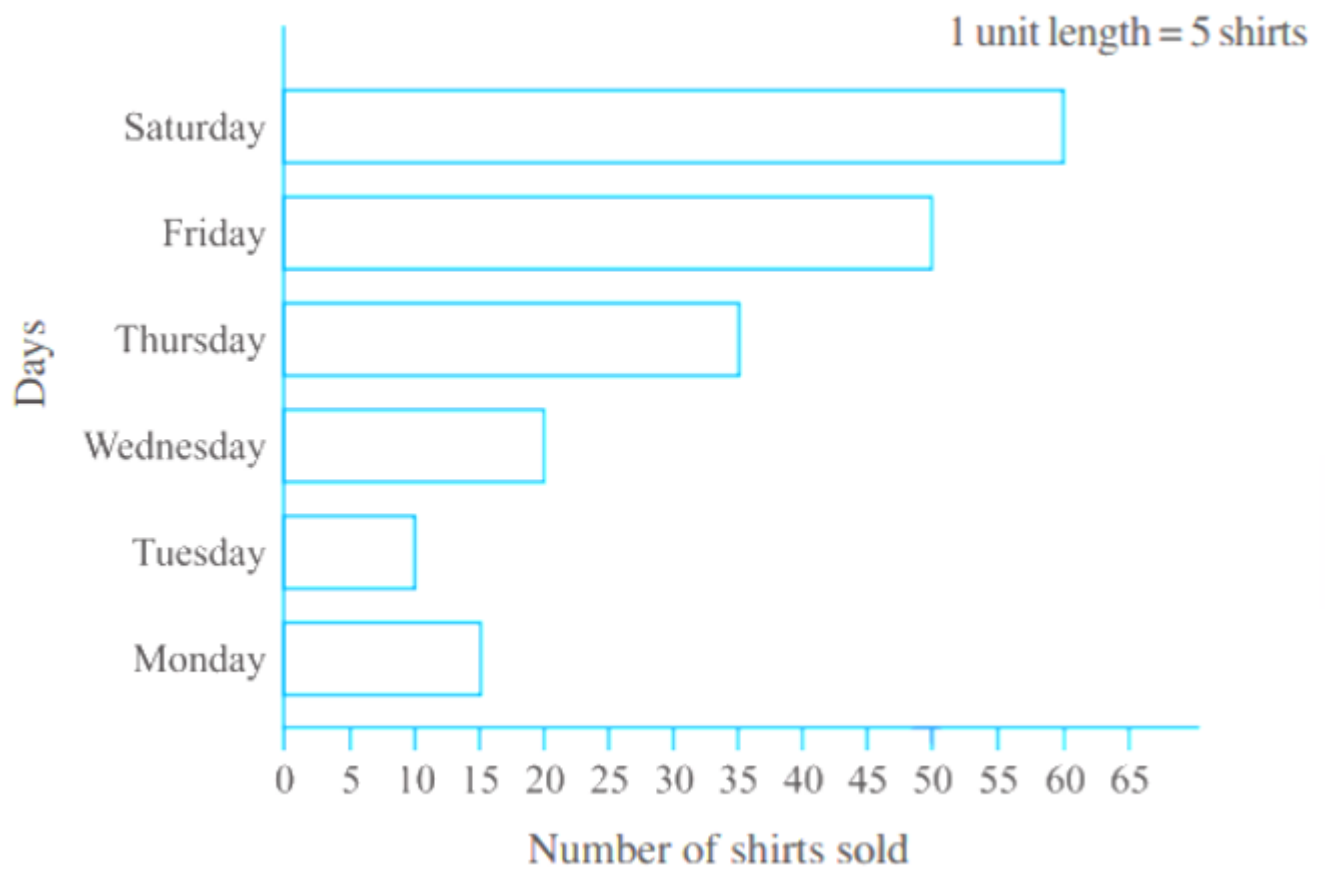


Read the bar graph and write down your observations. In which year was

- the wheat production maximum?
- the wheat production minimum?

- Sol.**
- The wheat production was maximum in the year 2002.
 - The wheat production was minimum in the year 1998.

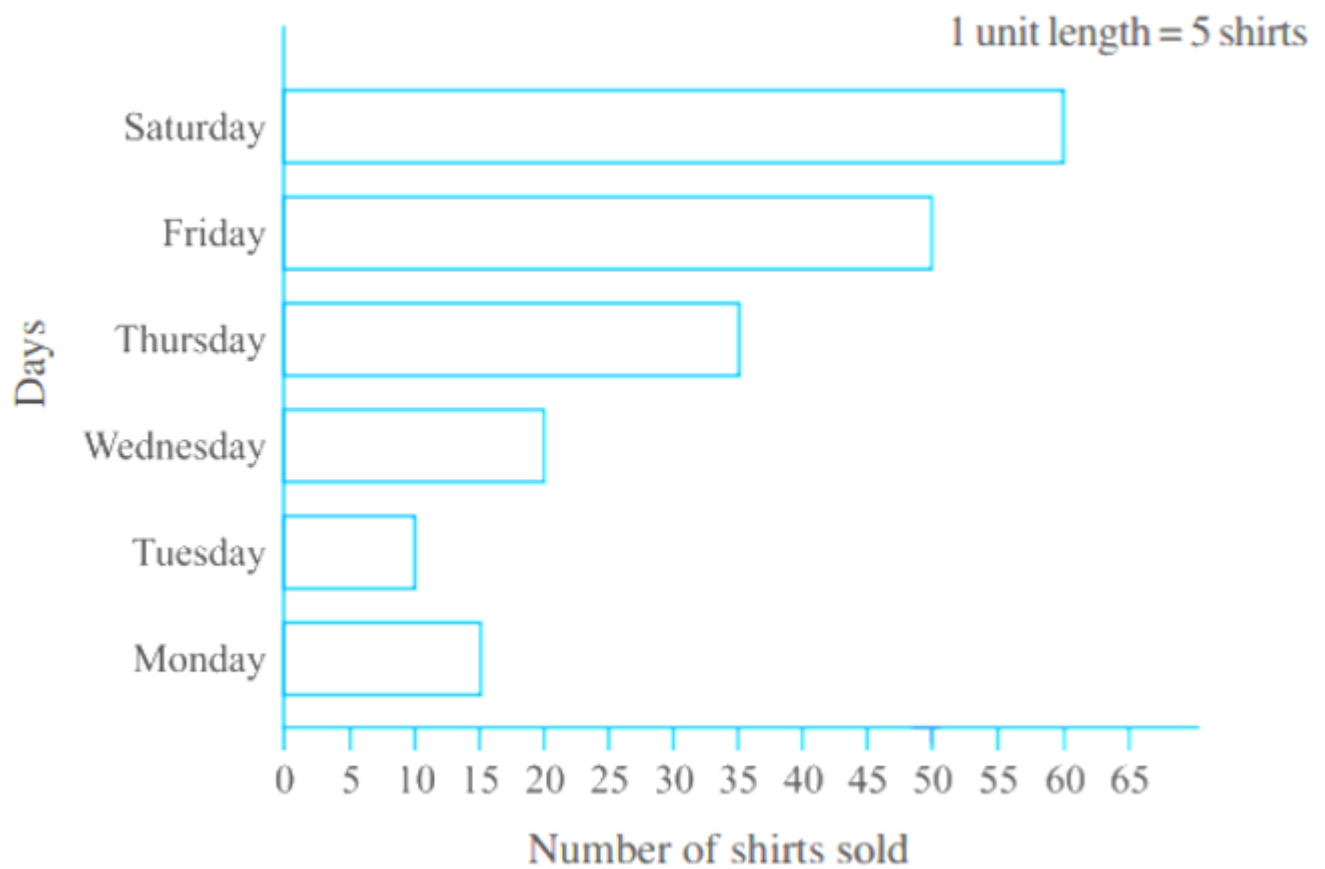
- Observe this bar graph which is showing the sale of shirts in a ready-made shop from Monday to Saturday.



What information does the above bar graph give?

Sol. The given bar graph represents the number of shirts sold from Monday to Saturday.

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

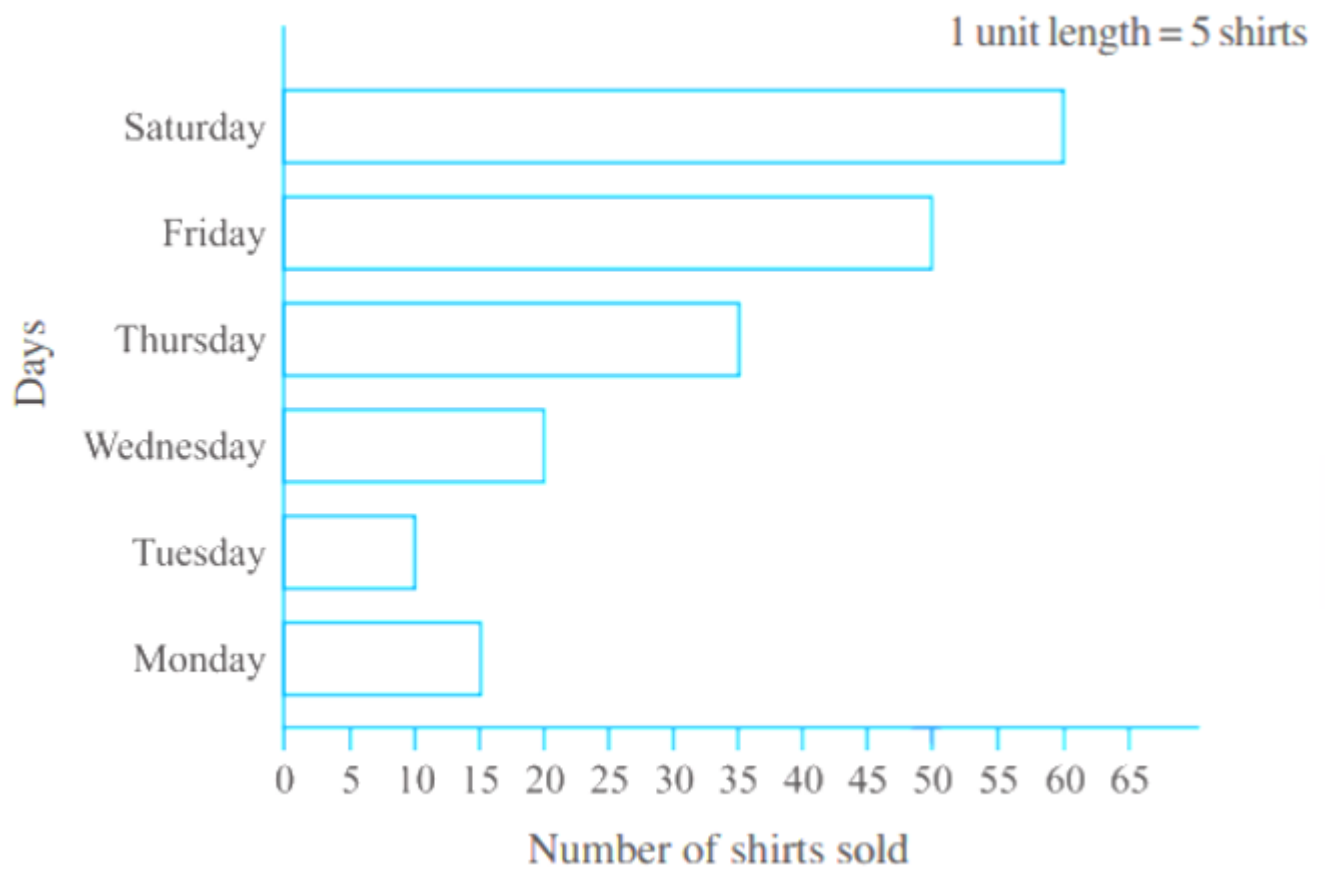


What is the scale chosen on the horizontal line representing number of shirts?

Sol. From the given bar graph, the scale of the horizontal line representing the number of shirts is chosen as:

1 unit = 5 shirts

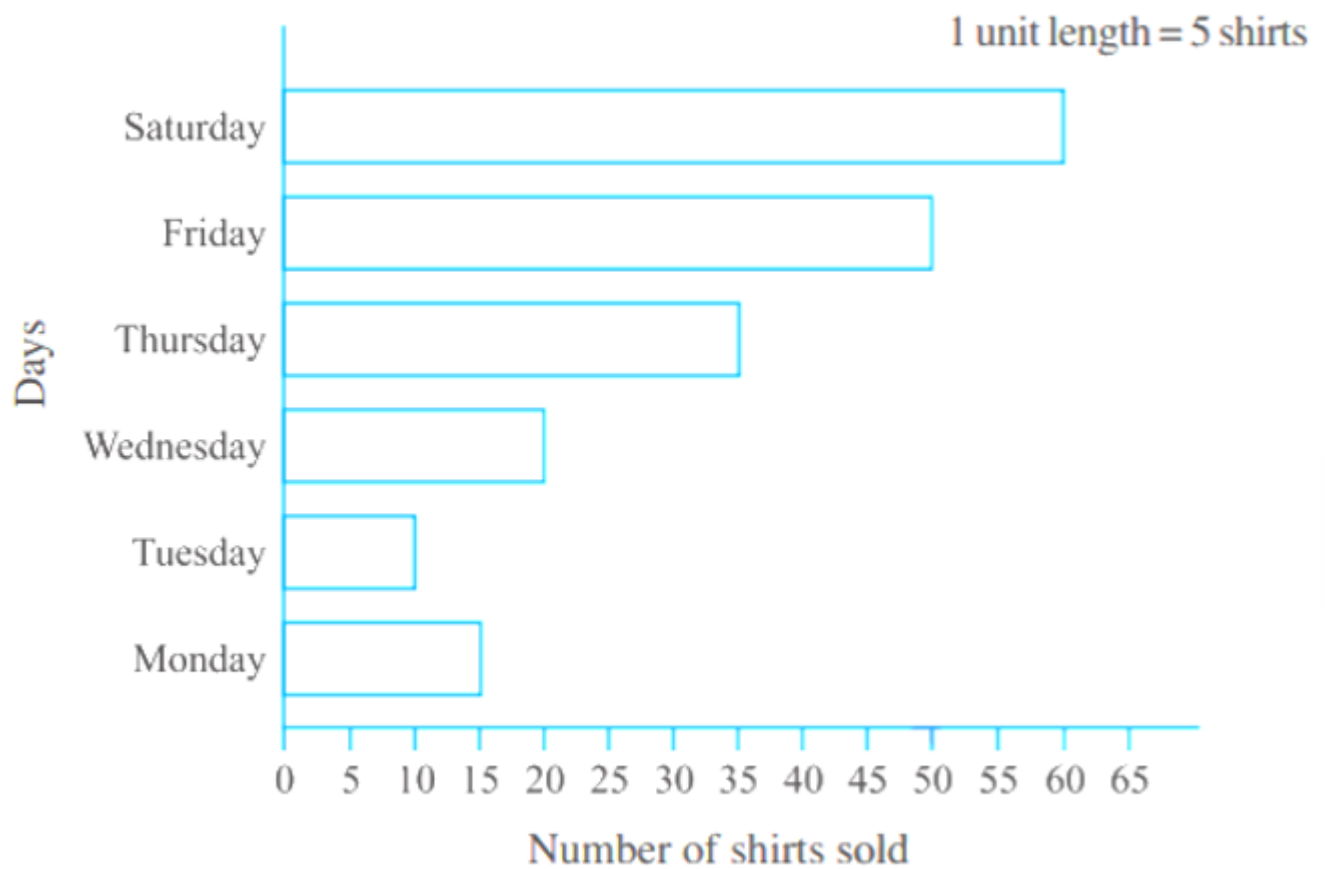
2(3). Observe this bar graph which is showing the sale of shirts in a ready made shop from Monday to Saturday.



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

Sol. From the given bar graph we observe that,
Maximum shirts were sold on Saturday with a total number of 60 shirts.

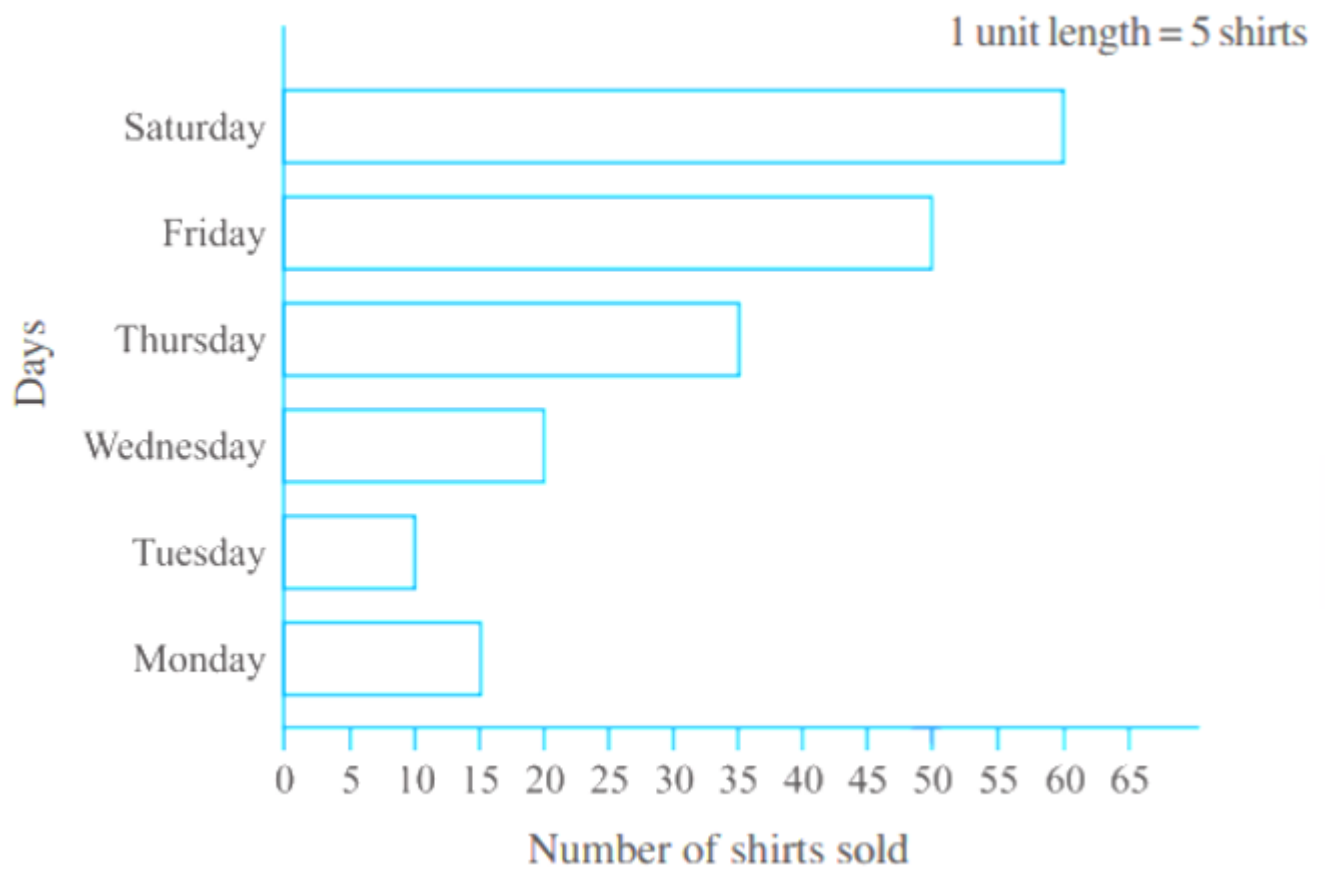
2(4). Observe this bar graph which is showing the sale of shirts in a ready made shop from Monday to Saturday.



On which day were the minimum number of shirts sold?

Sol. From the given bar graph we observe that,
Minimum shirts were sold on Tuesday with a total number of 10 shirts.

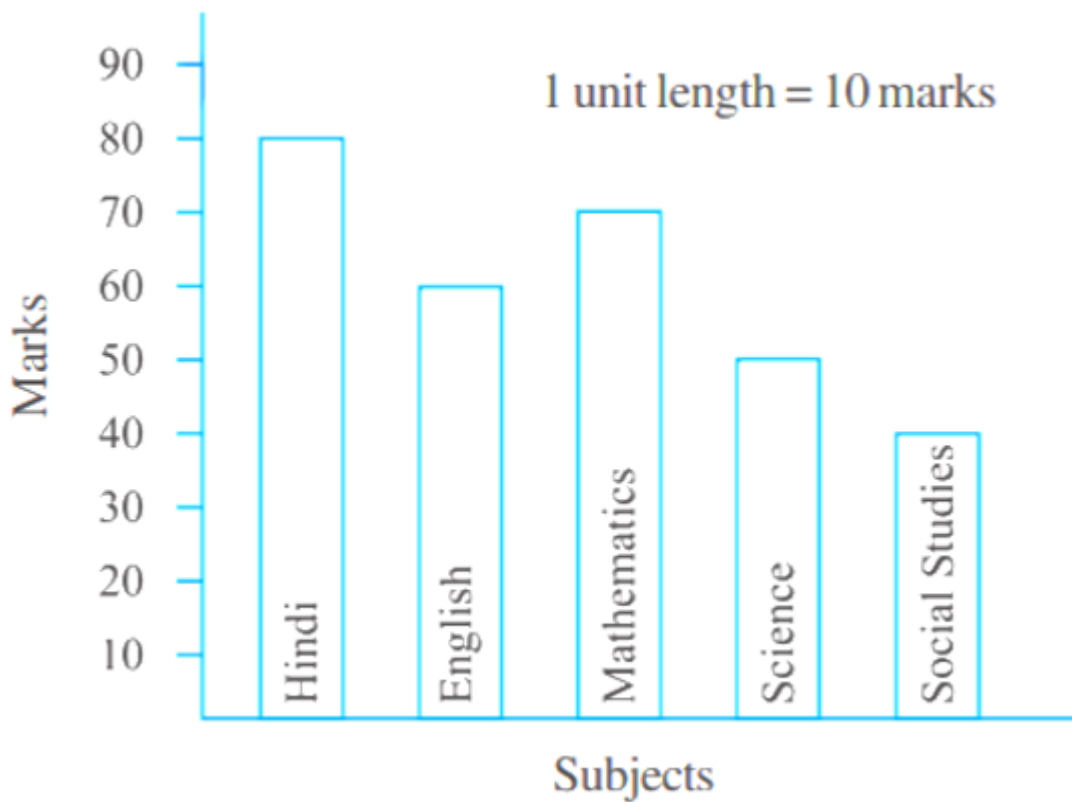
2(5). Observe this bar graph which is showing the sale of shirts in a ready made shop from Monday to Saturday.



How many shirts were sold on Thursday?

Sol. From the given graph, we observe that, 35 shirts were sold on Thursday.

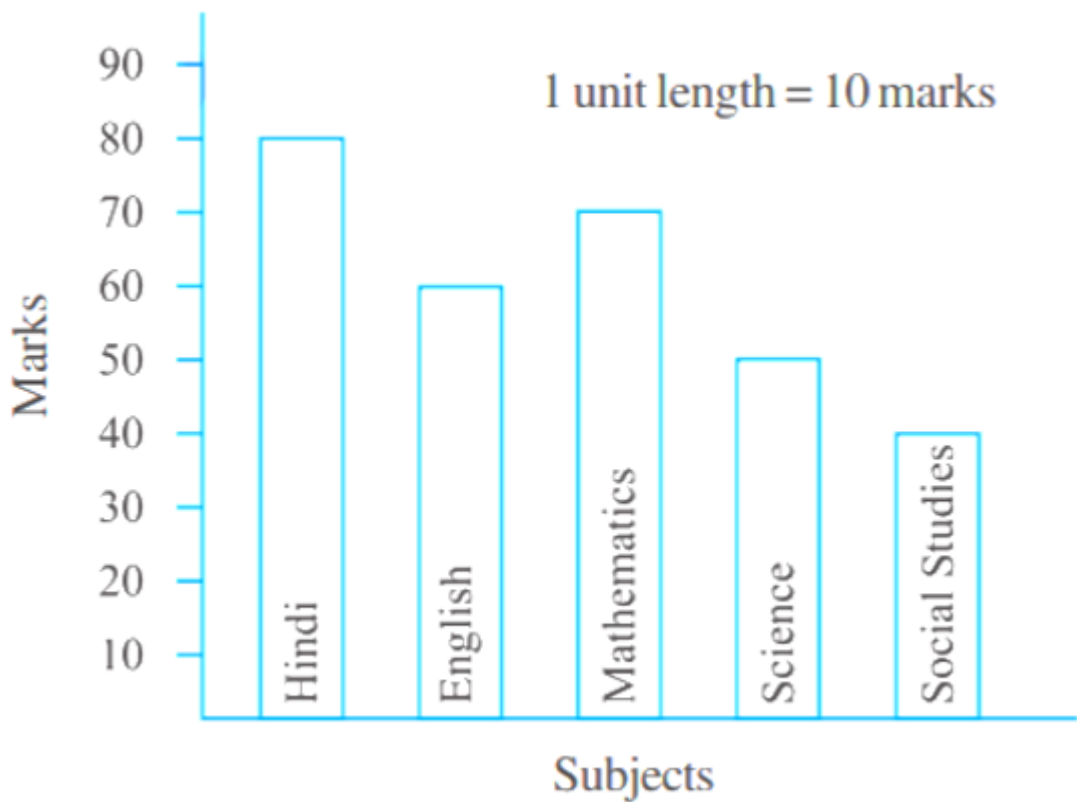
3(1). Observe this bar graph which shows the marks obtained by Aziz in half-yearly examination in different subjects.



What information does the bar graph give?

Sol. From the given bar graph, we observe that,
The given bar graph shows the marks obtained by Aziz in various subjects.

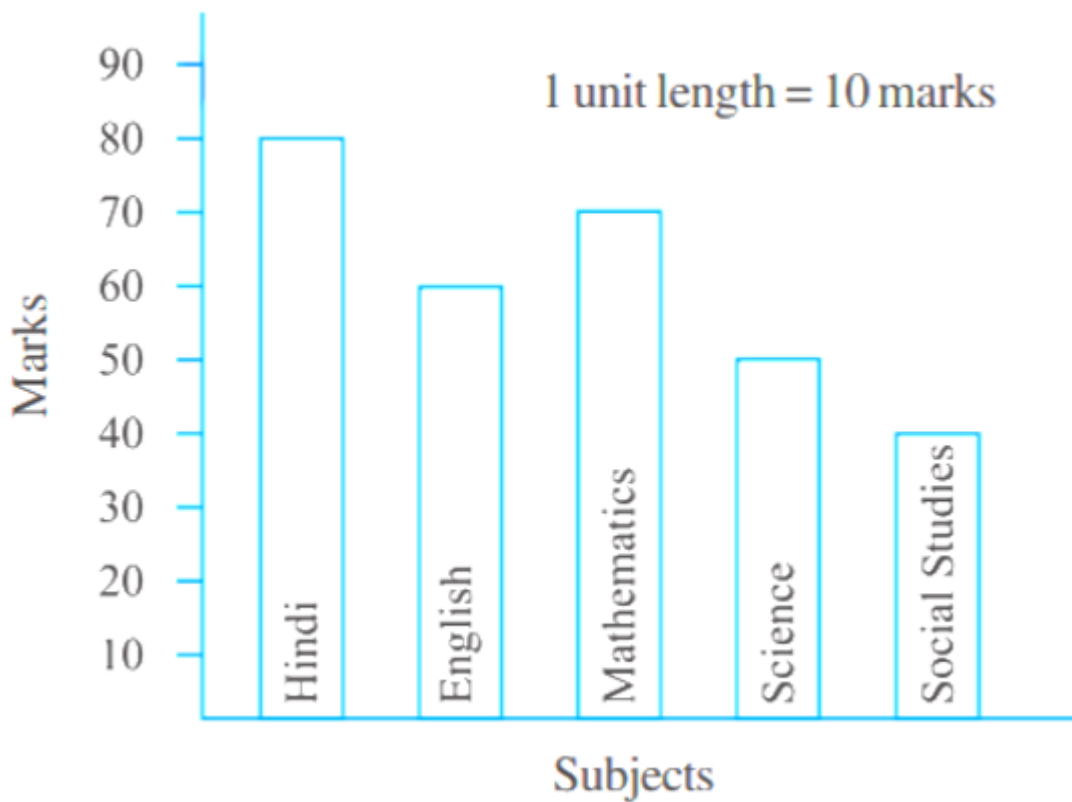
3(2). Observe this bar graph which shows the marks obtained by Aziz in half-yearly examination in different subjects.



Name the subject in which Aziz scored maximum marks.

Sol. From the given bar graph, we observe,
The maximum marks were scored by Aziz in the subject of Hindi.
He scored 80 marks in Hindi.

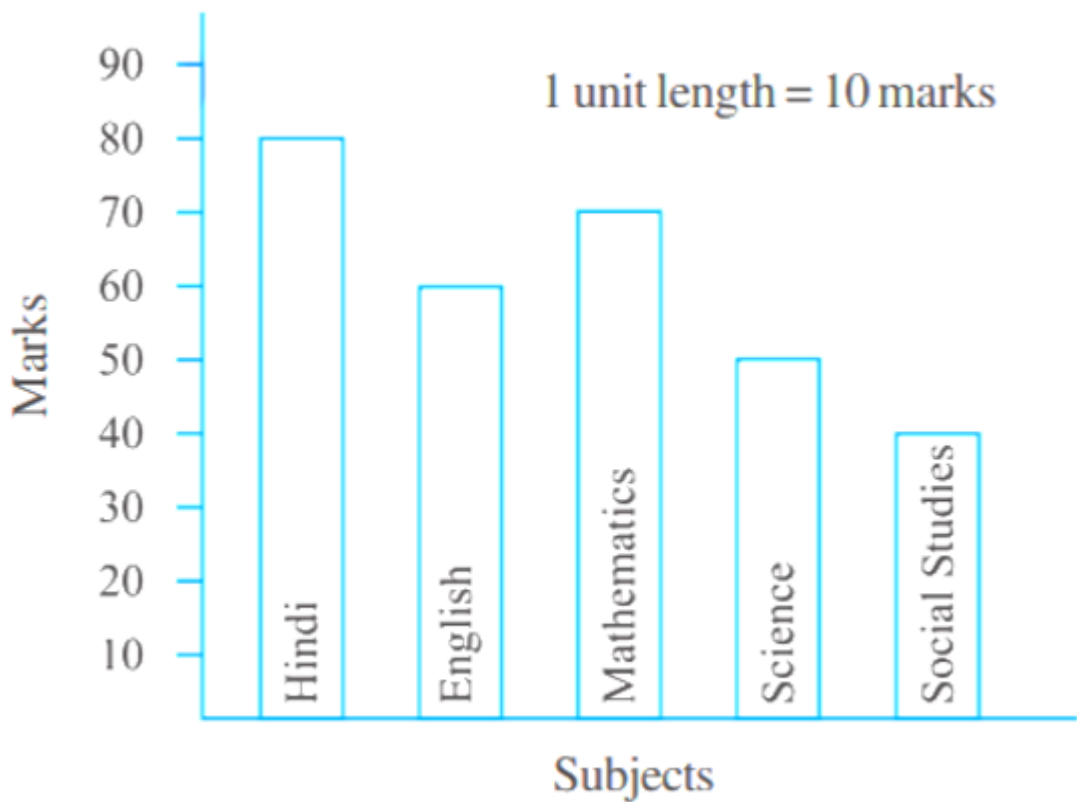
3(3). Observe this bar graph which shows the marks obtained by Aziz in half-yearly examination in different subjects.



Name the subject in which he has scored minimum marks.

Sol. From the given bar graph, we observe,
The least marks were scored by Aziz in the subject of Social Studies.
He scored 40 marks in Social Studies.

3(4). Observe this bar graph which shows the marks obtained by Aziz in half-yearly examination in different subjects.



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

Sol. From the given graph, we can observe that,
The name of the subject with its respective marks are listed below:
Hindi = 80
English = 60
Maths = 70
Science = 50
Social studies = 40

EX : 9.4

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

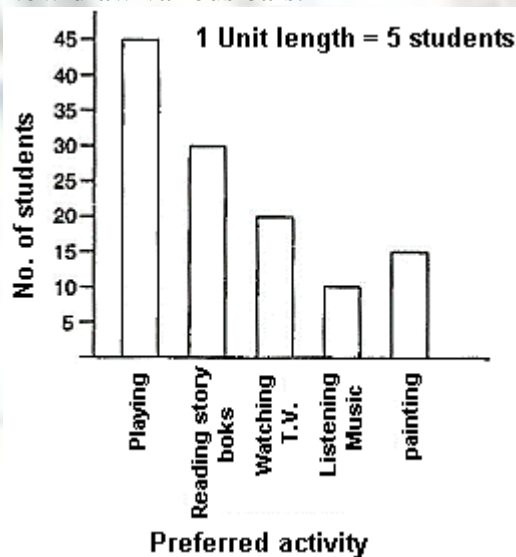
Preferred activity	Number of Students
Playing	45
Reading storybooks	30
Watching T.V.	20
Listening music	10
Painting	15

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?

- Sol.**
1. Draw two perpendicular lines - one vertical and one horizontal.
 2. Along horizontal line mark the "Preferred activity" and along vertical line mark the "No. of students".
 3. Take bars of same width keeping uniform gap between them.
 4. Take scale of 1 unit length = 5 students along the vertical line and then mark the corresponding values.
 5. Calculate the heights of the bars for various activities preferred as shown below:

Playing	$45 \div 5 = 9$ units
Reading story books	$30 \div 5 = 6$ units
Watching T.V.	$20 \div 5 = 4$ units
Listening music	$10 \div 5 = 2$ units
Painting	$15 \div 5 = 3$ units

6. Now draw various bars.



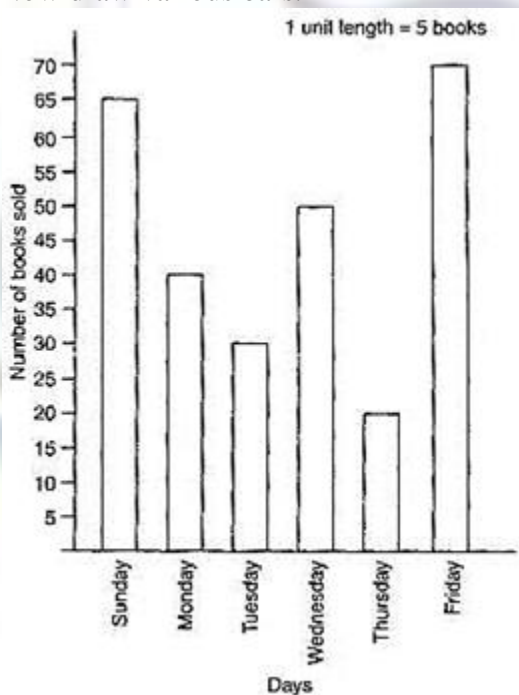
The activity "Reading story books" is preferred by most of the students other than playing.

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

Days	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Number of books sold	65	40	30	50	20	70

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

- Sol.**
- Draw two perpendicular lines—ones vertical and one horizontal.
 - Along horizontal line mark the "days" and along vertical line mark the "number of books sold."
 - Take bars of same width keeping uniform gap between them.
 - Take scale of 1 unit length = 5 books along the vertical line and mark the corresponding values.
 - Calculate the heights of the bars for various days as shown below :
Sunday: $65 \div 5 = 13$ units
Monday: $40 \div 5 = 8$ units
Tuesday: $30 \div 5 = 6$ units
Wednesday: $50 \div 5 = 10$ units
Thursday: $20 \div 5 = 4$ units
Friday: $70 \div 5 = 14$ units
 - Now draw various bars.



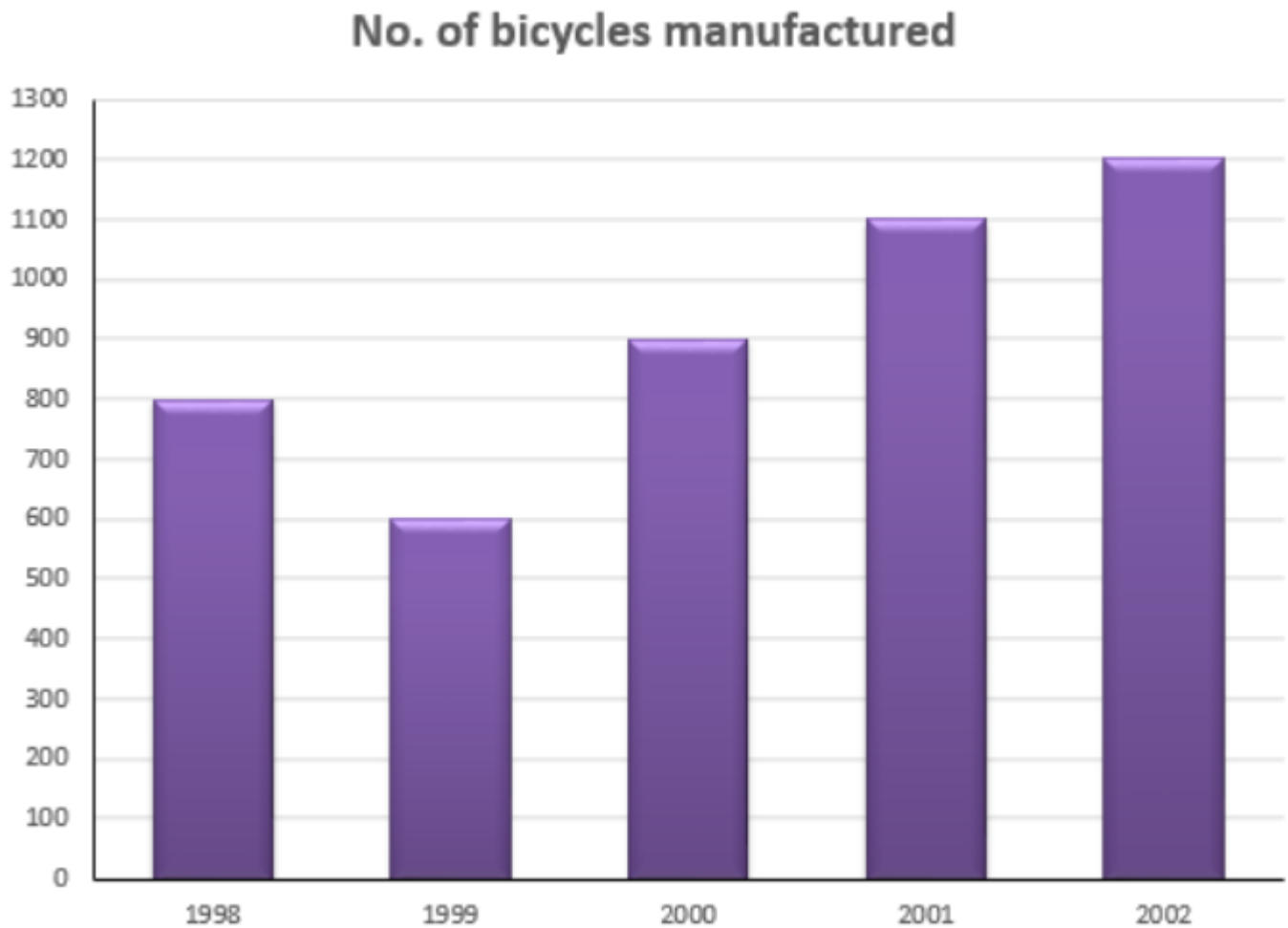
3(1). Following table shows the number of bicycle manufactured in a factory during the years 1998 to 2002. Illustrate this data in a bar graph. Choose a scale of your choice.

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

In which year were the maximum number of bicycles manufactured?

Sol. According to the question,

By taking a scale of 1 unit = 100 bicycles, a bar graph of the above-given data can be constructed as follows:



From the bar graph, we conclude that,

The maximum number of bicycles 1200, were manufactured in the year 2002.

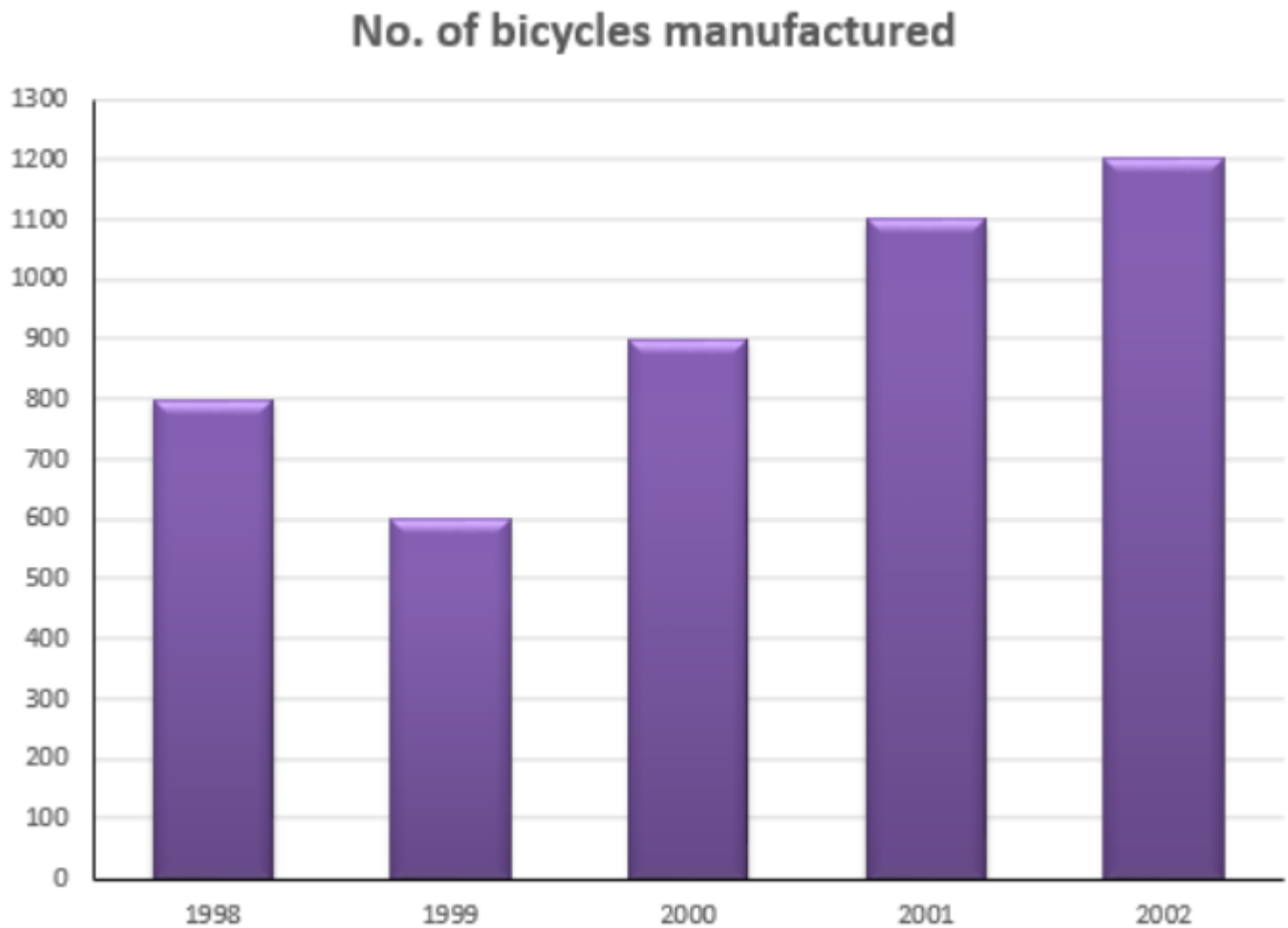
3(2). Following table shows the number of bicycle manufactured in a factory during the years 1998 to 2002. Illustrate this data in a bar graph. Choose a scale of your choice.

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

In which year were the minimum number of bicycles manufactured?

Sol. According to the question,

By taking a scale of 1 unit = 100 bicycles, a bar graph of the above-given data can be constructed as follows:



From the above bar graph, we can see that,
The minimum number of bicycles were manufactured in the year 2001.
And a total of 600 bicycles were manufactured.

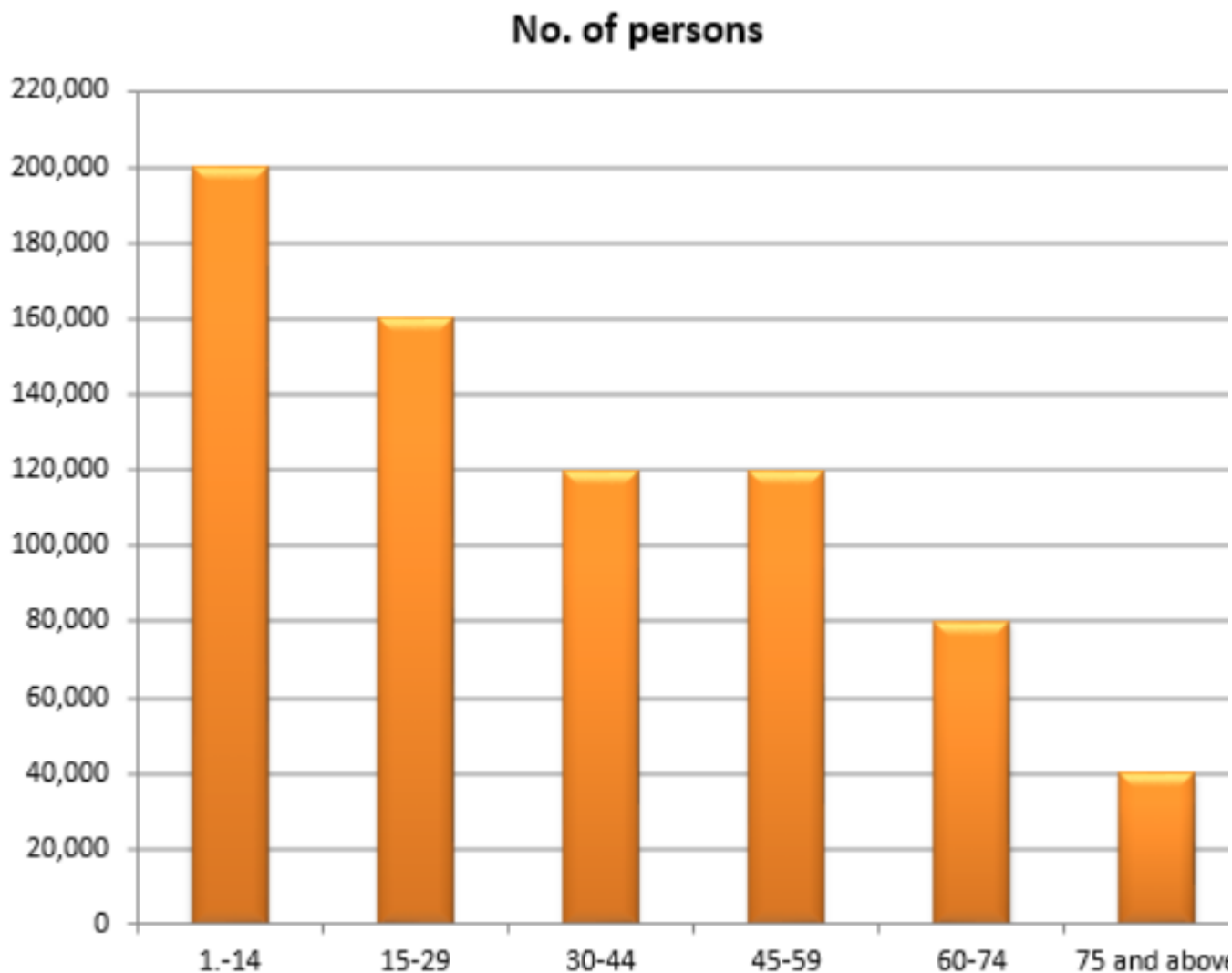
4(1). Number of persons in various age groups in a town is given in the following table :

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

Draw a bar graph to represent the above information and which two age groups have same population?

Sol. According to the question,

By taking a scale of 1 unit = 20 thousands, a bar graph of the above-given data can be constructed as follows:



From the above bar graph, we can clearly observe that,

The age groups in which the population is same are 30 - 44 and 45 - 59.

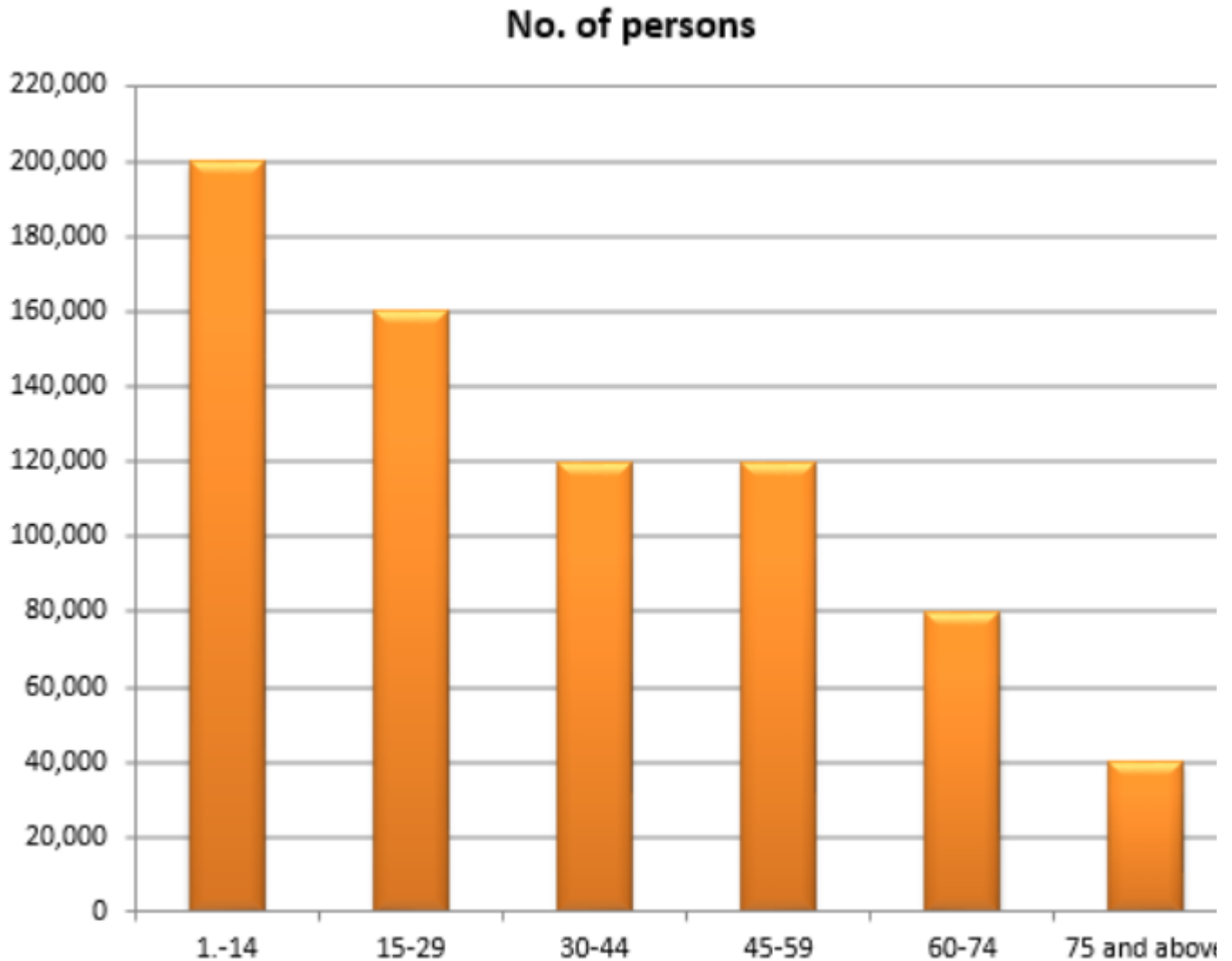
4(2). Number of persons in various age groups in a town is given in the following table :

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

Draw a bar graph to represent the above information and all persons in the age group of 60 and above are called senior citizens. How many senior citizens are there in the town?

Sol. According to the question,

By taking a scale of 1 unit = 20 thousands, a bar graph of the above-given data can be constructed as follows:



From the above bar graph, we can observe that,

The senior citizens are the people that are either from the age group of 60 – 74 and from the age group of 75 and above. Therefore,

We can calculate the number of senior citizens as follows:

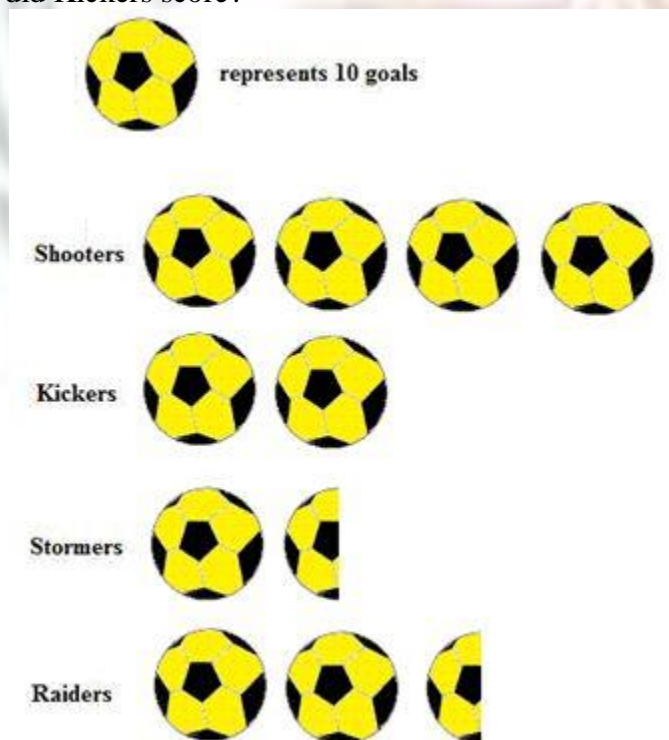
Total no. of senior citizen = $80,000 + 40,000 = 1,20,000$

Worksheet Ch-9 Data handling

1. Following frequency distribution table shows marks (out of 50) obtained in English by 45 students of class VI. Which two classes have the same frequency?

Class Interval	Frequency
0 - 10	1
10 - 20	6
20 - 30	20
30 - 40	12
40 - 50	6
Total	45

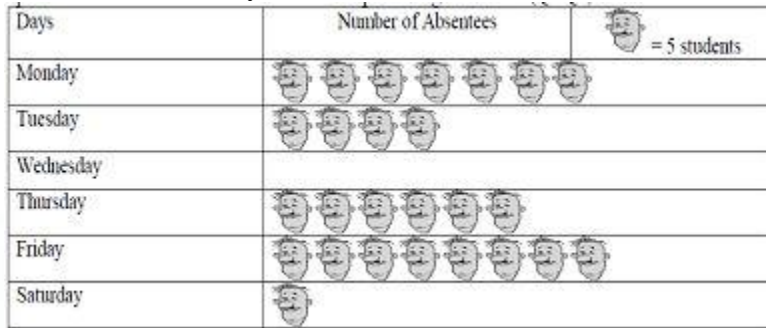
- a. 10 - 20 and 40 - 50
b. None of these
c. 10 - 20 and 20 - 30
d. 20 - 30 and 40 - 50
2. The pictograph shows the numbers of goals scored by four soccer teams in a season. How many goals did Kickers score?



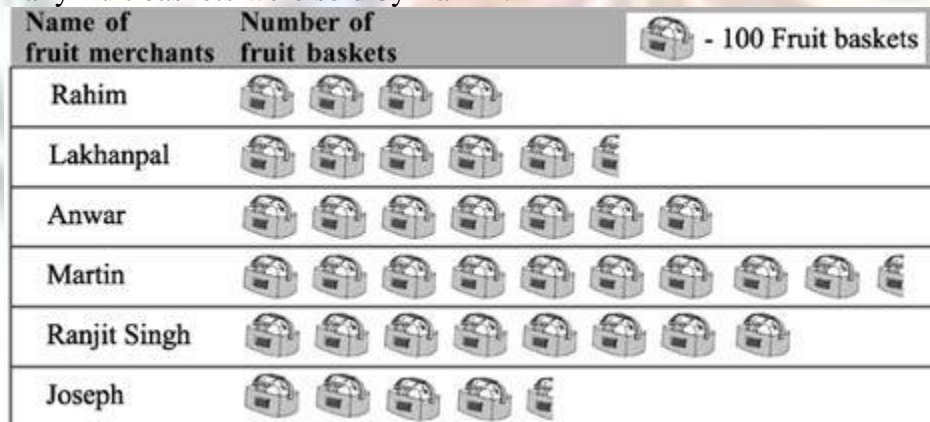
- a. 20
b. None of these
c. 10

d. 15

3. The following pictograph shows the number of absentees in a class of 50 students during the previous week. On which day were the maximum number of students absent?

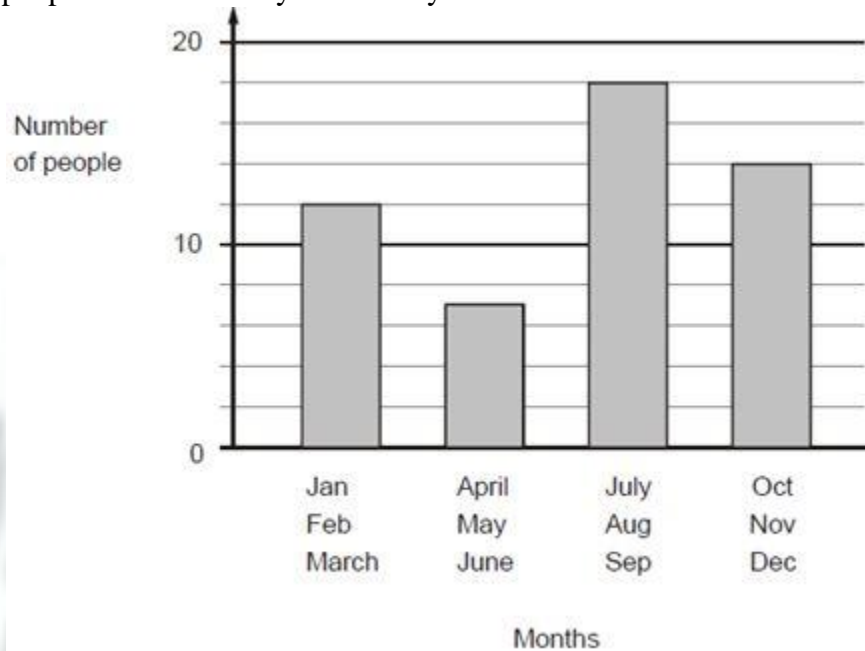


- a. Saturday
b. Friday
c. Thursday
d. Wednesday
4. A _____ is a collection of numbers gathered to give some information.
- a. Tally mark
b. Data
c. None of these
d. Frequency
5. In a village six fruit merchants sold the following number of fruit baskets in a particular season. How many fruit baskets were sold by Rahim?



- a. 700
b. 400
c. 500
d. 650

6. This chart shows the number of people with birthdays in each three months of the year. How many people have a birthday before July?



- None of these
- 7
- 12
- 19

7. Match the following:-

Column A	Column B
1.	(a) 8
2.	(b) 6
3.	(c) 5
4.	(d) 3

8. Fill up the following:

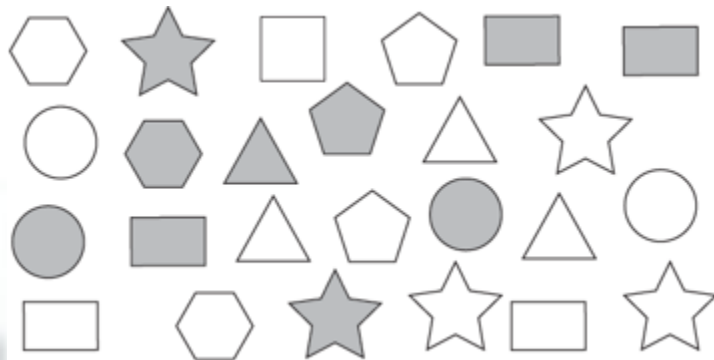
- Representation of data with the help of tally marks is called _____.
- In a bar graph width of rectangle is always _____.
- The tally mark represents _____.
- In a bar graph, _____ can be drawn horizontally and vertically.

9. State true or false:

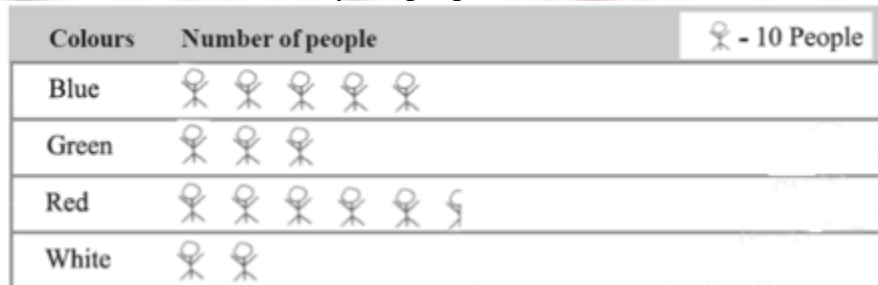
- A bar graph represents data in the form of pictures, object or parts of objects.
- Data is a collection of numerical figures giving required information.
- In a bar graph width of rectangle is always equal.
- The tally mark represents 5.

10. A collection of numbers gathered to give some information is called?

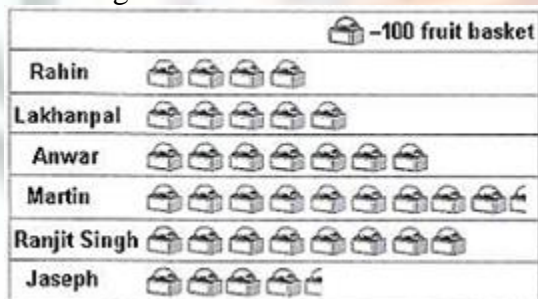
11. For a math assignment a group of students had to draw their favorite shapes.
The following pictures represent their choices. Each picture stands for 25 shapes.



12. The colors of fridges preferred by people living in a locality are shown by the following pictograph
Which colour most liked by the people?



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

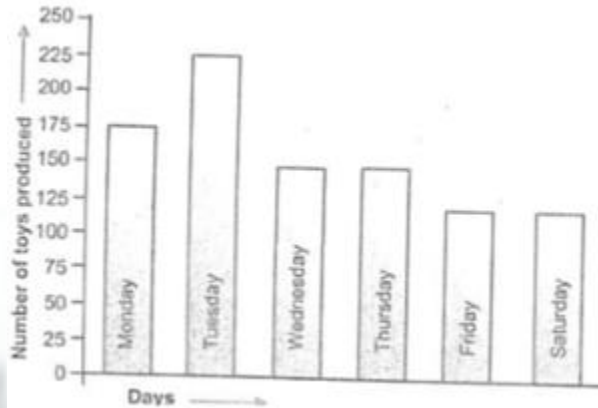


Observe this pictograph and answer the following questions:

- Which merchant sold the maximum number of baskets?
 - How many fruit baskets were sold by Answer?
 - 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?
14. 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
Plying	45
Reading story books	30
Watching T.V.	20
Listening music	10
Painting	15

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 ?
16. The bar graph shows the number of toys produced by a factory during a certain week:



Answer the following questions:

- On which day the maximum number of toys were produced?
- On which day equal number of toys were produced?
- What is the total number of toys produced during the week?
- In which day minimum number of toys were produced?

Notes
CHAPTER - 10
Mensuration

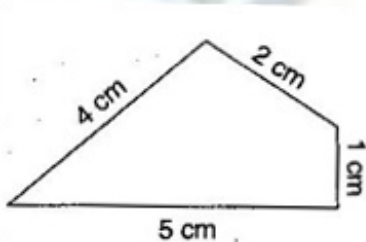
- **Perimeter** is the distance covered along the boundary forming a closed figure when you go round the figure once.
 - (a) Perimeter of a rectangle = $2 \times (\text{length} + \text{breadth})$
 - (b) Perimeter of a square = $4 \times \text{length of its side}$
 - (c) Perimeter of an equilateral triangle = $3 \times \text{length of a side}$
 - (d) Perimeter of a regular pentagon has five equal sides = $5 \times \text{length of a sides}$
- Figures in which all sides and angles are equal are called **regular closed figures**.
- The amount of surface enclosed by a closed figure is called its **area**.
- To calculate the area of a figure using a squared paper, the following conventions are adopted :
 - (a) Ignore portions of the area that are less than half a square.
 - (b) If more than half a square is in a region. Count it as one square
 - (c) If exactly half the square is counted, take its area as $1 / 2$ sq units.
- Area of a rectangle = length \times breadth
- Area of a square = side \times side

Chapter: 10 Mensuration

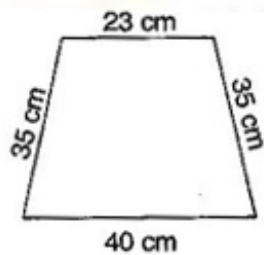
Sub : Maths

Ex. 10.1

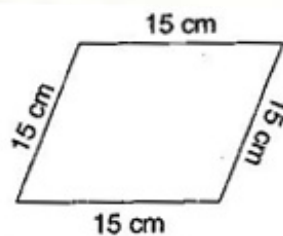
Question 1. Find the perimeter of each of the following figures:



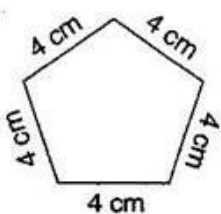
(a)



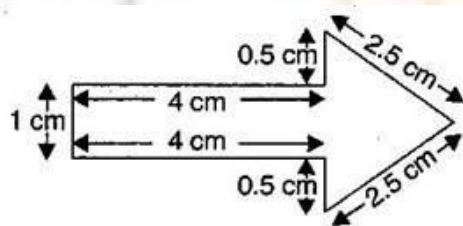
(b)



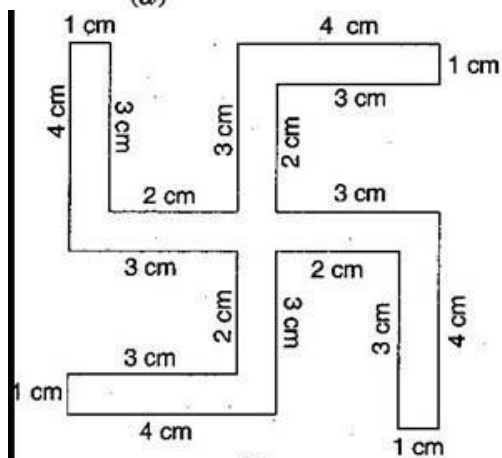
(c)



(d)



(e)



(f)

Answer: (a) Perimeter = Sum of all the sides

$$= 4 \text{ cm} + 2 \text{ cm} + 1 \text{ cm} + 5 \text{ cm} = 12 \text{ cm}$$

(b) Perimeter = Sum of all the sides

$$= 23 \text{ cm} + 35 \text{ cm} + 40 \text{ cm} + 35 \text{ cm} = 133 \text{ cm}$$

(c) Perimeter = Sum of all the sides

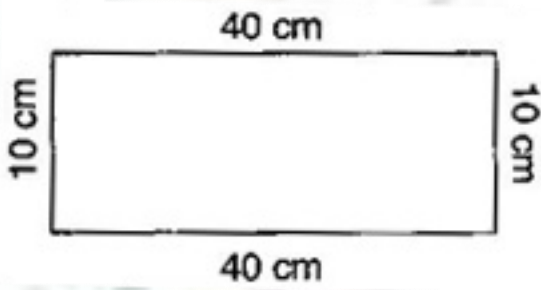
$$(b) = 15 \text{ cm} + 15 \text{ cm} + 15 \text{ cm} + 15 \text{ cm} = 60 \text{ cm} \text{ Perimeter} = \text{Sum of all the sides}$$
$$= 4 \text{ cm} + 4 \text{ cm} + 4 \text{ cm} + 4 \text{ cm} + 4 \text{ cm} = 20 \text{ cm}$$

$$(c) \text{ Perimeter} = \text{Sum of all the sides}$$
$$= 1 \text{ cm} + 4 \text{ cm} + 0.5 \text{ cm} + 2.5 \text{ cm} + 2.5 \text{ cm} + 0.5 \text{ cm} + 4 \text{ cm} = 15 \text{ cm}$$

$$(d) \text{ Perimeter} = \text{Sum of all the sides}$$
$$= 4 \text{ cm} + 1 \text{ cm} + 3 \text{ cm} + 2 \text{ cm} + 3 \text{ cm} + 4 \text{ cm} + 1 \text{ cm} + 3 \text{ cm} + 2 \text{ cm} + 3 \text{ cm} + 4 \text{ cm} +$$
$$1 \text{ cm} + 3 \text{ cm} + 2 \text{ cm} + 3 \text{ cm} + 4 \text{ cm} + 1 \text{ cm} + 3 \text{ cm} + 2 \text{ cm} + 3 \text{ cm} = 52 \text{ cm}$$

Question 2. The lid of a rectangular box of sides 40 cm by 10 cm is sealed all round with tape. What is the length of the tape required?

Answer: Total length of tape required = Perimeter of rectangle



$$= 2 (\text{length} + \text{breadth})$$

$$= 2 (40 + 10)$$

$$= 2 \times 50$$

$$= 100 \text{ cm} = 1 \text{ m}$$

Thus, the total length of tape required is 100 cm or 1 m.

Question 3. A table-top measures 2 m 25 cm by 1 m 50 cm. What is the perimeter of the table-top?

Answer: Length of table top = 2 m 25 cm = 2.25 m Breadth

of table top = 1 m 50 cm = 1.50 m

$$\text{Perimeter of table top} = 2 \times (\text{length} + \text{breadth})$$

$$= 2 \times (2.25 + 1.50)$$

$$= 2 \times 3.75 = 7.50 \text{ m}$$

Thus, perimeter of table top is 7.5 m.

Question 4. What is the length of the wooden strip required to frame a photograph of length 32 cm and

breadth 21 cm respectively?

Answer: Length of wooden strip = Perimeter of photograph
Perimeter of photograph = $2 \times (\text{length} + \text{breadth})$
 $= 2 (32 + 21)$
 $= 2 \times 53 \text{ cm} = 106 \text{ cm}$

Thus, the length of the wooden strip required is 106 cm.

Question 5. A rectangular piece of land measures 0.7 km by 0.5 km. Each side is to be fenced with 4 rows of wires. What is the length of the wire needed?

Answer: Since the 4 rows of wires are needed. Therefore the total length of wires is equal to 4 times the perimeter of rectangle.

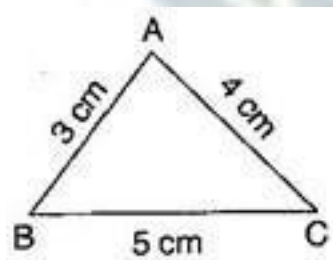
Perimeter of rectangular piece of land = $2 \times (\text{length} + \text{breadth})$
 $= 2 \times (0.7 + 0.5) = 2 \times 1.2 = 2.4 \text{ km}$
 $= 2.4 \times 1000 \text{ m} = 2400 \text{ m}$

Thus, the length of wire = $4 \times 2400 = 9600 \text{ m} = 9.6 \text{ km}$

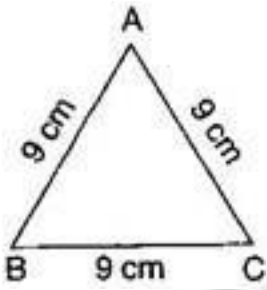
Question 6. Find the perimeter of each of the following shapes:

- (a) A triangle of sides 3 cm, 4 cm and 5 cm.**
- (b) An equilateral triangle of side 9 cm.**
- (c) An isosceles triangle with equal sides 8 cm each and third side 6 cm.**

Answer: (a) Perimeter of $\triangle ABC = AB + BC + CA = 3 \text{ cm} + 5 \text{ cm} + 4 \text{ cm} = 12 \text{ cm}$

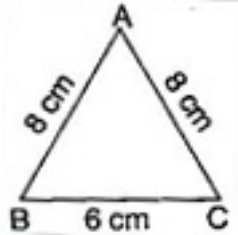


Perimeter of equilateral $\triangle ABC = 3 \times \text{side}$



$$= 3 \times 9 \text{ cm} = 27 \text{ cm}$$

(b) Perimeter of $\triangle ABC = AB + BC + CA$



$$= 8 \text{ cm} + 6 \text{ cm} + 8 \text{ cm} = 22 \text{ cm}$$

Question 7. Find the perimeter of a triangle with sides measuring 10 cm, 14 cm and 15 cm.

Answer: Perimeter of triangle = Sum of all three sides

$$= 10 \text{ cm} + 14 \text{ cm} + 15 \text{ cm} = 39 \text{ cm}$$

Thus, perimeter of triangle is 39 cm.

Question 8. Find the perimeter of a regular hexagon with each side measuring 8 cm. Answer: Perimeter of

Hexagon = 6 x length of one side

$$= 6 \times 8 \text{ m} = 48 \text{ m}$$

Thus, the perimeter of hexagon is 48 m.

Question 9. Find the side of the square whose perimeter is 20 m. Answer:

Perimeter of square = 4 x side

$$\Rightarrow 20 = 4 \times \text{side}$$

$$\Rightarrow \text{side} = \frac{20}{4} = 5 \text{ cm}$$

Thus, the side of square is 5 cm.

Question 10. The perimeter of a regular pentagon is 100 cm. How long is its each side?

Answer: Perimeter of regular pentagon = 100 cm 5 x side

$$\Rightarrow = 100 \text{ cm}$$

$$\Rightarrow \text{side} = \frac{100}{5} = 20 \text{ cm}$$

Thus, the side of regular pentagon is 20 cm.

Question 11. A piece of string is 30 cm long. What will be the length of each side if the string is used to form:

(a) a square

(b) an equilateral triangle

(c) a regular hexagon?

Answer: Length of string = Perimeter of each figure

(a) Perimeter of square = 30 cm 4 x

$$\Rightarrow \text{side} = 30 \text{ cm}$$

$$\Rightarrow \text{side} = \frac{30}{4} = 7.5 \text{ cm}$$

Thus, the length of each side of square is 7.5 cm.

(b) Perimeter of equilateral triangle = 30 cm 3 x

$$\Rightarrow \text{side} = 30 \text{ cm}$$

$$\Rightarrow \text{side} = \frac{30}{3} = 10 \text{ cm}$$

Thus, the length of each side of equilateral triangle is 10 cm.

(c) Perimeter of hexagon = 30 cm 6 x

$$\Rightarrow \text{side} = 30 \text{ cm}$$

$$\Rightarrow \text{side} = \frac{30}{6} = 5 \text{ cm}$$

Thus, the length of each side of hexagon is 5 cm.

Question 12. Two sides of a triangle are 12 cm and 14 cm. The perimeter of the triangle is 36 cm. What is the third side?

Answer: Let the length of third side be x cm.

Length of other two side are 12 cm and 14 cm.

Now, Perimeter of triangle = 36 cm

$$\Rightarrow 12 + 14 + x = 36$$

$$\Rightarrow 26 + x = 36$$

$$\Rightarrow x = 36 - 26$$

$$\Rightarrow x = 10 \text{ cm}$$

Thus, the length of third side is 10 cm.

Question 13. Find the cost of fencing a square park of side 250 m at the rate of Rs 20 per meter.

Answer: Side of square = 250 m

Perimeter of square = 4 x side

$$= 4 \times 250 = 1000 \text{ m}$$

Since, cost of fencing of per meter = Rs. 20

Therefore, cost of fencing of 1000 meters = $20 \times 1000 = \text{Rs. } 20,000$

Question 14. Find the cost of fencing a rectangular park of length 175 m and breadth 125 m at the rate of Rs. 12 per meter.

Answer: Length of rectangular park = 175 m

Breadth of rectangular park = 125 m

Perimeter of park = $2 \times (\text{length} + \text{breadth})$

$$= 2 \times (175 + 125)$$

$$= 2 \times 300 = 600 \text{ m}$$

Since, cost of fencing park per meter = Rs. 12

Therefore, cost of fencing park of 600 m = $12 \times 600 = \text{Rs. } 7,200$

Question 15. Sweety runs around a square park of side 75 m. Bulbul runs around a rectangular park with length of 60 m and breadth 45 m. Who covers less distance?

Answer: Distance covered by Sweety = Perimeter of square park
Perimeter of square = $4 \times \text{side}$
 $= 4 \times 75 = 300 \text{ m}$

Thus, distance covered by Sweety is 300 m.

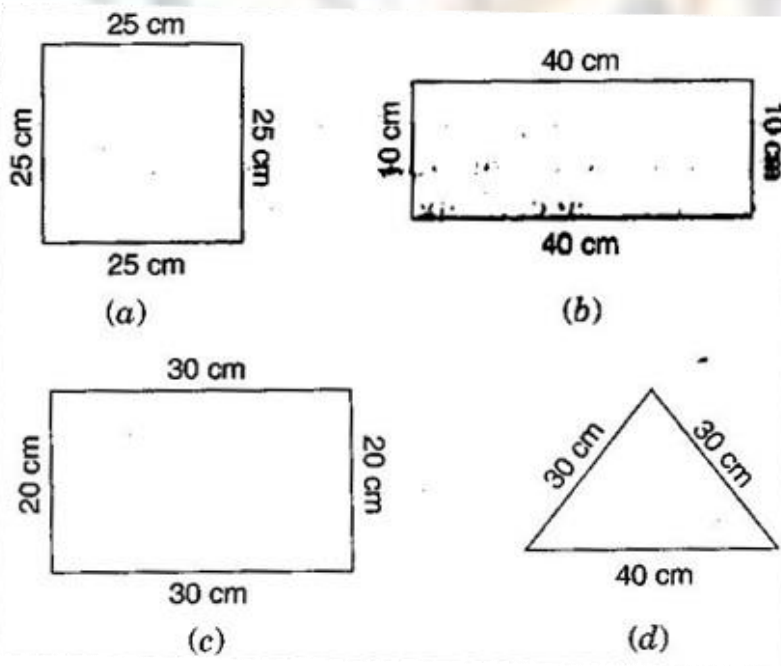
Now, distance covered by Bulbul = Perimeter of rectangular park
Perimeter of rectangular park = $2 \times (\text{length} + \text{breadth})$

$$\begin{aligned} &= 2 \times (60 + 45) \\ &= 2 \times 105 \\ &= 210 \text{ m} \end{aligned}$$

Thus, Bulbul covers the distance of 210 m.

So, Bulbul covers less distance.

Question 16. What is the perimeter of each of the following figures? What do you infer from the answer?



Answer: (a) Perimeter of square = $4 \times \text{side}$

$$= 4 \times 25 = 100 \text{ cm}$$

(b) Perimeter of rectangle = $2 \times (\text{length} + \text{breadth})$

$$= 2 \times (40 + 10)$$

$$= 2 \times 50 = 100 \text{ cm}$$

(c) Perimeter of rectangle = $2 \times (\text{length} + \text{breadth})$

$$= 2 \times (30 + 20)$$

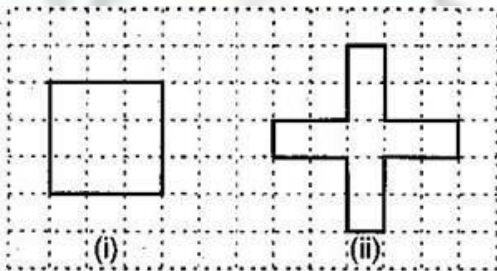
$$= 2 \times 50 = 100 \text{ cm}$$

(d) Perimeter of triangle = Sum of all sides

$$= 30 \text{ cm} + 30 \text{ cm} + 40 \text{ cm} = 100 \text{ cm}$$

Thus, all the figures have same perimeter.

Question 17. Avneet buys 9 square paving slabs, each with a side $\frac{1}{2}$ m. He lays them in the form of a square



(a) What is the perimeter of his arrangement?

(b) Shari does not like his arrangement. She gets him to lay them out like a cross. What is the perimeter of her arrangement?

(c) Which has greater perimeter?

(d) Avneet wonders, if there is a way of getting an even greater perimeter. Can you find a way of doing this? (The paving slabs must meet along complete edges, i.e., they cannot be broken.)

Answer: (a) 6 m

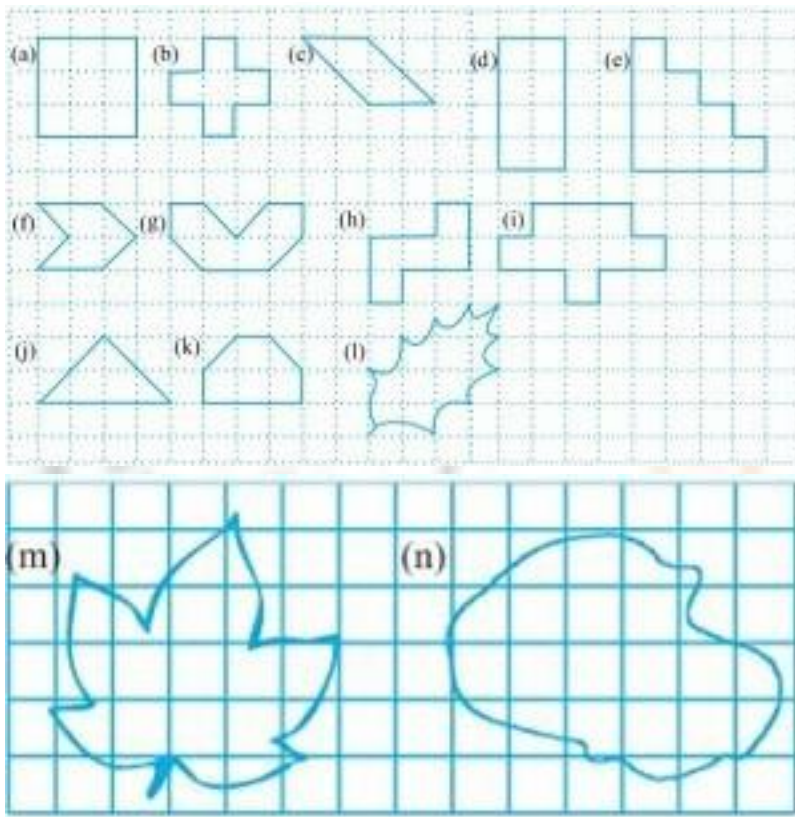
(b) 10 m

(c) Second arrangement has greater perimeter.

(d) Yes, if all the squares are arranged in row, the perimeter be 10 cm.

Ex. 10.2

Question 1. Find the areas of the following figures by counting squares:



Answer: (a) Number of filled square = 9

Area covered by squares = $9 \times 1 = 9$ sq. units

(b) Number of filled squares = 5

Area covered by filled squares = $5 \times 1 = 5$ sq. units

(c) Number of full filled squares = 2

Number of half filled squares = 4

Area covered by full filled squares = $2 \times 1 = 2$ sq. units

And Area covered by half filled squares = $\frac{1}{2} \times 4 = 2$ sq. units

Total area = $2 + 2 = 4$ sq. units

(d) Number of filled squares = 8

Area covered by filled squares = $8 \times 1 = 8$ sq. units

(e) Number of filled squares = 10

Area covered by filled squares = $10 \times 1 = 10$ sq. units

(f) Number of full filled squares = 2 Number of half filled squares = 4

Area covered by full filled squares = $2 \times 1 = 2$ sq. units

And Area covered by half filled squares = $1/2 \times 4 = 2$ sq. units Total area = $2 + 2 = 4$ sq. units

(g) Number of full filled squares = 4 Number

of half filled squares = 4

Area covered by full filled squares = $4 \times 1 = 4$ sq. units

And Area covered by half filled squares = $1/2 \times 4 = 2$ sq. units Total area = $4 + 2 = 6$ sq. units

(h) Number of filled squares = 5

Area covered by filled squares = $5 \times 1 = 5$ sq. units

(i) Number of filled squares = 9

Area covered by filled squares = $9 \times 1 = 9$ sq. units

(j) Number of full filled squares = 2 Number of half filled squares = 4

Area covered by full filled squares = $2 \times 1 = 2$ sq. units

And Area covered by half filled squares = $1/2 \times 4 = 2$ sq. units Total area = $2 + 2 = 4$ sq. units

(k) Number of full filled squares = 4 Number of half filled squares = 2

Area covered by full filled squares = $4 \times 1 = 4$ sq. units

And Area covered by half filled squares = $1/2 \times 2 = 1$ sq. units Total area = $4 + 1 = 5$ sq. units

(l) Number of full filled squares = 3

Number of half filled squares = 10

Area covered by full filled squares = $3 \times 1 = 3$ sq. units

And Area covered by half filled squares = $1/2 \times 10 = 5$ sq. units Total area = $3 + 5 = 8$ sq. units

(m) Number of full filled squares = 7 Number of half filled squares = 14

Area covered by full filled squares = $7 \times 1 = 7$ sq. units

And Area covered by half filled squares = $1/2 \times 14 = 7$ sq. units Total area = $7 + 7 = 14$ sq. units

(n) Number of full filled squares = 10 Number of half filled squares = 16

Area covered by full filled squares = $10 \times 1 = 10$ sq. units

And Area covered by half filled squares = $1/2 \times 16 = 8$ sq. units Total area = $10 + 8 = 18$ sq. units.

Ex. 10.3

Question 1. Find the areas of the rectangles whose sides are:

- (a) 3 cm and 4 cm**
- (b) 12 m and 21 m**
- (c) 2 km and 3 km**
- (d) 2 m and 70 cm**

Answer: (a) Area of rectangle = length x breadth

$$= 3 \text{ cm} \times 4 \text{ cm} = 12 \text{ cm}^2$$

(b) Area of rectangle = length x breadth

$$= 12 \text{ m} \times 21 \text{ m} = 252 \text{ m}^2$$

(c) Area of rectangle = length x breadth

$$= 2 \text{ km} \times 3 \text{ km} = 6 \text{ km}^2$$

(d) Area of rectangle = length x breadth

$$= 2 \text{ m} \times 70 \text{ cm} = 2 \text{ m} \times 0.7 \text{ m} = 1.4 \text{ m}^2$$

Question 2. Find the areas of the squares whose sides are:

- (a) 10 cm**
- (b) 14 cm**
- (c) 5 m**

Answer:(a) Area of square = side x side = $10 \text{ cm} \times 10 \text{ cm} = 100 \text{ cm}^2$

(b) Area of square = side x side = $14 \text{ cm} \times 14 \text{ cm} = 196 \text{ cm}^2$

(c) Area of square = side x side = $5 \text{ m} \times 5 \text{ m} = 25 \text{ m}^2$

Question 3. The length and the breadth of three rectangles are as given below:

- (a) 9 m and 6 m**
- (b) 17 m and 3 m**
- (c) 4 m and 14 m**

Which one has the largest area and which one has the smallest? Answer:

(a) Area of rectangle = length x breadth = 9 m x 6 m = 54 m²

(b) Area of rectangle = length x breadth = 3 m x 17 m = 51 m²

(c) Area of rectangle = length x breadth = 4 m x 14 m = 56 m²

Thus, the rectangle (c) has largest area, i.e. 56 m² and rectangle (b) has smallest area, i.e., 51 m².

Question 4. The area of a rectangular garden 50 m long is 300 m², find the width of the garden.

Answer: Length of rectangle = 50 m and Area of rectangle = 300 m² Since, Area of

rectangle = length x breadth

$$\text{Therefore, Breadth} = \frac{\text{Area of rectangle}}{\text{Length}} = \frac{300}{50} = 6\text{m}$$

Thus, the breadth of the garden is 6 m.

Question 5. What is the cost of tiling a rectangular plot of land 500 m long and 200 m wide at the rate of Rs. 8 per hundred sq. m?

Answer: Length of land = 500 m and Breadth of land = 200 m

$$\text{Area of land} = \text{length} \times \text{breadth} = 500 \text{ m} \times 200 \text{ m} = 1,00,000 \text{ m}^2$$

∴ Cost of tiling 100 sq. m of land = Rs. 8

$$\therefore \text{Cost of tiling } 1,00,000 \text{ sq. m of land} = \frac{8}{100} * 100000 = \text{Rs. } 8000$$

Question 6. A table-top measures 2 m by 1 m 50 cm. What is its area in square meters?

Answer: Length of table = 2 m and breadth of table = 1 m 50 cm = 1.50 m

$$\text{Area of table top} = 2 \times 1.50 = 3 \text{ sq m}$$

7. A room is 4 m long and 3 m 50 cm wide. How many square metre of carpet is needed to cover the floor of the room?

Sol. Length of the room = 4 m

Breadth of the room = 3 m 50 cm

$$= 3.50 \text{ m}$$

∴ Area of the room = Length × Breadth

$$= 4 \times 3.5 \text{ sq. m}$$

$$= 14.0 \text{ sq m}$$

Hence, 14.0 square metres of carpet is needed to cover the floor of the room.

8. A floor is 5 m long and 4 m wide. A square carpet of sides 3 m is laid on the floor. Find the area of the floor that is not carpeted.

Sol. Length of the floor = 5 m

Breadth of the floor = 4 m

\therefore Area of the floor = Length \times Breadth

$$= 5 \text{ m} \times 4 \text{ m}$$

$$= 20 \text{ sq m}$$

Area of the square carpet = side \times side

$$= 3 \text{ m} \times 3 \text{ m}$$

$$= 9 \text{ sq m}$$

\therefore Area of the floor that is not carpeted = 20 sq m – 9 sq m

$$= 11 \text{ sq m.}$$

9. Five square flower beds each of sides 1 m are dug on a piece of land 5 m long and 4 m wide. What is the area of the remaining part of land?

Sol. Area of square flower bed = \times side

$$= 1 \text{ m} \times 1 \text{ m}$$

$$= 1 \text{ sq m}$$

\therefore Area of 5 square flower beds = 5 \times 1 sq m

$$= 5 \text{ sq m}$$

Length of the piece of land = 5 m

Breadth of the piece of land = 4 m

\therefore Area of the piece of land = Length \times Breadth

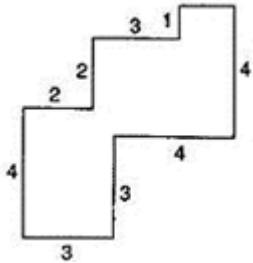
$$= 5 \text{ m} \times 4 \text{ m}$$

$$= 20 \text{ sq m}$$

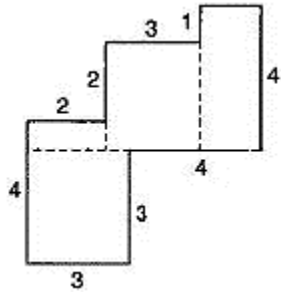
\therefore Area of the remaining part of land = 20 sq m – 5 sq m

$$= 15 \text{ sq m}$$

- 10(1). By splitting the figure into rectangle, find out the area. (The measures are given in centimetre).

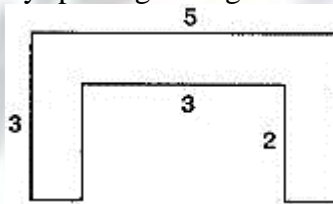


Sol.

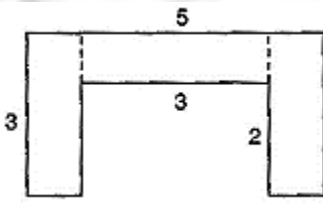


$$\begin{aligned}\text{Area of the figure} &= (3 \times 3 + 1 \times 2 + 3 \times 3 + 4 \times 2) \text{ sq cm} \\ &= (9 + 2 + 9 + 8) \text{ sq cm} \\ &= 28 \text{ sq cm}\end{aligned}$$

10(2). By splitting the figure into rectangle, find their area. (The measures are given in centimetre).

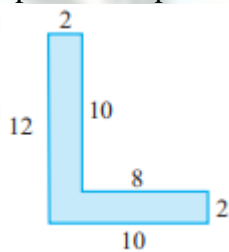


Sol.



$$\begin{aligned}\text{Area of the figure} &= (3 \times 1 + 3 \times 1 + 3 \times 1) \text{ sq cm} \\ &= (3 + 3 + 3) \text{ sq cm} \\ &= 9 \text{ sq cm}\end{aligned}$$

11(1). Split the shape into a rectangle and find its area. (The measures are given in centimetres)



Sol. We know that,

Area of rectangle = Length \times Breadth

Hence, from the figure,

$$\text{Area of 1}^{\text{st}} \text{ rectangle} = 12 \times 2 = 24 \text{ cm}^2$$

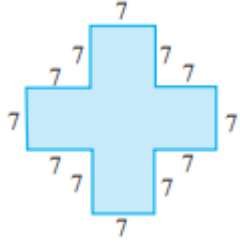
Also,

$$\text{Area of 2}^{\text{nd}} \text{ rectangle} = 8 \times 2 = 16 \text{ cm}^2$$

Therefore,

$$\text{Total area} = 24 + 16 \text{ cm}^2 = 40 \text{ cm}^2$$

11(2). Split the shape into a rectangle and find its area. (The measures are given in centimetres)



Sol. We know that,

Area of rectangle = Length \times Breadth

Also,

Area of square = (Side)²

Therefore,

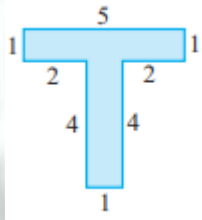
Area of one square = $7 \times 7 = 49 \text{ cm}^2$

As there are 5 squares in a total of equal size.

Therefore,

Area of 5 squares = $5 \times 49 \text{ cm}^2 = 245 \text{ cm}^2$

11(3). Split the shape into a rectangle and find its area. (The measures are given in centimetres)



Sol. We know that,

Area of rectangle = Length \times Breadth

Therefore,

From the figure, we have,

Area of 1st rectangle = $5 \times 1 = 5 \text{ cm}^2$

Also,

Area of 2nd rectangle = $4 \times 1 = 4 \text{ cm}^2$

Therefore,

Total area = $5 + 4 = 9 \text{ cm}^2$

12(1). How many tiles whose length and breadth are 12 cm and 5 cm respectively will be needed to fit in a rectangular region whose length and breadth are 100 cm and 144 cm respectively.

Sol. Length of the region = 100 cm

Breadth of the region = 144 cm

\therefore Area of the region = Length \times Breadth

= 100 cm \times 144 cm

$$= 14400 \text{ sq cm}$$

$$\text{Length of a tile} = 12 \text{ cm}$$

$$\text{Breadth of a tile} = 5 \text{ cm}$$

$$\therefore \text{Area of a tile} = \text{Length} \times \text{Breadth}$$

$$= 12 \times 5 \text{ sq cm}$$

$$= 60 \text{ sq cm}$$

$$\therefore \text{Number of tiles needed to fit the region}$$

$$= \frac{\text{Area of the region}}{\text{Area of a tile}} = \frac{14400}{60}$$

$$= 240$$

12(2). How many tiles whose length and breadth are 12 cm and 5 cm respectively will be needed to fit in a rectangular region whose length and breadth are 70 cm and 36 cm respectively.

Sol. Length of the region = 70 cm

$$\text{Breadth of the region} = 36 \text{ cm}$$

$$\therefore \text{Area of the rectangular region} = 70 \text{ cm} \times 36 \text{ cm}$$

$$= 2520 \text{ sq cm}$$

$$\text{Area of a tile} = 12 \text{ cm} \times 5 \text{ cm} = 60 \text{ sq cm}$$

$$\therefore \text{Number of tiles needed to fit the region}$$

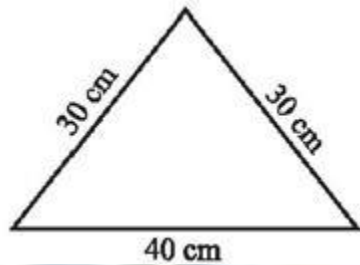
$$= \frac{\text{Area of the region}}{\text{Area of a tile}} = \frac{2520}{60}$$

$$= 42$$

$$= 42$$



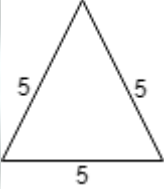
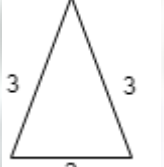
Worksheet Ch-10 Mensuration

1. The side of a square is 12 m. Its perimeter is
 - a. 144 m
 - b. 48 m
 - c. 24 m
 - d. 36 m
2. The shape of your class room blackboard is
 - a. circle
 - b. equilateral triangle
 - c. square
 - d. rectangle
3. Which figure encloses more area: a square of side 2 cm ; a rectangle of side 3 cm and 2 cm ;An equilateral triangle of side 4 cm?
 - a. None of these
 - b. square
 - c. equilateral triangle
 - d. rectangle



4. The perimeter of the given figure is
 - a. 70 cm
 - b. None of these
 - c. 60 cm
 - d. 100 cm
5. The area of square is 100 cm^2 . Its side is
 - a. 5 cm
 - b. 10 cm
 - c. 20 cm
 - d. 10.5 cm

6. Match the following:-

Shapes	Perimeter
a. 	i. 15
b. 	ii. 8
c. 	iii. 24
d. 	iv. 12

7. Fill in the blanks:-

- _____ is a rectangle whose all sides are equal.
- The amount of surface enclosed by a figure is called its _____.
- For fencing the plot, we need to calculate its _____.
- _____ is the sum of all sides.

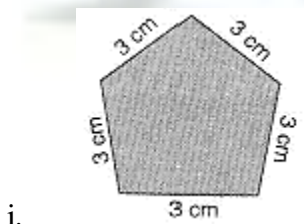
8. State True or False:-

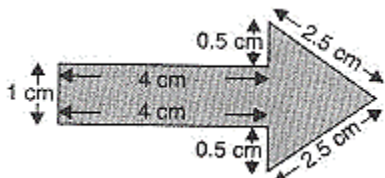
- For tiling a rectangular Plot, we must calculate its area.
- Length and breadth of a Rectangle are 1.5m and 1m. Area is 1.5m^2 .
- The Perimeter of a square is 4 times the length of the side.
- To find the length of fencing the square playground we must find its Perimeter.
-

9. Find the area of the rectangle whose side are :3 cm and 4 cm

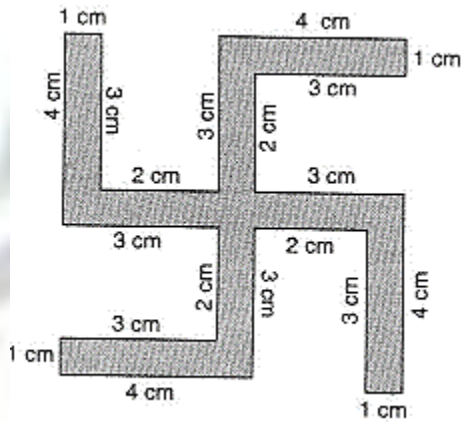
10. Find the area of the rectangle whose side are :12 m and 21 m

11. Find the perimeter of each of the following figures given below?



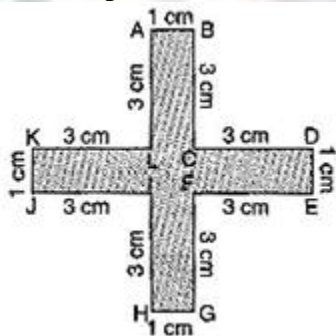


ii.

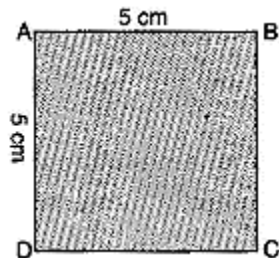


iii.

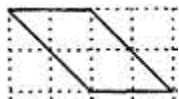
2. Find the perimeter of the following figure?



3. Find the perimeter of the following figure given below.



4. Find the area of the following figure:



5. The length of rectangle is thrice its breadth and its perimeter is 48cm. Find length and breadth of rectangle.

