ODM EDUCATIONAL GROUP
Changing your Tomorrow

CLASS	**: IV**
SUBJECT	**: MATHEMATICS**
CHAPTER NUMBER	**: 17**
CHAPTER NAME	**: DATA HANDLING**
SUBTOPIC	**: PICTOGRAPH AND TALLY MARKS, EXAMPLES**

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DATA HANDLING

We collect information about various things and people in different forms. The information we collect is known as **data**.

The presentation of collected information in an arranged and sorted way is known as **Data Handling**.

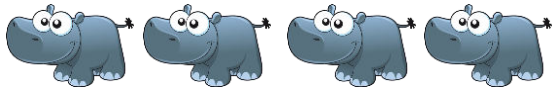
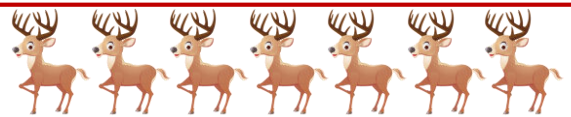
One  represents 10 Trees	
Name	**Number of Trees**
Apple	
Peach	
Guava	
Pear	

DATA HANDLING

PICTOGRAPH

Pictograph is a way of representing the **numeric data** in the form of pictures.

EXAMPLE : 1 The pictograph shows the number of animals in a zoo. Answer the questions that follow.

Lion	
Tiger	
Hippo	
Deer	
Elephant	

1. Which animal is the maximum in number?

Ans. Deer

2. How many tigers are there?

Ans. 3

3. Which animal is the least in number?

Ans. Lion

4. How many elephants are there?

Ans. 3

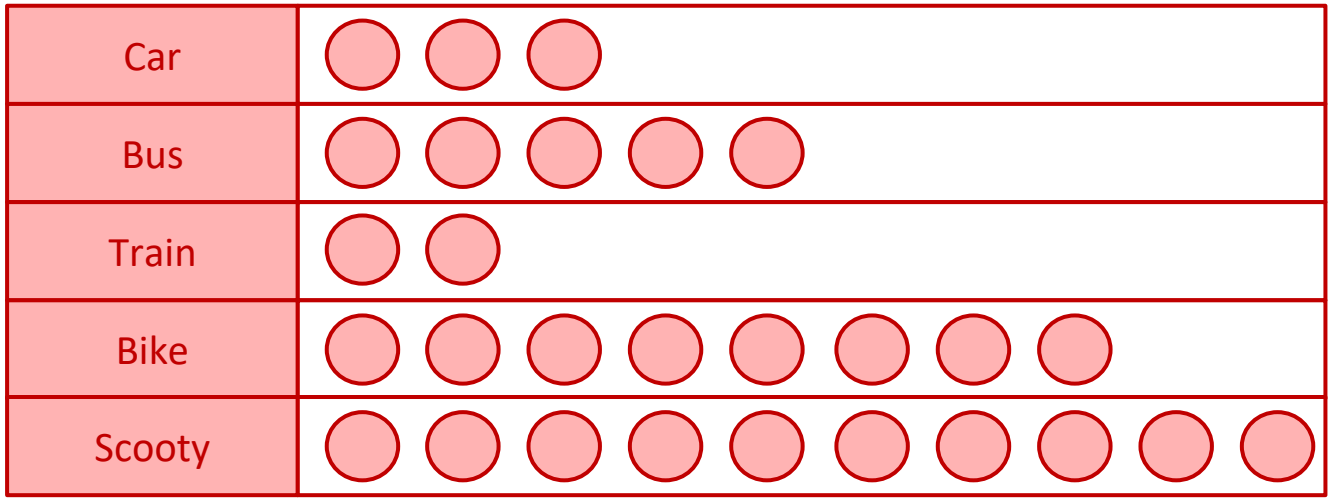
5. How many hippos and deers are there in the zoo?

Ans. 11

DATA HANDLING

PICTOGRAPH

EXAMPLE : 2 People use different personal vehicle and public transport to go to office. The pictograph below the detailed information regarding the means of transport used by the staff of an office. Study the pictograph and answer the question that follow.



Each dot ( ) represent 10 people.

DATA HANDLING

PICTOGRAPH

a. How many people use public transport? Ans. 70

b. How many people use car? Ans. 30

c. Which mode of travelling is the most preferred? Ans. Scooty

d. Which personal vehicle is preferred the least? Ans. Car

e. Which public transport is preferred the least? Ans. Train

f. How many people use scooty? Ans. 100

g. What is the number of people who use bike and scooty? Ans. 180

h. How many people in total does the pictograph represent? Ans. 280

DATA HANDLING

TALLY MARKS

Another way of representing a large data is through tally marks. Here, numbers are represented in groups of five by drawing lines.

One vertical line is made for each of the first four numbers and the fifth number is represented nu a diagonal line across the previous four vertical lines.

DATA HANDLING

TALLY MARKS

EXAMPLE : 1 There are 40 students in a class. Students have different favourite subjects. The representation below shows the detailed information of the data. Read the data and answer the following questions.

Subject	Number of students liking the subject
English	𝍸 |||
Hindi	𝍸 |
Maths	𝍸 𝍸 ||
Computer studies	𝍸 ||||
Arts	𝍸

1. Students' most favourite subject is Maths.
2. Students' least favourite subject is Arts.
3. How many students like English?

Ans. 8

4. How many students like Computer Studies?

Ans. 9

5. How many students like Hindi and Arts?

Ans. 11

DATA HANDLING

TALLY MARKS

EXAMPLE : 2 Consider a garden with lots of flowers. Mary has different types of flower pots which are given in the table below:

Names of flower	Number of pots
Rose	𝍸 |
Lily	𝍸 𝍸
Jasmine	𝍸 𝍸
Tulip	𝍸 𝍸
daisy	𝍸

1. How many daisy flower pots are there?

Ans. 5

2. Which two flowers have the same number of pots?

Ans. Lily and tulip

3. Which flower has the maximum number of pots?

Ans. Jasmine

DATA HANDLING

The pictograph showing different months of the year and girls of a class who were born in a particular month:

Months	Girls born in a particular month
Jnauary	
February	
March	
April	
May	
June	
July	
August	
September	
October	
November	
December	

1. How many girls were born in the month of September?

Ans. 8

2. How many girls were born in the month of June?

Ans. 2

3. In which month were the maximum number of girls born?

Ans. October

4. Find the total number of girls in the class.

Ans. 59

5. What is the difference between the number of girls born in the months of October and June?

Ans. 7

LEARNING OUTCOME:

Students are able to understand about the pictograph and tally marks through various examples.

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SUBTOPIC	**: PICTOGRAPH AND TALLY MARKS, EX-17 A**

DATA HANDLING

Exercise : 17(A)

1. The table below represents the favourite fast foods of children. Read carefully and answer the questions given below.

Pizza	𝍸
Burger	𝍸 | | |
Sandwich	| | | |
Noodles	𝍸 |
Pasta	| |

One 🌳 represents 10 Trees	
Name	**Number of Trees**
Apple	🌳🌳🌳
Peach	🌳🌳🌳🌳
Guava	🌳🌳🌳🌳🌳
Pear	🌳🌳

DATA HANDLING

Exercise : 17(A)

a. Which food is the most popular among the students?	Ans. Burger
b. Which is the least popular food among the students?	Ans. Pasta
c. How many children are represented in the table altogether?	Ans. 25
d. Number of children who like noodles is .	Ans. 6
e. How many children like pizza and burger?	Ans. 13
f. How many children like sandwich and pasta?	Ans. 6
g. Number of children who like noodles and pizza is .	Ans. 11

DATA HANDLING

Exercise : 17(A)

2. The following pictograph shows the weekly sale of shakes and juices at a juice corner.

Read and answer the

Mixed fruit juice	
Orange juice	
Pineapple juice	
Chocolate shake	
Strawberry shake	
Banana shake	

[Each glass represents 20 glasses of juice and shakes.]

One represents 10 Trees	
Name	Number of Trees
Apple	
Peach	
Guava	
Pear	

DATA HANDLING

Exercise : 17(A)

a. What is the weekly sale of shakes oat the juice corner? Ans. 660

b. Which juice or shake is the most popular? Ans. Chocolate shake

c. What is the total sale of mixed fruit juice and orange juice together? Ans. 260

d. What juice or shake is the least popular? Ans. Strawberry shake

e. How many glasses of banana shake are sold in a week? Ans. 100

f. What number of glasses of strawberry shake are sold in a week? Ans. 60

g. How many glasses of chocolate shakes and pineapple juice are sold? Ans. 240

h. What is the sale of pineapple juice. Ans. 80

DATA HANDLING

Exercise : 17(A)

3. The pictograph below shows the musical instruments which students play in a music school. Answer the following questions after observing the pictograph carefully.

Guitar	
Piano	
Flute	
Tabla	
Harmonium	

Scale :  = 250 children

 = 500 children;

One  represents 10 Trees	
Name	Number of Trees
Apple	
Peach	
Guava	
Pear	

DATA HANDLING

Exercise : 17(A)

a. How many students are there in the music school? Ans. 8250

b. How many children like to play guitar? Ans. 2750

c. What is the number of students who love to play harmonium? Ans. 1500

d. Which instrument is the most popular? Ans. Guitar

e. Which instrument is the least popular? Ans. Flute

f. How many children like to play flute and tabla? Ans. 2000

g. What is the number of children who love to play piano and harmonium? Ans. 3500

h. How many children love to play guitar and flute? Ans. 3500

DATA HANDLING

Exercise : 17(A)

4. The table below shows the games the games which are played in a school. Answer the following questions after observing the pictograph carefully.

Cricket	
Carrom	
Chess	
Badminton	
Basket ball	

Each ( ) represents 50 students.

One represents 10 Trees	
Name	Number of Trees
Apple	
Peach	
Guava	
Pear	

DATA HANDLING

Exercise : 17(A)

a. How many students love to play a game? Ans. 800

b. How many students love to play chess? Ans. 50

c. Which game is the most popular among children? Ans. Cricket

d. Which game is the least popular among children? Ans. Chess

e. How many students play carrom and chess? Ans. 150

f. How many students love to play badminton? Ans. 200

g. How many students love to play basketball and badminton? Ans. 350

h. How many children play cricket? Ans. 300

HOME ASSIGNMENT:

- **Complete Exercise – 17 A in your book.**

LEARNING OUTCOME:

Students are able to understand more about the tally marks and pictograph.

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SUBTOPIC	**: BAR GRAPH, EX-17 B**

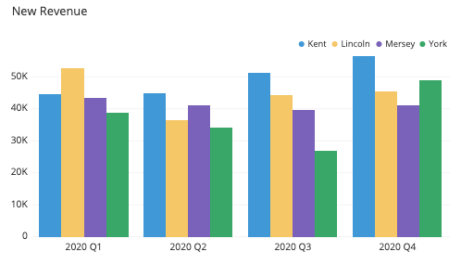
BAR GRAPH

A bar graph is the representation of numerical data in the form of rectangular bars having standard width but variable length according to the scale chosen.

The are two types of bar graphs :

1. **Vertical bar graphs**

2. **Horizontal bar graphs**

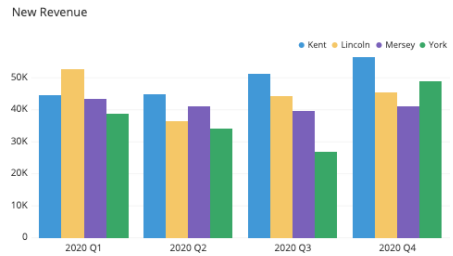


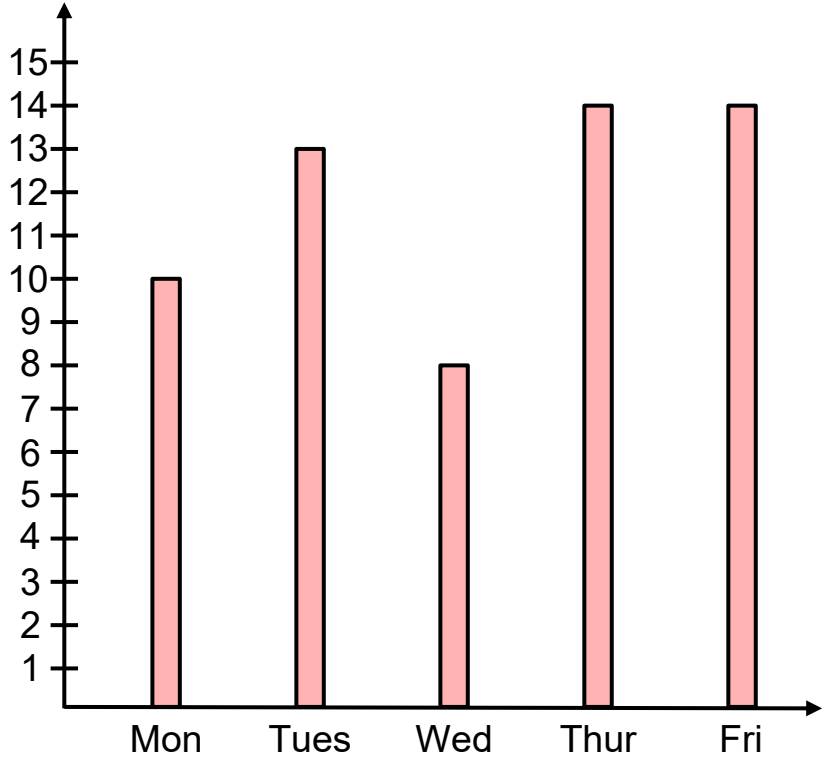
BAR GRAPH

Vertical bar graph

Vertical bar graphs are those graphs in which data is represented in vertical bars. The vertical bars are drawn from bottom going upwards.

The graph given alongside is representing the number of people visiting a cinema hall on five different days of a week.



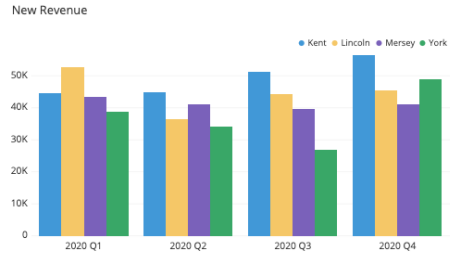


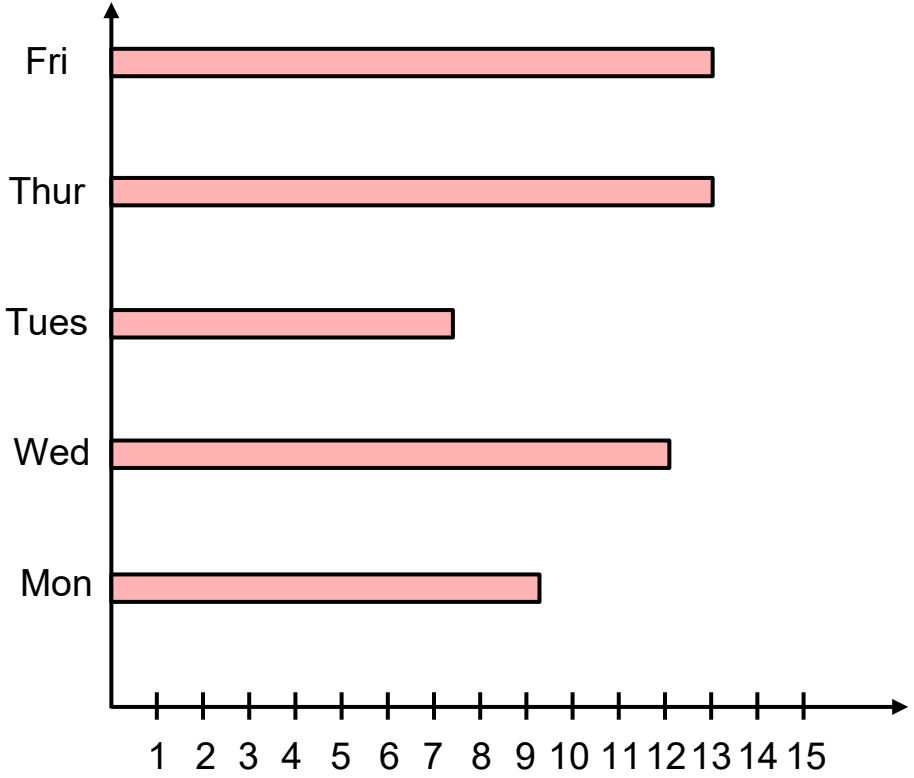
BAR GRAPH

Horizontal bar graph

Horizontal bar graphs are those graphs in which data is represented in horizontal bars. The horizontal bars are drawn from left to right.

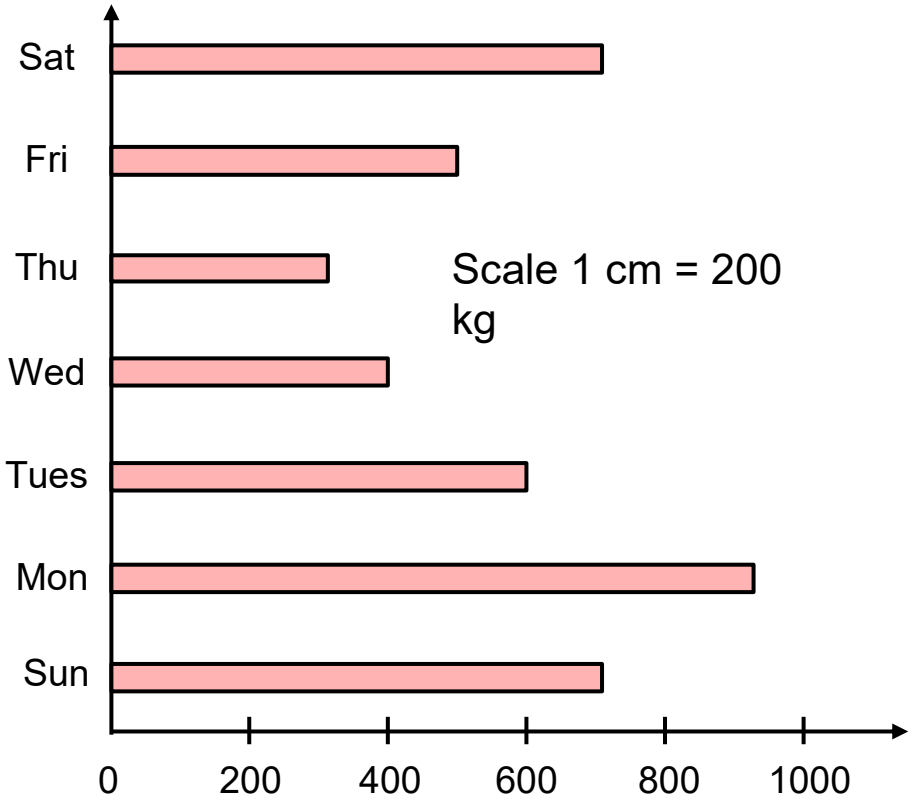
The graph given alongside is representing the same data as shown in the vertical bar graph.





BAR GRAPH

EXAMPLE Daily sale of sugar in a department store is shown in the bar graph below.



a. Which day has the maximum sale?

Ans. Monday

b. Which day has the least sale?

Ans. Thursday

c. Calculate the total sale of the week.

Ans. 4.100

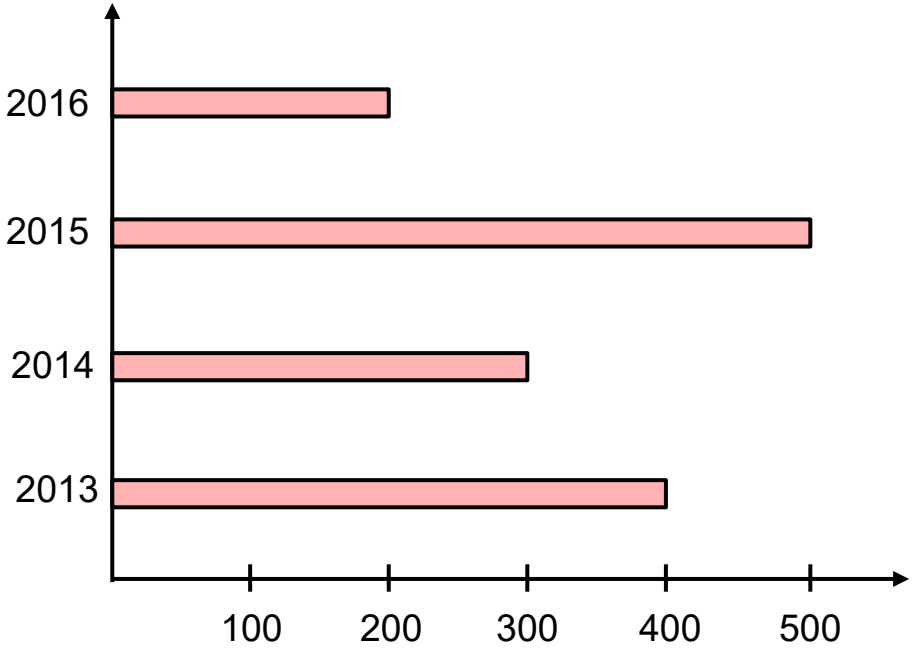
d. Which two days have the same sale?

Ans. Saturday and Sunday

BAR GRAPH

EXERCISE – 17(B)

1. The graph below shows the number of students who participated in a maths Olympiad in the past years.



a. In which year did the maximum number of students appear in the Olympiad?

Ans. 2015

b. How many students participated in the Olympiad in 2014?

Ans. 300

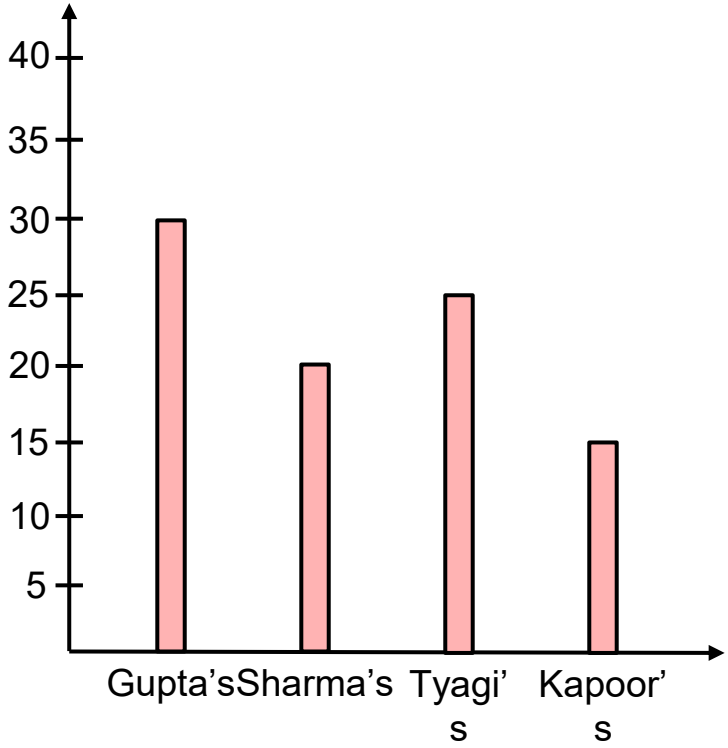
c. How many students participated in the Olympiad in 2016 and 2014?

Ans. 500

BAR GRAPH

EXERCISE – 17(B)

2. The graph given alongside shows the consumption of water per day by each family (in L). Answer the following questions with the help of the graph.



a. Which family consumed the least amount of water and how much?

Ans. Kapoor's and 15 L.

b. How much water is consumed by the Gupta's?

Ans. 30 L

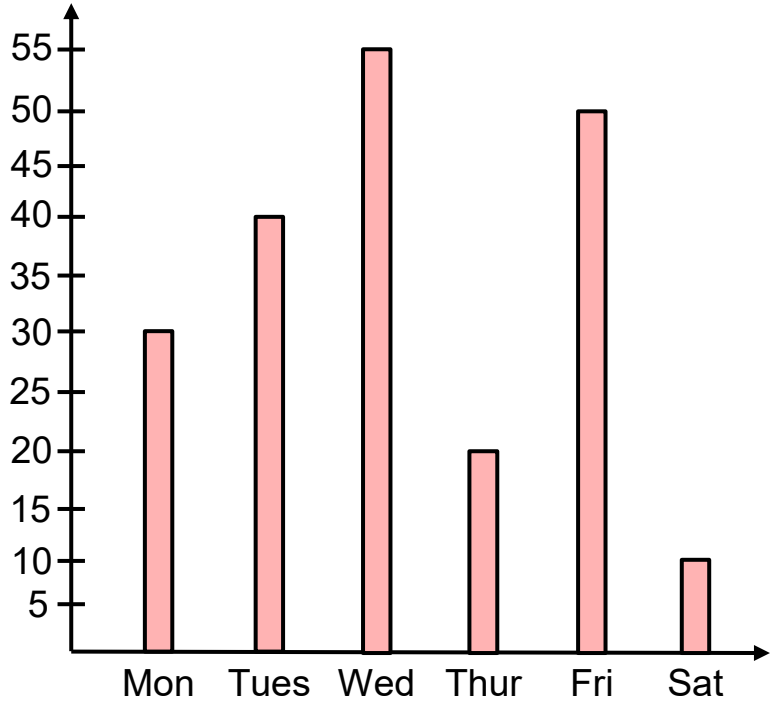
c. How much water did the Tyagi's consumed?

Ans. 25L

BAR GRAPH

EXERCISE – 17(B)

3. The graph shows the attendance of 55 class-II students for a week. Answer the following questions with the help of the graph.



a. On which day most of the students attended the school?

Ans. Wednesday.

b. How many students attended the school on Monday?

Ans. 30

c. How many students attended the school on Tuesday and Friday altogether?

Ans. 90

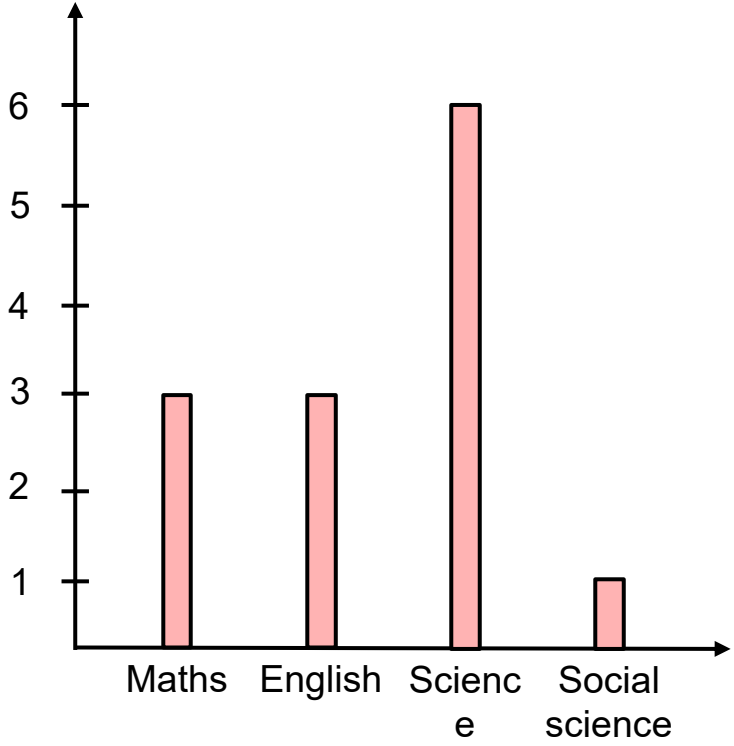
d. How many students were absent on Tuesday?

Ans. 15

BAR GRAPH

EXERCISE – 17(B)

4. Charles studies for an examination for 12 hours a day in which he divided the time for different subjects. Read the graph and answer the questions the follow:



a. Which subjects does Charles study the most?

Ans. Science

b. How many hours a day does Charles study maths?

Ans. 3 hours

c. How many hours does Charles study English and Social Science per day?

Ans. 4 hours

HOME ASSIGNMENT:

- **Complete Exercise – 17 B in your book.**

LEARNING OUTCOME:

Students are able to understand about the bar graph and the use of bar graph in case of arranging different data.

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