Chapter – 3
Data Handling

Exercise 3.1

1. Find the range of heights of any ten students of your class.

Answer:

According to the question:

Let us assume the heights (in cm) of ten students of our class be as follows:

125, 129, 130, 133, 134, 136, 138, 141, 144, 146

Now,

We can observe that,

Highest value among these observations = 146

Lowest value among these observations = 125

Now,

We have to find the range of the given data.

Hence,

Range = Highest value – Lowest value

= 146 – 125

= 21 cm

2. Organize the following marks in a class assessment, in a tabular form.

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

(i) Which number is the highest?

(ii) Which number is the lowest?
(iii) What is the range of the data?
(iv) Find the arithmetic mean.

Answer:

According to the question,

At first,

We will draw the frequency table of the given data.

Hence,

Marks	Tally marks	Frequency
1	I	1
2	II	2
3	I	1
4	III	3
5	~~IIII~~	5
6	IIII	4
7	II	2
8	I	1
9	I	1

(i) Now,

Clearly, The highest number among the given data is 9

(ii) Clearly, The lowest number among the given data is 1

(iii)

We know that,

Range = Highest value – Lowest value

Hence,

Range of the given data can be calculated as follows:

Range = highest number – lowest number

= 9 – 1

= 8

(iv) Here,

We have to find the arithmetic mean of the given data

Now,

At first,

We'll find the sum of all the observations

Thus,

Sum of all the observations = 4 + 6 + 7 + 5 + 3 + 5 + 4 + 5 + 2 + 6 + 2 + 5 + 1 + 9 + 6 + 5 + 8 + 4 + 6 + 7 = 100

Now,

Total number of observations = 20

Hence,

Arithmetic mean = $\frac{Sum\ of\ all\ observations}{Number\ of\ observations}$

= $\frac{100}{20}$

= 5

3. Find the mean of the first five whole numbers.

Answer:

As per the question,

We have to find the mean of the first five whole numbers

Thus,

At first,

First five whole numbers are 0, 1, 2, 3 and 4

Now,

We know that,

$$\text{Mean} = \frac{Sum\ of\ all\ observations}{Number\ of\ observations}$$

$$= \frac{10}{5}$$

$$= 2$$

4. A cricketer scores the following runs in eight innings:
58, 76, 40, 35, 46, 45, 0, 100.
Find the mean score.

Answer:

As per the question,

We have to find the mean of the runs scored by the cricketer

Thus,

Runs scored by the cricketer are 58, 76, 40, 35, 46, 45, 0, and 100.

Hence,

$$\text{Mean score} = \frac{Total\ runs\ scored\ in\ all\ the\ innings}{Total\ number\ of\ innings}$$

$$= \frac{58+76+40+35+46+45+0+100}{8}$$

$$= \frac{400}{8}$$

$$= 50$$

Therefore,

Mean score is 50

5. Following table shows the points of each player scored in four games:

Player	Game 1	Game 2	Game 3	Game 4

A	14	16	10	10
B	0	8	6	4
C	8	11	Did not Play	13

Now answer the following questions:

(i) Find the mean to determine A's average number of points scored per game.

(ii) To find the mean number of points per game for C, would you divide the total points by 3 or by 4? Why?

(iii) B played in all the four games. How would you find the mean?

(iv) Who is the best performer?

Answer:

(i) As per the question,

To find the mean of the points scored by A to find its average

Now,

Scores of A are = 14, 16, 10, 10

Hence,

Mean score = $\frac{Total\ runs\ scored\ by\ A}{Total\ number\ of\ games}$

$= \frac{14+16+10+10}{4}$

$= \frac{50}{4}$

= 12.5

Therefore,

Mean score is 12.5.

(ii) Here,

As per the question,

We have to find the digit with which the total points of C needs to be divided in order to find the mean number of points per game for C.
Now,

We know that,

$$\text{Mean} = \frac{(Sum\ of\ all\ observations)}{(Number\ of\ observations)}$$

And,

We also know that C played total of 3 games

Hence,

The total points will be divided by 3, in order to find the mean of the number of points per game for C.

(iii) As per the question,

We have to find the mean of the points scored by B to find its average

Now,

Scores of B are = 0, 8, 6, 4

Hence,

$$\text{Mean score} = \frac{Total\ runs\ scored\ by\ B}{Total\ number\ of\ games}$$

$$= \frac{0+6+8+4}{4}$$

$$= \frac{18}{4}$$

$$= 4.5$$

Therefore,

Mean score is 4.5.

(iv) Here,

As per the question,

We have to find the best performer among them.

Now,

We know that,

The best performer will be the one who will have the greatest average among all.

Thus,

Here,

We can observe that,

The best average among A, B, and C is of A that is 12.5

Hence,

We can say that,

A is the best performer among these three.

6. The marks (out of 100) obtained by a group of students in a science test are 85, 76, 90, 85, 39, 48, 56, 95, 81 and 75.
Find the:
(i) Highest and the lowest marks obtained by the students.
(ii) Range of the marks obtained.
(iii) Mean marks obtained by the group.

Answer:

Here,

According to the question,

At first,

We will arrange the data in the ascending order

Thus,

The marks obtained by the group of students in a science test can be arranged in an ascending order as follows:

39, 48, 56, 75, 76, 81, 85, 85, 90, 95

(i) Now,

As per the question,

Here,

We have to find the following two things,

The highest marks obtained in Science

And,

The lowest marks obtained in Science

Hence,

We can observe that,

Highest marks = 95

Lowest marks = 39

(ii) Now,

We have to find the range of the given data.

And,

We know that,

Range = Highest value – Lowest value

Hence,

Range of the given data can be calculated as follows:

Range = highest number – lowest number

= 95 – 39

= 56

(iii) Here,

We have to find the arithmetic mean of the given data

Now,

At first,

We'll find the sum of all the observations

Thus,

Sum of all the observations = 85 + 76 + 90 + 85 + 39 + 48 + 56 + 95 + 81 + 75

= 730

Now,

Total number of observations = 10

Hence,

Arithmetic mean = $\frac{Sum\ of\ all\ observations}{Number\ of\ observations}$

= $\frac{730}{10}$

= 73

7. The enrolment in a school during six consecutive years was as follows:
1555, 1670, 1750, 2013, 2540, 2820
Find the mean enrolment of the school for this period.

Answer:

Here,

We have to find the mean of the given enrolments of the school

Now,

At first,

We'll find the sum of all the observations

Thus,

Sum of all the observations = 1555 + 1670 + 1750 + 2013 + 2540 + 2820

= 12348

Now,

Total number of observations = 6

Hence,

Mean enrolments $= \frac{Sum\ of\ all\ observations}{Number\ of\ observations}$

$= \frac{12348}{6}$

= 2058

8. The rainfall (in mm) in a city on 7 days of a certain week was recorded as follows:

Day	Mon	Tue	Wed	Thurs	Fri	Sat	Sun
Rainfall (in mm)	0.0	12.2	2.1	0.0	20.5	5.5	1.0

(i) Find the range of rainfall in the above data.
(ii) Find the mean rainfall for the week.
(iii) On how many days was the rainfall less than the mean rainfall?

Answer:

(i) Now,

We have to find the range of the given data.

And,

We know that,

Highest rainfall = 20.5mm

Lowest rainfall = 0.0 mm

Thus,

Range = Highest value – Lowest value

Hence,

Range of the given data can be calculated as follows:

Range = highest rainfall – lowest rainfall

= 20.5 – 0.0

= 20.5 mm

(ii) Here,

We have to find the mean of the rainfall for the week

Now,

At first,

We'll find the sum of all the observations

Thus,

Sum of all the observations = 0.0 + 12.2 + 2.1 + 0.0 + 20.5 + 5.5 + 1.0

= 41.3

Now,

Total number of observations = 7

Hence,

Mean rainfall = $\frac{Sum\ of\ all\ observations}{Number\ of\ observations}$

= $\frac{41.3}{7}$

= 5.9 mm

(iii) Here,

As per the question,

We have to find that,

The number of days when the rainfall was less than the mean rainfall

Hence,

We can observe that,

For total five days, the rainfall was less than the mean rainfall

Now,

These days are as follows:

Monday, Wednesday, Thursday, Saturday and Sunday.

9. The heights of 10 girls were measured in cm and he results are as follows:
135, 150, 139, 128, 151, 132, 146, 149, 143, 141.
(i) What is the height of the tallest girl?
(ii) What is the height of the shortest girl?
(iii) What is the range of the data?
(iv) What is the mean height of the girls?
(v) How many girls have heights more than the mean height?

Answer:

Here,

According to the question,

At first,

We will arrange the data in the ascending order

Thus,

The heights of the ten girls can be arranged in an ascending order as follows:

128, 132, 135, 139, 141, 143, 146, 149, 150, 151

(i) Now,

As per the question,

Here,

We have to find the height of tallest girl mentioned in the data.

Hence,

Height of the tallest girl = 151 cm

(ii) Now,

As per the question,

Here,

We have to find the height of smallest girl mentioned in the data.

Hence,

Height of the smallest girl = 128 cm

(iii) Now,

We have to find the range of the given data.

And,

We know that,

Highest height of girl = 151mm

Smallest height of girl = 128mm

Thus,

Range = Highest value – Lowest value

Hence,

Range of the given data can be calculated as follows:

Range = highest height – Smallest height

= 151 – 128

= 23 cm

(iv) Here,

We have to find the mean height of the girls

Now,

At first,

We'll find the sum of all the observations

Thus,

Sum of all the observations = 135 + 150 + 139 + 128 + 151 + 132 + 146 + 149 + 143 + 141

= 1414

Now,

Total number of observations = 10

Hence,

Mean height = $\frac{Sum\ of\ all\ observations}{Number\ of\ observations}$

= $\frac{1414}{10}$

= 141.4 cm

(v) Here,

As per the question,

We have to find that,

The number of girls whose heights were greater than the mean height

Hence,

We can observe that,

There were total five girls whose heights were greater than the mean height

Now,

These heights are as follows:

143, 146, 149, 150, and 151 cm

Exercise 3.2

1. The scores in mathematics test (out of 25) of 15 students are as follows:
19, 25, 23, 20, 9, 20, 15, 10, 5, 16, 25, 20, 24, 12, 20
Find the mode and median of this data. Are they the same?

Answer:

Here,

According to the question,

At first,

We'll arrange the scores in ascending order as follows:

5, 9, 10, 12, 15, 16, 19, 20, 20, 20, 20, 23, 24, 25, 25

Now,

We know that,

Mode is termed as that value of observation which occurs for the maximum number of times.

And,

Median of any data is known as the middle observation when that data is arranged in ascending or descending order.

Now,

As we know,

There are total of 15 observations

Hence,

Median $= \left(\frac{15+1}{2}\right) th\ term$

$= \frac{16}{2}$th term

$= 8^{th}$ term

Thus,

Median = 20

And,

We can observe that,

20 occurs the maximum number of times (3 times) which is the maximum number of times

Hence,

We get,

Mode of the given data = 20

Therefore,

Yes, both the values are the same.

2. The runs scored in a cricket match by 11 players is as follows:
6, 15, 120, 50, 100, 80, 10, 15, 8, 10, 15
Find the mean, mode and median of this data. Are the three same?

Answer:

Here,

According to the question,

At first,

We'll arrange the scores in an ascending order as follows:

6, 8, 10, 10, 15, 15, 15, 50, 80, 100, 120

Now,

We know that,

$$\text{Mean score} = \frac{Sum\ of\ all\ observations}{Total\ number\ of\ observations}$$

$$= \frac{6=8+10+10+15=15+15+50+80+100+120}{11}$$

$= \frac{429}{11}$

$= 39$

Therefore,

Mean score is 39

Mode is termed as that value of observation which occurs for the maximum number of times.

And,

Median of any data is known as the middle observation when that data is arranged in ascending or descending order.

Now,

As we know that,

There are total 11 observations

Hence,

Median $= \frac{11+1}{2} th\ term$

$= \frac{12}{2}$th term

$= 6^{th}$ term

Thus,

Median = 15

And,

We can observe that,

15 occurs the maximum number of times which is three times

Hence,

We get,

Mode of the given data = 15

Therefore,

No, all the three values are not the same.

3. The weights (in kg) of 15 students of a class are:
38, 42, 35, 37, 45, 50, 32, 43, 43, 40, 36, 38, 43, 38, 47
(i) Find the mode and median of this data.
(ii) Is there more than one mode?

Answer:

(i) Here,

According to the question,

At first,

We'll arrange the weight in an ascending order as follows:

32, 35, 36, 37, 38, 38, 38, 40, 42, 43, 43, 43, 45, 47, 50

Now,

We know that,

Mode is termed as that value of observation which occurs for the maximum number of times.

And,

Median of any data is known as the middle observation when that data is arranged in ascending or descending order.

Now,

As we know that,

There are total 15 observations

Hence,

Median $= \left(\frac{15+1}{2}\right) th\ term$

$= \frac{16}{2}$th term

$= 8^{th}$ term

Thus,

Median = 40

And,

We can observe that,

38 and 43 both the observations occurs the maximum number of times which is three times.

Hence,

We get,

Mode of the given data = 38 and 43

(ii) Here,

We are asked,

If there is one or more than one mode in the given data

Hence,

We can observe that,

There is more than one mode.

And

There are two modes in the given data.

The two modes are 38 and 43

4. Find the mode and median of the data:
13, 16, 12, 14, 19, 12, 14, 13, 14

Answer:

Here,

According to the question,

At first,

We'll arrange the data in an ascending order as follows:

12, 12, 13, 13, 14, 14, 14, 16, 19

Now,

We know that,

Mode is termed as that value of observation which occurs for the maximum number of times.

And,

Median of any data is known as the middle observation when that data is arranged in ascending or descending order.

Now,

As we know that,

There are total 9 observations

Hence,

Median $= \left(\frac{9+1}{2}\right) th\ term$

$= \frac{10}{2}$th term

$= 5^{th}$ term

Thus,

Median = 14

And,

We can observe that,

14 occurs the maximum number of times which three number of times

Hence,

We get,

Mode of the given data = 14.

5. Tell whether the statement is true or false:

(i) The mode is always one of the numbers in a data.

(ii) The mean is one of the numbers in a data.

(iii) The median is always one of the numbers in a data.

(iv) The data 6, 4, 3, 8, 9, 12, 13, 9 has mean 9.

Answer:

(i) True

The given statement is true.

Since,

We know that,

Mode is termed as that value of observation which occurs for the maximum number of times.

Hence,

Mode will always be the one of the numbers in a data.

Therefore,

The statement is true.

(ii) False

The given statement is false

Since,

We know that,

Mean of a data is calculated as follows:

$$\text{Mean} = \frac{sum\ of\ observations}{number\ of\ observations}$$

Hence,

Mean may be or may not be one of the numbers in the data.

Therefore,

The statement is false.

(iii) True

The given statement is true.

Since,

We know that,

Median of any data is known as the middle observation when that data is arranged in ascending or descending order.

Hence,

Median is always one of the numbers in a data

Therefore,

The statement is true.

(iv) False

Since,

We know that,

Mean of a data is calculated as follows:

$$\text{Mean} = \frac{sum\ of\ observations}{number\ of\ observations}$$

$$= \frac{6+4+3+8+9+12+13+9}{8}$$

$$= \frac{64}{8}$$

$$= 8$$

Hence,

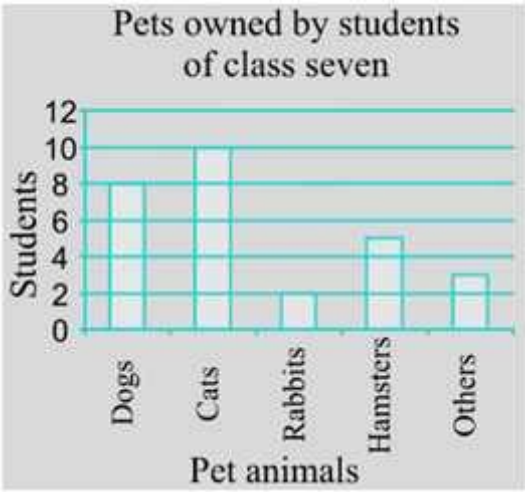
Mean of the given data is 8 and not 9

Therefore,

The statement is false.

Exercise 3.3

1. Use the bar graph to answer the following question.



(a) Which is the most popular pet?

(b) How many students have dog as a pet?

Answer:

(a) Here,

According to the question,

We have to find the most popular pet among them.

Now,

Here,

The bar graph represents the pets owned by the students of class seven.

And,

We can see that,

The bar of the cat is the tallest

Hence,

Cat is the most popular pet.

(b) Here,

According to the question,

We have to find the number of students who have dog as a pet.

Now,

Here,

We know that,

The bar graph represents the pets owned by the students of class seven.

And,

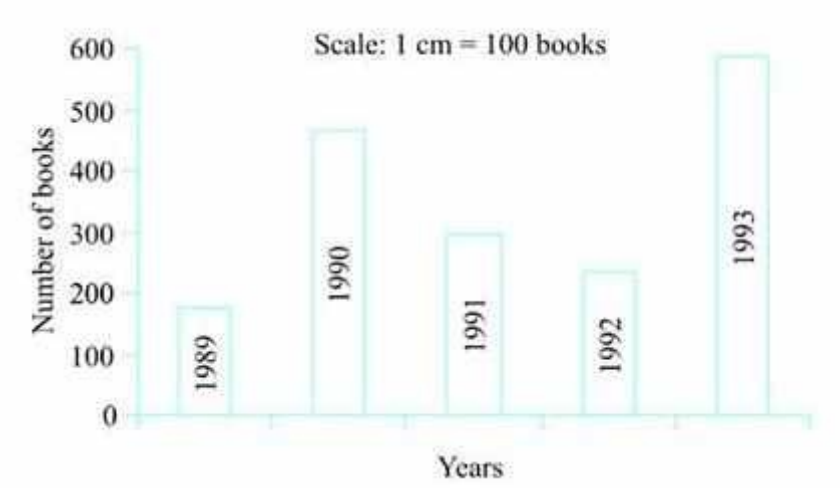
We can see that,

The bar of the dog is till 8

Hence,

8 students have dog as their pet.

2. Read the bar graph which shows the number of books sold by a bookstore during five consecutive years and answer the following questions:



(i) About how many books were sold in 1989? 1990? 1992?
(ii) In which year were about 475 books sold? About 225 books sold?
(iii) In which years were fewer than 250 books sold?
(iv) Can you explain how you would estimate the number of books sold in 1989?

Answer:

(i) Here

We can say that,

While observing the graph,

The total books sold in the year 1989, 1990 and 1992 are as follows:

Number of books sold in 1989 = 180

And,

Number of books sold in 1992 = 220

And,

Number of books sold in 1990 = 480

(ii) Here,

We have to find,

The year in which the following number of books were sold:

475

And,

225

Hence,

While observing the graph,

We can say that,

475 books were sold in the year 1990

And,

225 books were sold in the year 1992

(iii) Here,

We have to find,

The years in which the books sold were less than 250 books

Hence,

While observing the graph,

We can conclude that,

The years in which the total number of books sold was less than 250 are as follows:

The year 1989 and the year 1992.

(iv) Now,

According to the question,

From the graph,

We can conclude that,

The number of books sold in the year 1989 is about 1 and th part of 1 cm.

Now,

We know that,

The scale here is:

1cm = 100 books

Hence,

$100 + \frac{3^{th}}{4} \times 100$

$= 100 + 75$

$= 75$

Thus,

About 175 books were sold in the year 1989.

We estimated this number by drawing a horizontal line from the top of 1989 bar to y-axis where the line touches y-axis in the number of books.

3. Number of children in six different classes are given below. Represent the data on a bar graph.

Class	Number of Children
Fifth	135
Sixth	120
Seventh	95
Eighth	100
Ninth	90
Tenth	80

(a) How would you choose a scale?

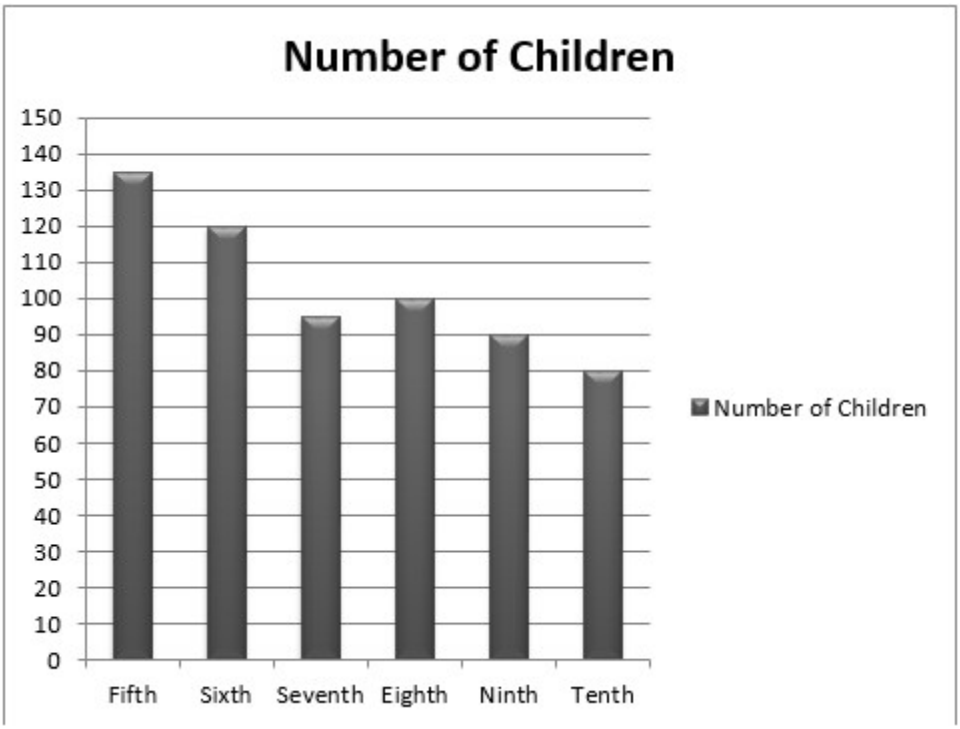
(b) Answer the following questions:

(i) Which class has the maximum number of children? And the minimum?

(ii) Find the ratio of students of class sixth to the students of class eighth.

Answer:

The bar graph of the given data is represented below:



(a) Here,

We will choose a scale as follows:

1 unit = 10 children

We will take this scale because with this scale we can represent a better and clear difference among the number of students of class 7th and class 9th.

(b) .

(i) We can see that,

The tallest bar is of class fifth

Hence,

We can say that,

The maximum number of students are in class fifth.

Similarly,

We can observe that,

The smallest bar is of class tenth

Hence,

We can say that,

There are least number of students in class tenth.

(ii) Now,

Here,

We can clearly see that,

There are 120 students in class sixth

And,

There are 100 students in class eighth

Hence,

The ratio between the number of students of class sixth and the number of students of class eighth can be calculated as follows:

$= \frac{120}{100}$

$= \frac{6}{5}$

$= 6 : 5$

4. The performance of a student in 1st Term and 2nd Term is given. Draw a double bar graph choosing appropriate scale and answer the following:

Subject	1st term (M.M. 100)	2nd Term (M.M. 100)
English	67	70
Hindi	72	65
Maths	88	95
Science	81	85

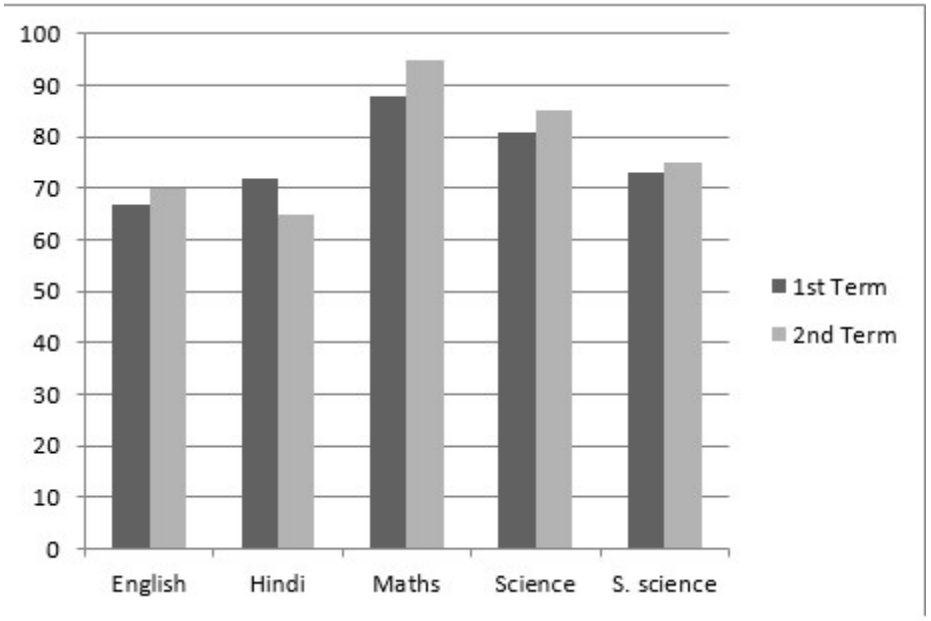
S. Science	73	75

(i) In which subject, has the child improved his performance the most?
(ii) In which subject is the improvement the least?
(iii) Has the performance gone down in any subject?

Answer:

As per the question:

The double bar graph of the given data is made below:



(i) Here,

We can see that,

Math had a maximum increase in marks.

Hence,

It can be concluded that,

The child had improved his performance the most in Maths.

(ii) Here,

We can see that,

S. science had the least increase in marks.

Hence,

It can be concluded that,

The child had improved his performance the least in S. science.

(iii) Here,

We can observe that,

From the given graph,

Hindi has a decrement in marks in the second term

Hence,

It can be concluded that,

The child's performance has gone down in Hindi.

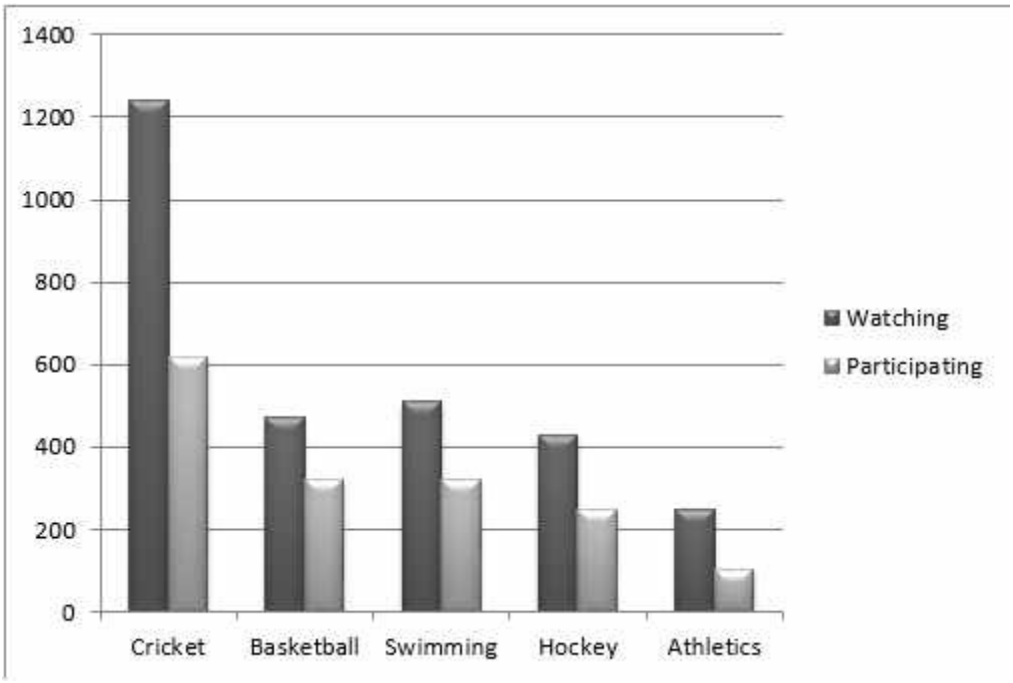
5. Consider this data collected from a survey of a colony.

Favourite Sport	Cricket	Basket Ball	Swimming	Hockey	Atheletics
Watching	1240	470	510	430	250
Participating	620	320	320	250	105

(i) Draw a double bar graph choosing an appropriate scale.
What do you infer from the bar graph?
(ii) Which sport is most popular?
(iii) Which is more preferred, watching or participating in sports?

Answer:

(i) We can draw the double graph of the given data as follows:



Now,

As per the question,

The double bar graph represents the number of people who like watching and participating in various sports.

Now,

We can observe that,

The maximum number of people are fond of either watching or participating in cricket.

And,

The least number of people are fond of either watching or participating in athletics.

(ii) Here,

From the drawn bar graph,

We can observe that,

The tallest bar representing the people who like either watching or participating any sport is of cricket.

Hence,

It can be concluded that,

Cricket is the most popular game whom people either like to watch or participate.

(iii) Here,

From the drawn bar graph,

We can observe that,

The bars representing watching sports are longer than the bars representing participating in sports.

Hence,

We can conclude that,

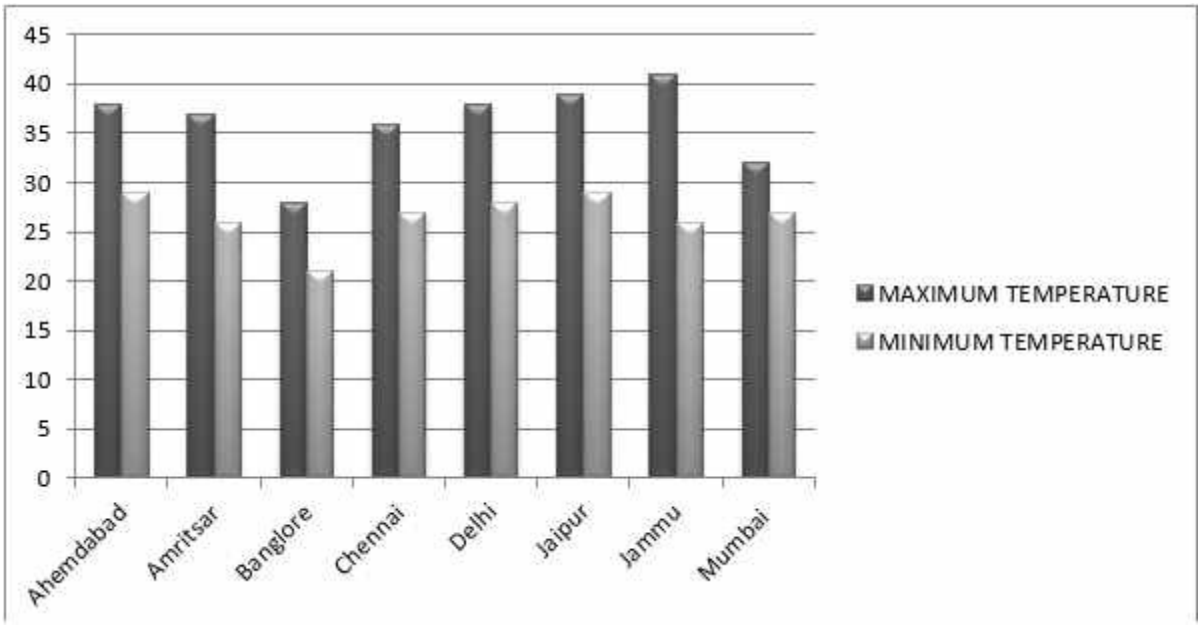
Watching sports is preferred over participating in sports.

6. Take the data giving the minimum and the maximum temperature of various cities given in the beginning of this Chapter. Plot a double bar graph using the data and answer the following:
(i) Which city has the largest difference in the minimum and maximum temperature on the given date?
(ii) Which is the hottest city and which is the coldest city?
(iii) Name two cities where maximum temperature of one was less than the minimum temperature of the other.
(iv) Name the city which has the least difference between its minimum and the maximum temperature.

Answer:

Here,

The bar graph of the given data can be creates as follows:



(i) Here,

According to the question,

We have to find the city with the largest difference in its maximum and minimum temperature.

Therefore,

We can observe that,

From the graph,

The largest difference between the maximum and minimum bars is of Jammu.

Hence,

It can be concluded that,

Jammu is city with the largest difference in its maximum temperature and minimum temperatures on 20.06.2006

(ii) Here,

According to the question,

We have to find the hottest and coolest city from the given cities while looking into the graph.

And,

We know that,

Hottest city would have the maximum temperature

And,

Coolest city would have the least temperature.

Therefore,

We can observe that,

From the graph,

The highest bar of maximum temperature is of Jammu.

Hence,

Jammu is the hottest city.

And,

The lowest bar of minimum temperature is of Bangalore,

Hence,

Bangalore is the coolest city among the given cities.

(iii) Here,

According to the question,

We have to find the two cities where maximum temperature of one was less than the minimum temperature of the other.

Therefore,

We can observe that,

From the graph,

Bangalore has its maximum temperature as 28°C

Whereas,

The minimum temperature of the following two cities is 29°C

Jaipur

And,

Ahmedabad

Hence,

It can be concluded that the required pair of two cities are,

Bangalore and Jaipur

And,

Bangalore and Ahmedabad

(iv) Here,

According to the question,

We have to find the city with the least difference in its maximum and minimum temperature.

Therefore,

We can observe that,

From the graph,

The least difference between the maximum and minimum bars is of Mumbai.

Hence,

It can be concluded that,

Mumbai is city with the least difference in its maximum temperature and minimum temperatures on 20.06.2006.

Exercise 3.4

1. Tell whether the following is certain to happen, impossible, can happen but not certain.
(i) You are older today than yesterday.

(ii) A tossed coin will land heads up.
(iii) A die when tossed shall land up with 8 on top.
(iv) The next traffic light seen will be green.
(v) Tomorrow will be a cloudy day.

Answer:
(i) Here,

We have to categorize the situation as following:

Certain to happen which means that there is a surety of the given situation to happen

Impossible which gives a little surety that the situation would never take place

Can happen but not certain which shows that you are not sure of the situation's happening or not happening, it may or may not take place

Therefore,

Here,

We can see that,

It is very obvious that,

You will be older than yesterday

Hence,

The given condition is certain to happen

(ii) Here,

We have to categorize the situation as following:

Certain to happen which means that there is a surety of the given situation to happen

Impossible which gives a little surety that the situation would never take place

Can happen but not certain which shows that you are not sure of the situation's happening or not happening, it may or may not take place

Therefore,

Here,

We can see that,

It is very obvious that,

We cannot give assurance that the tossed coin would give heads. It may give head or tail.

Hence,

The given condition is can happen but not certain

(iii) Here,

We have to categorize the situation as following:

Certain to happen which means that there is a surety of the given situation to happen

Impossible which gives a little surety that the situation would never take place

Can happen but not certain which shows that you are not sure of the situation's happening or not happening, it may or may not take place

Therefore,

Here,

We can see that,

It is very obvious that,

A die whenever tossed would never give 8 because it has only six faces marked as 1, 2, 3, 4, 5, 6 on it.

Hence,

The given condition is impossible.

(iv) Here,

We have to categorize the situation as following:

Certain to happen which means that there is a surety of the given situation to happen

Impossible which gives a little surety that the situation would never take place

Can happen but not certain which shows that you are not sure of the situation's happening or not happening, it may or may not take place

Therefore,

Here,

We can see that,

It is very obvious that,

We cannot give assurance that the next traffic light seen would be green. It may give yellow, red or green light.

Hence,

The given condition is can happen but not certain

(v) Here,

We have to categorize the situation as following:

Certain to happen which means that there is a surety of the given situation to happen

Impossible which gives a little surety that the situation would never take place

Can happen but not certain which shows that you are not sure of the situation's happening or not happening, it may or may not take place

Therefore,

Here,

We can see that,

It is very obvious that,

We cannot give assurance that the upcoming day will be a cloudy day. It may be a cloudy day or a sunny day or a rainy day.

Hence,

The given condition is can happen but not certain.

2. There are 6 marbles in a box with number from 1 to 6 marked on each of them.
(i) What is the probability of drawing a marble with number 2?
(ii) What is the probability of drawing a marble with number 5?

Answer:

(i) Here,

It is given in the question that,

There are 6 marbles in the box numbered from 1 to 6

Now,

We know that,

Probability of drawing marble with number 2

$= \frac{number\ of\ favourable\ outcome}{number\ of\ possible\ outcome}$

Therefore,

$P(\text{Appearance of } 2) = \frac{1}{6}$

(ii) Here,

It is given in the question that,

There are 6 marbles in the box numbered from 1 to 6

Now,

We know that,

Probability of drawing marble with number 5

$= \frac{number\ of\ favourable\ outcome}{number\ of\ possible\ outcome}$

Therefore,

P(Appearance of 5) $= \frac{1}{6}$.

3. A coin is flipped to decide which team starts the game. What is the probability that your team will start?

Answer:

Here,

As per the question,

We know that,

A coin has two faces i.e. Head and Tail

Hence,

It can be concluded that,

One can opt either Head or Tail

And,

We know that,

Probability of any outcome $= \frac{number\ of\ favourable\ outcome}{number\ of\ possible\ outcome}$

Therefore,

P(our team will start first) $= \frac{1}{2}$.