

Chapter 5: Data Handling

NCERT Exemplar · Class 6 · Maths

Questions

Question 1

Using tally marks, which one of the following represents the number eight:

- (A)  (B)  (C)  (D) 

Solution

Solution:-

- (A)  (B)  (C)  (D) 

- (A)  (B)  (C)  (D) 

represents number 5

- (A)  (B)  (C)  (D) 

represents number 3

So, $5 + 3 = 8$

The data can be arranged in a tabular form using tally marks.

Question 2

The marks (out of 10) obtained by 28 students in a Mathematics test are listed below:

8, 1, 2, 6, 5, 5, 5, 0, 1, 9, 7, 8, 0, 5, 8, 3, 0, 8, 10, 10, 3, 4, 8, 7, 8, 9, 2, 0

The number of students who obtained marks more than or equal to 5 is

(A) 13 (B) 15 (C) 16 (D) 17

Solution

Solution:-

(D) 17

First, we have to arrange the marks (out of 10) obtained by 28 students in a Mathematics test.

0, 0, 0, 0, 1, 1, 2, 2, 3, 3, 4, 5, 5, 5, 5, 6, 7, 7, 8, 8, 8, 8, 8, 8, 9, 9, 10, 10.

The number of students who obtained marks more than or equal to 5 is 17.

Question 3

In question 2 above, the number of students who scored marks less than 4 is

(A) 15 (B) 13 (C) 12 (D) 10

Solution

Solution:-

(D) 10

First we have to arrange the marks (out of 10) obtained by 28 students in a Mathematics test.

0, 0, 0, 0, 1, 1, 2, 2, 3, 3, 4, 5, 5, 5, 5, 6, 7, 7, 8, 8, 8, 8, 8, 8, 9, 9, 10, 10.

The number of students who scored marks less than 4 is 10.

Question 4

The choices of the fruits of 42 students in a class are as follows:

A, O, B, M, A, G, B, G, A, G, B, M, A, G, M, A,

B, G, M, B, A, O, M, O, G, B, O, M, G, A, A, B,

M, O, M, G, B, A, M, O, M, O,

where A, B, G, M and O stand for the fruits Apple, Banana, Grapes, Mango and Orange, respectively.

Which two fruits are liked by an equal number of students?

(A) A and M (B) M and B

(C) B and O (D) B and G

Solution

Solution:-

(D) B and G

From the question, it is given that A, B, G, M and O stand for the fruits Apple, Banana, Grapes, Mango and Orange, respectively.

So, by observing the choices of the fruits of 42 students in a class Bananas (B) and Grapes (G) are liked by an equal number of students i.e. 8 students each.

Question 5

According to data from question 4, which fruit is liked by most of the students?

(A) O (B) G (C) M (D) A

Solution

Solution:-

(C) M

According to data from question 4, Mango(M) is liked by most of the students.

In questions 6 to 13, state whether the given statements are true (T) or false (F).

Question 6

In a bar graph, the width of bars may be unequal.

Solution

Solution:-

False.

In a bar graph, bars of uniform width are drawn horizontally or vertically with equal spacing between them.

Question 7

In a bar graph, bars of uniform width is drawn vertically only.

Solution

Solution:-

False.

In a bar graph, bars of uniform width are drawn horizontally or vertically with equal spacing between them.

Question 8

In a bar graph, the gap between two consecutive bars may not be the same.

Solution

Solution:-

False.

In a bar graph, bars of uniform width are drawn horizontally or vertically with equal spacing between them.

Question 9

In a bar graph, each bar (rectangle) represents only one value of the numerical data.

Solution

Solution:-

True.

Question 10

To represent the population of different towns using a bar graph, it is convenient to take a one-unit length to represent one person.

Solution

Solution:-

False.

If the population of towns are large numbers, then we may need a different scale.

Question 11

Pictographs and bar graphs are pictorial representations of numerical data.

Solution

Solution:-

True.

By definition, pictographs and bar graphs are pictorial representations of numerical data.

Question 12

An observation occurring five times in a data is recorded as |||||, using tally marks.

Solution

Solution:-

False.

An observation occurring five times in a data is recorded as

 using tally marks.

13. In a pictograph, if a symbol  represents 50 books in a library shelf, then the symbol  represents 25 books.

Solution:-

True.

13. In a pictograph, if a symbol  represents 50 books in a library shelf, then the symbol  represents 25 books.

represents 25 books.

In questions 14 to 20, fill in the blanks to make the statements true:

Question 13

In a pictograph, if a symbol



A.

True

B.

False

Solution

Ans: True

In Questions 14 to 21, fill in the blanks to make the statements true

Question 14

A _____ is a collection of numbers gathered to give some meaningful information.

Solution

Solution: –

Data is a collection of numbers gathered to give some meaningful information.

Question 15

The data can be arranged in a tabular form using _____ marks.

Solution

Solution:-

The data can be arranged in a tabular form using tally marks.

Question 16

A _____ represents data through pictures of objects.

Solution

Solution:-

A pictograph represents data through pictures of objects.

Question 17

In a bar graph, _____ can be drawn horizontally or vertically.

Solution

Solution:-

In a bar graph, bars can be drawn horizontally or vertically.

Question 18

In a bar graph, bars of _____ width can be drawn horizontally or vertically with _____ spacing between them.

Solution

Solution:-

In a bar graph, bars of uniform width can be drawn horizontally or vertically with equal spacing between them.

Question 19

An observation occurring seven times in a data is represented as _____ using tally marks.

Solution

 **Solution:-**

An observation occurring seven times in a data is represented using tally marks.

20. In a pictograph, if a symbol  represents 20 flowers in a basket then  stands for _____ flowers.

Solution:-

In a pictograph, if a symbol  represents 20 flowers in a basket then  stands for 60 flowers

From the question, it is given that one symbol represents 20 flowers.

Then, 3 symbol represents = 3×20

= 60

Question 20

In a pictograph, if a symbol  represents 20 basket then  stands for flowers

Solution

Ans: In a pictograph, if a symbol represents 20 flowers in a basket then stands for 60 flowers.

Question 21

On the scale of 1-unit length = 10 crore, the bar of length 6 units will represent _____ crore and of units will represent 75 crore.

Solution

Solution:-

From the question, it is given that, 1 – unit length = 10 crore,

So, a bar of length 6 units = 6×10

= 60 crore

Then, the number of units will represent 75 crore = $75/10$

= 7.5 units

On the scale of 1-unit length = 10 crore, the bar of length 6 units will represent 60 crore and of 7.5 units will represent 75 crore.

Question 22

In an examination, the grades achieved by 30 students of a class are given below. Arrange these grades in a table using tally marks: B, C, C, E, A, C, B, B, D, D, D, D, B, C, C, C, A, C, B, E, A, D, C, B, E, C, B, E, C, D

Solution

Solution:-

From the question, it is given that,

The grades achieved by 30 students of a class, B, C, C, E, A, C, B, B, D, D, D, D, B, C, C, C, A, C, B, E, A, D, C, B, E, C, B, E, C, D.

These marks are represented in the table by using tally marks,

Grades	Tally marks	Number of Students
A	III	3
B	IIII II	7
C	IIII IIII	10
D	IIII I	6
E	IIII	4

Question 23

The number of two-wheelers owned individually by each of the 50 families is listed below. Make a table using tally marks.

1, 1, 2, 1, 1, 1, 2, 1, 2, 1, 0, 1, 1, 2, 3, 1, 2, 1, 1, 2, 1, 2, 3, 1, 0, 2, 1, 0, 2, 1, 2, 1, 2, 1, 1, 4, 1, 3, 1, 1, 2, 1, 1, 1, 1, 2, 3, 2, 1, 1

Find the number of families having two or more two-wheelers.

Solution**Solution:-**

From the question, it is given that,

The number of two-wheelers owned individually by each of the 50 families is,

1, 1, 2, 1, 1, 1, 2, 1, 2, 1, 0, 1, 1, 2, 3, 1, 2, 1, 1, 2, 1, 2, 3, 1, 0, 2, 1, 0, 2, 1, 2, 1, 2, 1, 1, 4, 1, 3, 1, 1, 2, 1, 1, 1, 1, 2, 3, 2, 1, 1

Number of two-wheelers	Tally marks
0	
1	
2	
3	
4	

Question 24

The lengths in centimetres (to the nearest centimetre) of 30 carrots are given as follows:

15, 22, 21, 20, 22, 15, 15, 20, 20, 15, 20, 18, 20, 22, 21,

20, 21, 18, 21, 18, 20, 18, 21, 18, 22, 20, 15, 21, 18, 20

Arrange the data given above in a table using tally marks and answer the following questions.

(a) What is the number of carrots which have a length of more than 20 cm?

(b) Which length of the carrots occur a maximum number of times? TA minimum number of times?

Solution

Solution:-

Lengths in cm	Tally marks	Number of carrots
15		5
18		6
20		9
21		6
22		4

(a) From the table, 10 carrots have lengths of more than 20 cm.

(b) From the table, the 20 cm length of the carrots occurs the maximum number of times, and the 22 cm length of the carrots occurs the minimum number of times.

Question 25

Thirty students were interviewed to find out what they want to be in future. Their responses are listed below:

doctor, engineer, doctor, pilot, officer, doctor, engineer, doctor, pilot, officer, pilot, engineer, officer, pilot, doctor, engineer, pilot, officer, doctor, officer, doctor, pilot, engineer, doctor, pilot, officer, doctor, pilot, doctor, engineer

Arrange the data in a table using tally marks.

Solution

Solution: –

Responses	Tally marks	Number of Response
Doctor		10
Engineer		6
Pilot		8
Officer		6

Question 26

Following are the choices of games of 40 students of Class VI:

football, cricket, football, kho-kho, hockey, cricket, hockey, kho-kho, tennis, tennis, cricket, football, football, hockey, kho-kho, football, cricket, tennis, football, hockey, kho-kho, football, cricket, cricket, football, hockey, kho-kho, tennis, football, hockey, cricket, football, hockey, cricket, football, kho-kho, football, cricket, hockey, football.

(a) Arrange the choices of games in a table using tally marks.

(b) Which game is liked by most of the students?

(c) Which game is liked by the minimum number of students?

Solution

Solution: –

(a)

Games	Tally marks	Number of Students
Football		13
Cricket		9
Kho-Kho		6

Hockey		8
Tennis		4

(b) Football is liked by most of the students.

(c) Tennis is liked by the minimum number of students.

Question 27

Fill in the blanks in the following table, which represents the shirt size of 40 students of a school.

Shirt size	Tally marks	Number of Students
30		3
32		—
34	_____	8
36		—
38		10
40	_____	7

Solution

Solution:-

Shirt size	Tally marks	Number of Students
30		3
32		5

34		8
36		7
38		10
40		7