

statistics class-9 Maths Exercise 14.2
(solved exercise) By-Ashish Jha

1. The blood groups of 30 students of Class VIII are recorded as follows:

A, B, O, O, AB, O, A, O, B, A, O, B, A, O, O,

A, AB, O, A, A, O, O, AB, B, A, O, B, A, B, O.

Represent this data in the form of a frequency distribution table. Which is the most common, and which is the rarest, blood group among these students?

Solution:

Frequency is the number of students having the same blood group. The frequency is represented in the table or the frequency distribution table:

Blood Group Number of Student
(Frequency)

A	9
B	6
O	12
AB	3

Total 30

The most common Blood Group is the blood group with highest frequency: O

The rarest Blood Group is the blood group with lowest frequency: AB

2. The distance (in km) of 40 engineers from their residence to their place of work were found as follows:

5 3 10 20 25 11 13 7 12 31

19 10 12 17 18 11 32 17 16 2

7 9 7 8 3 5 12 15 18 3

12 14 2 9 6 15 15 7 6 12

Construct a grouped frequency distribution table with class size 5 for the data given above taking the first interval as 0-5 (5 not included). What main features do you observe from this tabular representation?

Solution:

Since the given data is very large, we construct a grouped frequency distribution table of class size 5. , class interval will be 0-5, 5-10, 10-15, 15-20 and so on. The data is

represented in the grouped frequency distribution table as:

Distances (in km)	Tally marks	Frequency
0 - 5		5
5 - 10		11
10 - 15		11
15 - 20		9
20 - 25		1
25 - 30		1
30 - 35		2
Total		40

In the given table the classes do not overlap. Also we find that, the houses of 36 out of 40 engineers are below 20 km of distance.

3. The relative humidity (in %) of a certain city for a month of 30 days was as follows:

98.1 98.6 99.2 90.3 86.5 95.3 92.9 96.3 94.2 95.1
 89.2 92.3 97.1 93.5 92.7 95.1 97.2 93.3 95.2 97.3
 96.2 92.1 84.9 90.2 95.7 98.3 97.3 96.1 92.1 89

(i) Construct a grouped frequency distribution table with classes 84 – 86, 86 – 88, etc.

(ii) Which month or season do you think this data is about?

(iii) What is the range of this data

Relative humidity (in %)	Frequency
84-86	1
86-88	1
88-90	2
90-92	2
92-94	7
94-96	6
96-98	7
98-100	4
Total	30

Solution:

(i) Since the given data is very large, we construct a grouped frequency distribution table of class size 2.

, class interval will be 84-86, 86-88, 88-90, 90-92 and so on. The data is represented in the grouped frequency distribution table as:

(ii) The humidity is very high in the given data. Since the humidity is observed to be high during the rainy season, the data here must be about rainy season.

(iii) The range of a data = The maximum value of the data–minimum value of the data

$$= 99.2-84.9$$

$$= 14.3$$