

Board – ICSE

Class – IX

Topic – Statistics

- In a histogram, each class rectangle is constructed with base as _____.
- 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?

- In a city, the weekly observations made in a study on the cost of living index are given in the following table: Draw a frequency polygon for the data above (without constructing a histogram).

Cost of living index	Number of weeks
140 - 150	5
150 - 160	10
160 - 170	20
170 - 180	9
180 - 190	6
190 - 200	2
Total	52

- Following are the ages of 180 patients getting medical treatment in a hospital on a day.

Age (in years)	0-5	5-10	10-20	20-30	30-40	40-60	60-80
No of patients	25	25	20	30	20	40	20

Represent the above data by histograms.

- The monthly expenditure of a family is given below. Represent the data in the form of a bar graph.

Month	Jan	Feb	March	April	May
Average monthly expenditure (Rs)	2500	3000	1600	3500	800

- Distance (in km) of 40 engineers from their place of 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).

7. Thirty children were asked about the number of hours they watched TV programmes in the previous week. The results were found as follows:

1 6 2 3 5 12 5 8 4 8
10 3 4 12 2 8 15 1 17 6
3 2 8 5 9 6 8 7 14 12

(i) Make a frequency distribution table for this data, taking class width 5 and one of the class interval 5 – 10.

(ii) How many children watched television for 15 or more hours a week

8. Construct the frequency distribution table for the data on heights (cm) of 20 boys using the class intervals 130 - 135, 135 - 140 and so on. The heights of the boys in cm are: 140, 138, 133, 148, 160, 153, 131, 146, 134, 136, 149, 141, 155, 149, 165, 142, 144, 147, 138, and 139. Also, find the range of heights of the boys.

9. Draw a histogram and frequency polygon for the following distribution.

Marks obtained	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of student	7	10	6	8	12	3	2	2

10. The frequency distribution of weights (in kg) of 40 persons is given below.

Weights (in kg)	30-35	35-40	40-45	45-50	50-55
Frequency	6	13	14	4	3

- (a) What is the lower limit of fourth class interval?
 (b) What is the class size of each class interval?
 (c) Which class interval has the highest frequency?
 (d) Find the class marks of all the class intervals?

Answer

1. Class interval
2. Most common O group=12,Rarest blood group=AB=3
3. Graph
4. Graph
5. Graph
6. Graph
7. (i) Frequency distribution table for the given data is as follows:

Number of hours (in a week)	Tally Marks	Number of children (Frequency)
0 - 5		10
5 - 10		13
10 - 15		5
15 - 20		2
Total		30

(ii) From the frequency table we observe that number of children in the class interval 15 - 20 is 2.

So 2 children view television for 15 hours or more than 15 hours a week.

8.

C.I.	130-135	135-140	140-145	145-150	150-155	155-160	160-165	165-170
Frequency	3	4	4	5	1	1	1	1

Range = 34 cm.

9. Graph

10. (a) 45
 (b) 5
 (c) 40 - 45
 (d) 32.5, 37.5, 42.5, 47.5, 52.5