



MATHS

BOOKS - NAND LAL PUBLICATION

STATISTICS

Exercise 14 1

1. Give some examples of data that you can collect from your day to day life.



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2. Classify the data in Above as primary and secondary data.



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Exercise 14 2

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?



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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

(i) less than 7 km from her place of work?

(ii) more than or equal to 7 km from her place of work?

(iii) within $\frac{1}{2}$ km from her place of work?



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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

: What is

the range of this data ?



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4. The heights of 50 students, measured to the nearest centimetres have been found to be as follows :

161	150	154	165	168	161	154
162	150	151	162	164	171	165
158	154	156	172	160	170	153
159	161	170	162	165	166	168
165	164	154	152	153	156	158
162	160	161	173	166	161	159
162	167	168	159	158	153	154
159						

: What

can you conclude about their heights from the table ?



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5. A study was conducted to find out the concentration of sulphur dioxide in the air in parts per million (ppm) of a certain city. The data obtained for 30 days is as follows :

0.03	0.08	0.08	0.09	0.04	0.17
0.16	0.05	0.02	0.06	0.18	0.20
0.11	0.08	0.12	0.13	0.22	0.07
0.08	0.01	0.10	0.06	0.09	0.18
0.11	0.07	0.05	0.07	0.01	0.04

Make a

grouped frequency distribution table for this data with class intervals as 0.00 - 0.04, 0.04 - 0.08 and so on.



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6. Three coins were tossed 30 times simultaneously. Each time the number of heads occurring was noted down as follows :

0	1	2	2	1	2	3	1	3	0
1	3	1	1	2	2	0	1	2	1
3	0	0	1	1	2	3	2	2	0

Prepare a

frequency distribution for the data given above



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7. The value of π upto 50 decimal places is given below:

3.14159265358979323846264338327950288419716939937510

(i) Make a frequency distribution of the digits from 0 to 9 after the decimal point. (ii) What are the most and the least frequently occurring digits?



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8. 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

: Make a

frequency distribution table for this data, taking class width 5 and one of the class interval as 5— 10



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9. A company manufactures carbatteries of particular type. The lives (in years) of 40 such batteries were recorded as follows :

2.6	3.0	3.7	3.2	2.2	4.1	3.5	4.5
3.5	2.3	3.2	3.4	3.8	3.2	4.6	3.7
2.5	4.4	3.4	3.3	2.9	3.0	4.3	2.8
3.5	3.2	3.9	3.2	3.2	3.1	3.7	3.4
4.6	3.8	3.2	2.6	3.5	4.2	2.9	3.6

Construct

a grouped frequency distribution table for this data, using class intervals of size 0.5 starting from the interval 2— 2.5.



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Exercise 14 3

1. The following data on the number of girls to the nearest ton per thousand boys in different sections of

the society is given below:

Section	Number of girls per thousand boys
Scheduled Caste (SC)	940
Scheduled Tribe (ST)	970
Non SC/ST	920
Backward districts	950
Non-backward districts	920
Rural	930
Urban	910

- (i) Represent the information above by a bar graph.
- (ii) Write two conclusions you can arrive at from the graph, with justification.



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Exercise 14 4

1. The following number of goals were scored by a team in a series of 10 matches : 2, 3, 4, 5, 0, 1, 3, 3, 4, 3

Find mean, median and mode of these scores :

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2. In a mathematics test given to 15 students, the following marks (out of 100) are recorded : 41, 39, 48, 52, 46, 62, 54, 40, 96, 52, 98, 40, 42, 52, 60 Find the mean, median and mode of this data.

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3. The following observations have been arranged in ascending order. If the median of the data is 63, find the value of x . 29, 32, 48, 50, x , $x + 2$, 72, 78, 84, 95

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4. Find the mode of 14, 25, 14, 28, 18, 17, 18, 14, 23, 22, 14, 18.

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5. Give one example of a situation in which the mean is not an appropriate measure of central tendency but

the median is an appropriate measure of central tendency.



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