EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Statistics

Grade : SSC Grade IX

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1. In inclusive form representation, the observation 41 falls in which class?

   (i) 21-31 (ii) 30-40 (iii) 31-41 (iv) 42-51 (v) 26-36

2. In exclusive form representation, the observation 27 falls in which class?

   (i) 37-47 (ii) 22-27 (iii) 17-27 (iv) 27-37 (v) 32-42

The daily wages (in rupees) of 18 workers in a factory are given below.

3. Represent the data in the form of a frequency distribution in exclusive form taking class size 30.

   235 245 260 270 201 298 233 280 202 222 248 213 217 279 213 203 227 248

(i)

Wages (in rupees)	201 - 231	231 - 261	261 - 291	291 - 321
No. of Workers	8	3	6	1

(ii)

Wages (in rupees)	201 - 231	231 - 261	261 - 291	291 - 321
No. of Workers	8	6	7	1

(iii)

Wages (in rupees)	201 - 231	231 - 261	261 - 291	291 - 321
No. of Workers	8	6	3	1

(iv)

Wages (in rupees)	201 - 231	231 - 261	261 - 291	291 - 321
No. of Workers	1	6	3	8

(v)

Wages (in rupees)	201 - 231	231 - 261	261 - 291	291 - 321
No. of Workers	8	9	3	1

4. If the length of the class is 7, then the number of class intervals needed to represent data with range 40 is

   (i) 6 (ii) 8 (iii) 3 (iv) 5 (v) 7

The sale of shirts of various sizes at a shop on a particular day is given below. Identify the frequency distribution

5. table for the given data.

   40 22 24 21 30 40 36 20 31 23 25 28 25 21 38 34 25 32 23 23 25 37

(i)

Size	20	21	22	23	24	25	28	30	31	32	34	36	37	38	40
No. of Shirts	1	2	1	3	2	3	1	1	1	1	1	1	1	1	2

(ii)

Size	20	21	22	23	24	25	28	30	31	32	34	36	37	38	40
No. of Shirts	1	2	1	3	1	4	1	1	1	1	1	1	1	1	2

(iii)

Size	24	25	26	29	30	31	33	34	35	37	38	39
No. of Shirts	1	3	2	2	2	3	1	1	3	1	2	1

(iv)

Size	20	21	23	24	25	28	30	31	32	34	36	37	38	40
No. of Shirts	1	2	3	1	4	1	1	1	1	1	1	1	1	3

(v)

Size	22	23	24	25	27	28	29	30	32	33	35	36	37	39	40
No. of Shirts	1	1	1	1	1	1	1	3	1	1	2	1	3	3	1

6. Which of the following are discrete variables?

a) Marks obtained by student in a particular subject
b) Number of workers in a factory
c) Temperature at a place over a month
d) Weights of persons in a group
e) Heights of children in a class

(i) {a,b} (ii) {d,b} (iii) {c,a} (iv) {d,b,a} (v) {e,c,a}

Find the cumulative frequency of class $54\text{-}59$.

7.

Class-Interval	24 - 29	30 - 35	36 - 41	42 - 47	48 - 53	54 - 59	60 - 65	66 - 71
Frequency	13	7	25	9	15	12	24	7

(i) 82 (ii) 81 (iii) 84 (iv) 78 (v) 80

Rainfall of 20 days are given below. Find the mean.

8.

Rainfall (in mm)	6	7	9	11	12	13	15
No. of days	3	3	2	3	4	2	3

(i) $\frac{21}{2}$ mm (ii) $\frac{211}{20}$ mm (iii) $\frac{249}{20}$ mm (iv) $\frac{209}{20}$ mm (v) $\frac{229}{20}$ mm

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Identify the cumulative frequency of the given grouped data.

9.

class interval	10 - 18	18 - 26	26 - 34	34 - 42
frequency	23	10	11	11

(i)

class interval	**Cumulative Frequency**
10 - 18	23
18 - 26	37
26 - 34	48
34 - 42	59

(ii)

class interval	**Cumulative Frequency**
10 - 18	23
18 - 26	33
26 - 34	44
34 - 42	55

(iii)

class interval	**Cumulative Frequency**
10 - 18	23
18 - 26	33
26 - 34	39
34 - 42	50

(iv)

class interval	**Cumulative Frequency**
10 - 18	11
18 - 26	21
26 - 34	32
34 - 42	55

(v)

class interval	**Cumulative Frequency**
10 - 18	23
18 - 26	34
26 - 34	44
34 - 42	55

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10. The observations of an ungrouped data are x_1, x_2, x_3 and $x_1 < x_2 < x_3$. If the mean and median of the data are 18 and 12 respectively and $x_3 - x_1 = 30$, find x_1, x_2, x_3

(i) $10, 12, 40$ (ii) $12, 12, 72$ (iii) $6, 12, 36$ (iv) $8, 12, 38$

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11. Convert the discontinuous form of the class interval 34 - 41 to continuous form

(i) 34-41 (ii) 33.5-42 (iii) 33.5-41.5 (iv) 33-42 (v) 33-41.5

12. Heights of 20 plants are given below. Find the median.

Height (in cm)	60	63	68	82	83	85	94
No. of plants	1	3	1	4	1	4	6

(i) 84 cm (ii) 82 cm (iii) 85 cm (iv) 83 cm (v) 86 cm

13. Scores of 30 students are given below. Find the median.

Score	72	73	74	77	79	80	81	84	86	87
No. of students	2	2	6	4	1	1	1	1	4	8

(i) $\frac{161}{2}$ (ii) $\frac{163}{2}$ (iii) 80 (iv) $\frac{159}{2}$

14. The true lower limit and true upper limit of the class with frequency x is

Class-Interval	**Frequency**
43 - 50	12
51 - 58	28
59 - 66	9
67 - 74	7
75 - 82	x

(i) 74.5-83 (ii) 74-83 (iii) 74.5-82.5 (iv) 74-82.5 (v) 75-82

15. Scores of 11 students are given below. Find the mode.

Score	73	76	79	81	87	88	90
No. of students	1	1	1	3	2	1	2

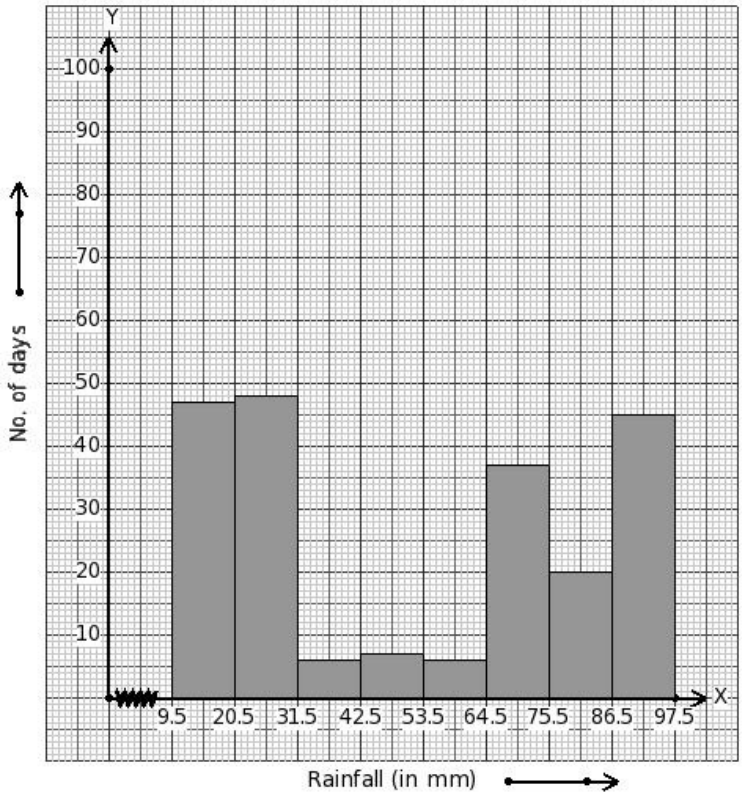
(i) 80 (ii) 81 (iii) 79 (iv) 83 (v) 82

16. Rainfall of 26 days are given below. Find the mode.

Rainfall (in mm)	5	6	7	8	9	10	11	12	13	14	15
No. of days	5	2	2	2	1	2	2	4	3	1	2

(i) 5 mm (ii) 7 mm (iii) 6 mm (iv) 4 mm (v) 3 mm

17. Rainfall of 216 days (in mm) are given below. Identify the class interval table for the given histogram.



(i)

Rainfall (in mm)	10 - 20	21 - 31	32 - 42	43 - 53	54 - 64	65 - 75	76 - 86	87 - 97
No. of days	47	48	6	7	4	37	20	45

(ii)

Rainfall (in mm)	10 - 20	21 - 31	32 - 42	43 - 53	54 - 64	65 - 75	76 - 86	87 - 97
No. of days	47	45	6	7	6	37	20	48

(iii)

Rainfall (in mm)	10 - 20	21 - 31	32 - 42	43 - 53	54 - 64	65 - 75	76 - 86	87 - 97
No. of days	47	48	6	7	6	37	20	45

(iv)

Rainfall (in mm)	10 - 20	21 - 31	32 - 42	43 - 53	54 - 64	65 - 75	76 - 86	87 - 97
No. of days	47	48	11	7	6	37	20	45

(v)

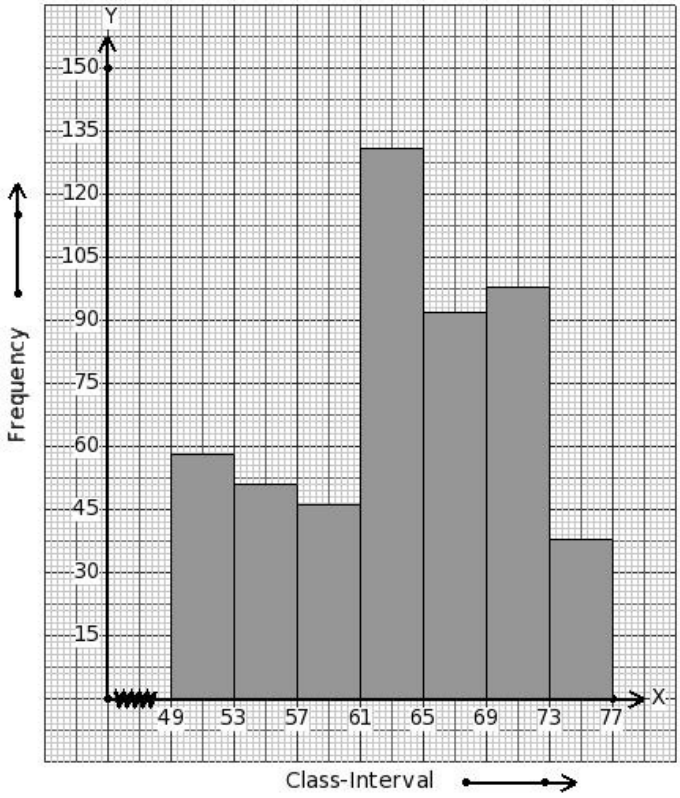
Rainfall (in mm)	10 - 20	21 - 31	32 - 42	43 - 53	54 - 64	65 - 75	76 - 86	87 - 97
No. of days	47	48	7	6	6	37	20	45

18. The upper limit of the class with frequency x is

Class-Interval	Frequency
43 - 49	4
49 - 55	8
55 - 61	x
61 - 67	2
67 - 73	27

(i) 61 (ii) 60 (iii) 62 (iv) 59 (v) 63

19. Identify the class interval table for the given histogram.



(i)

Class-Interval	49 - 53	53 - 57	57 - 61	61 - 65	65 - 69	69 - 73	73 - 77
Frequency	58	51	46	135	92	98	38

(ii)

Class-Interval	49 - 53	53 - 57	57 - 61	61 - 65	65 - 69	69 - 73	73 - 77
Frequency	58	38	46	131	92	98	51

(iii)

Class-Interval	49 - 53	53 - 57	57 - 61	61 - 65	65 - 69	69 - 73	73 - 77
Frequency	58	51	46	131	92	98	38

(iv)

Class-Interval	49 - 53	53 - 57	57 - 61	61 - 65	65 - 69	69 - 73	73 - 77
Frequency	58	46	51	131	92	98	38

(v)

Class-Interval	49 - 53	53 - 57	57 - 61	61 - 65	65 - 69	69 - 73	73 - 77
Frequency	58	51	48	131	92	98	38

20. Rainfall of 11 days (in mm) are given below. Find the mean rainfall.

10 9 9 15 5 9 5 10 15 8 8

(i) $\frac{105}{11}$ mm (ii) $\frac{114}{11}$ mm (iii) $\frac{125}{11}$ mm (iv) $\frac{103}{11}$ mm (v) $\frac{104}{11}$ mm

21. Temperatures of 15 days are given below. Find the mean.

Temperature (in degree C)	25	26	27	29	31	32	34	35
No. of days	2	1	5	1	1	1	2	2

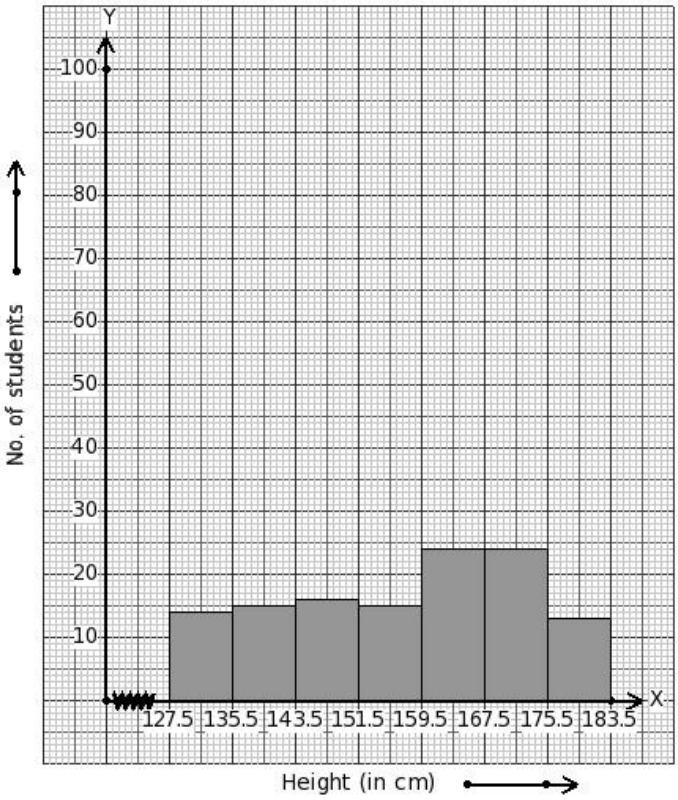
(i) $\frac{157}{5}$ °C (ii) $\frac{152}{5}$ °C (iii) $\frac{147}{5}$ °C (iv) $\frac{149}{5}$ °C (v) $\frac{148}{5}$ °C

22. The scores obtained by 10 students in a test are given below. Find the minimum score.

5 1 5 18 18 18 4 10 18 1

(i) 1 (ii) $7\frac{1}{2}$ (iii) 17 (iv) $9\frac{4}{5}$ (v) 18

23. Heights of 121 students (in cm) are given below. Identify the class interval table for the given histogram.



(i)

Height (in cm)	128 - 135	136 - 143	144 - 151	152 - 159	160 - 167	168 - 175	176 - 183
No. of students	14	15	19	15	24	24	13

(ii)

Height (in cm)	128 - 135	136 - 143	144 - 151	152 - 159	160 - 167	168 - 175	176 - 183
No. of students	14	13	16	15	24	24	15

(iii)

Height (in cm)	128 - 135	136 - 143	144 - 151	152 - 159	160 - 167	168 - 175	176 - 183
No. of students	14	16	15	15	24	24	13

(iv)

Height (in cm)	128 - 135	136 - 143	144 - 151	152 - 159	160 - 167	168 - 175	176 - 183
No. of students	14	15	16	15	24	24	13

(v)

Height (in cm)	128 - 135	136 - 143	144 - 151	152 - 159	160 - 167	168 - 175	176 - 183
No. of students	14	15	16	11	24	24	13

24. The class boundaries of the class with frequency x is

Class-Interval	Frequency
25 - 33	x
34 - 42	25
43 - 51	14
52 - 60	23
61 - 69	30

(i) 24.5-33.5 (ii) 24-34 (iii) 25-33 (iv) 24.5-34 (v) 24-33.5

25. Scores of 13 students are given below. Find the mean score.

81 81 80 82 89 84 75 72 87 89 76 89 76

(i) $\frac{1061}{13}$ (ii) $\frac{1063}{13}$ (iii) $\frac{1074}{13}$ (iv) $\frac{1062}{13}$ (v) $\frac{1087}{13}$

Assignment Key

1) (iii)	2) (iv)	3) (iii)	4) (i)	5) (ii)	6) (i)
7) (ii)	8) (iv)	9) (ii)	10) (iii)	11) (iii)	12) (i)
13) (iv)	14) (iii)	15) (ii)	16) (i)	17) (iii)	18) (i)
19) (iii)	20) (iv)	21) (iii)	22) (i)	23) (iv)	24) (i)
25) (i)					

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