EduSahara™ Worksheet

Name : Chapter Based Worksheet

Chapter : Frequency Distribution

Grade : ICSE Grade IX

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

Class-Interval	Frequency
26 - 33	12
34 - 41	30
42 - 49	x
50 - 57	11
58 - 65	14

(i) 41-49.5 (ii) 41.5-49.5 (iii) 41.5-50 (iv) 41-50 (v) 42-49

2. Which of the following are discontinuous variables?

a) Weights of persons in a group.
b) Number of members in a family.
c) Wages of workers in a factory.
d) Heights of children in a class.
e) Number of workers in a factory.

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

3. Find the cumulative frequency of class 58-64 .

Class-Interval	30 - 36	37 - 43	44 - 50	51 - 57	58 - 64	65 - 71	72 - 78
Frequency	5	19	5	7	17	24	14

(i) 55 (ii) 52 (iii) 54 (iv) 50 (v) 53

4. The number of classes of class size 9 required to represent the given random sample in exclusive form
3 7 9 10 18 21 21 23 26 26 27 29 29 29 30 30 31 31 32 33 35 36 39 40 40 43 44 48 49 49 50

(i) 6 (ii) 9 (iii) 7 (iv) 3 (v) 5

5. If some random sample data is arranged in a frequency distribution table in inclusive form with 2 - 11 as the first class, then the observation 26 falls in which class?

(i) 22-31 (ii) 22.5-30.5 (iii) 21.5-31.5 (iv) 23-32 (v) 21-30

6. The class boundaries of 14 - 23 which is in inclusive form are

(i) 13.5-24 (ii) 13.5-23.5 (iii) 14-23 (iv) 13-23.5 (v) 13-24

7. The weights (in gm) of 16 fruits are as follows. Form the grouped frequency table in exclusive form by taking class size 50. 315 371 257 261 279 315 394 378 308 397 281 388 219 364 382 266

(i)

Weight (in gm)	219 - 269	269 - 319	319 - 369	369 - 419
No. of Fruits	4	5	5	6

(ii)

Weight (in gm)	219 - 269	269 - 319	319 - 369	369 - 419
No. of Fruits	4	10	1	6

(iii)

Weight (in gm)	219 - 269	269 - 319	319 - 369	369 - 419
No. of Fruits	4	5	1	6

(iv)

Weight (in gm)	219 - 269	269 - 319	319 - 369	369 - 419
No. of Fruits	4	1	5	6

(v)

Weight (in gm)	219 - 269	269 - 319	319 - 369	369 - 419
No. of Fruits	6	5	1	4

8. During the medical check-up of 42 students of a class, their weights in kgs are recorded as follows. Identify the number of students whose weight is more than 76 kg

Class-Interval	40 - 49	49 - 58	58 - 67	67 - 76	76 - 85
Frequency	9	9	10	8	6

(i) 7 (ii) 5 (iii) 9 (iv) 3 (v) 6

9. Identify the cumulative frequency of the given grouped data.

class interval	32 - 40	41 - 49	50 - 58	59 - 67	68 - 76	77 - 85
frequency	15	19	7	18	7	17

(i)

class interval	Cumulative Frequency
32 - 40	15
41 - 49	34
50 - 58	41
59 - 67	59
68 - 76	66
77 - 85	83

(ii)

class interval	Cumulative Frequency
32 - 40	15
41 - 49	22
50 - 58	41
59 - 67	59
68 - 76	66
77 - 85	83

(iii)

class interval	Cumulative Frequency
32 - 40	15
41 - 49	34
50 - 58	41
59 - 67	54
68 - 76	61
77 - 85	78

(iv)

class interval	Cumulative Frequency
32 - 40	15
41 - 49	34
50 - 58	43
59 - 67	61
68 - 76	68
77 - 85	85

(v)

class interval	Cumulative Frequency
32 - 40	15
41 - 49	32
50 - 58	39
59 - 67	57
68 - 76	64
77 - 85	83

10. The class marks of a frequency distribution are 26.5 , 35.5 , 44.5 , 53.5 .
Find the class size and class intervals in exclusive form

(i) $9;21-30,30-39,39-48,48-57$ (ii) $9;22-31,31-40,40-49,49-58$ (iii) $10;22-31,32-41,42-51,52-61$

(iv) $11;21-31,32-42,43-53,54-64$ (v) $9;23-32,32-41,41-50,50-59$

11. If some random sample data is arranged in a frequency distribution table in exclusive form with $5-15$ as the first class, then the observation 27 falls in which class?

(i) 24-34 (ii) 25.5-34.5 (iii) 26-36 (iv) 24.5-35.5 (v) 25-35

12. If the upper and lower limit of class interval are 22 and 18 respectively, then the class interval is

(i) 17.5-22.5 (ii) 18.5-21.5 (iii) 17.5-22 (iv) 18-22 (v) 18-22.5

13. The lower limit of the class with frequency x is

Class-Interval	Frequency
45 - 54	27
55 - 64	16
65 - 74	18
75 - 84	7
85 - 94	x

(i) 85 (ii) 86 (iii) 84 (iv) 88 (v) 83

14. Given class interval $45-50$ in exclusive form, its mid value is

(i) $\frac{95}{2}$ (ii) $\frac{93}{2}$ (iii) 48 (iv) $\frac{97}{2}$ (v) $\frac{189}{4}$

15. Construct a frequency distribution table from the following cumulative frequency distribution

Class-Interval	Cumulative Frequency
11 - 15	6
15 - 19	19
19 - 23	28
23 - 27	39
27 - 31	48
31 - 35	54
35 - 39	68
39 - 43	77

(i)

Class-Interval	11 - 15	15 - 19	19 - 23	23 - 27	27 - 31	31 - 35	35 - 39	39 - 43
Frequency	6	13	11	9	9	6	14	9

(ii)

Class-Interval	11 - 15	15 - 19	19 - 23	23 - 27	27 - 31	31 - 35	35 - 39	39 - 43
Frequency	6	13	9	11	14	6	14	9

(iii)

Class-Interval	11 - 15	15 - 19	19 - 23	23 - 27	27 - 31	31 - 35	35 - 39	39 - 43
Frequency	6	13	14	11	9	6	14	9

(iv)

Class-Interval	11 - 15	15 - 19	19 - 23	23 - 27	27 - 31	31 - 35	35 - 39	39 - 43
Frequency	6	13	9	11	9	6	14	9

(v)

Class-Interval	11 - 15	15 - 19	19 - 23	23 - 27	27 - 31	31 - 35	35 - 39	39 - 43
Frequency	6	9	9	11	9	6	14	13

16. Arrange the following data 10 10 28 13 29 30 23 24 15 31 in ascending order

(i) 29 17 16 35 39 16 11 21 18 23 (ii) 13 35 24 32 12 13 28 23 15 16

(iii) 26 16 20 13 29 10 34 31 34 15 (iv) 10 10 13 15 23 24 28 29 30 31

(v) 35 32 14 22 37 10 18 36 16 22

17. The mid value of the class with frequency x is

Class-Interval	Frequency
8 - 13	23
14 - 19	x
20 - 25	10
26 - 31	28
32 - 37	27

(i) 17 (ii) $\frac{35}{2}$ (iii) $\frac{33}{2}$ (iv) $\frac{65}{4}$ (v) $\frac{31}{2}$

18. The class mark of the class with frequency x is

Class-Interval	Frequency
11 - 16	26
17 - 22	26
23 - 28	x
29 - 34	7
35 - 40	15

(i) $\frac{49}{2}$ (ii) $\frac{101}{4}$ (iii) $\frac{51}{2}$ (iv) 26 (v) $\frac{53}{2}$

19. Which of the following are continuous variables?

a) Temperature at a place over a month
b) Marks obtained by student in a particular subject
c) Number of players in a team
d) Number of members in a family
e) Heights of children in a class

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

20. Given class interval 22 - 25 in exclusive form, its class size is

(i) 6 (ii) 4 (iii) 3 (iv) 2 (v) 1

21. Convert the discontinuous form of the class interval 38 - 47 to continuous form

(i) 37.5-47.5 (ii) 37.5-48 (iii) 37-48 (iv) 37-47.5 (v) 38-47

22. The following outcomes were noted when a dice was thrown 19 times. Identify the frequency distribution table for the given data.

3 4 1 4 3 3 4 6 2 5 4 6 1 2 4 1 6 5 3

(i)

Outcome	1	2	3	4	5
No. of outcomes	2	3	5	5	4

(ii)

Outcome	1	2	3	4	5	6
No. of outcomes	2	2	4	6	2	3

(iii)

Outcome	1	2	3	4	5	6
No. of outcomes	2	2	5	5	2	3

(iv)

Outcome	1	2	3	4	5	6
No. of outcomes	3	2	4	5	1	4

(v)

Outcome	1	2	3	4	5	6
No. of outcomes	3	2	4	5	2	3

23. Given table in inclusive form, convert it into exclusive form.

Class-Interval	6 - 16	17 - 27	28 - 38	39 - 49	50 - 60
Frequency	46	12	38	43	45

(i)

Class-Interval	6.5 - 16.5	17.5 - 27.5	28.5 - 38.5	39.5 - 49.5	50.5 - 60.5
Frequency	46	12	38	43	45

(ii)

Class-Interval	6 - 16	16 - 26	26 - 36	36 - 46	46 - 56
Frequency	30	32	28	39	26

(iii)

Class-Interval	5.5 - 16.5	16.5 - 27.5	27.5 - 38.5	38.5 - 49.5	49.5 - 60.5
Frequency	46	12	38	43	45

(iv)

Class-Interval	5.5 - 15.5	16.5 - 26.5	27.5 - 37.5	38.5 - 48.5	49.5 - 59.5
Frequency	46	12	38	43	45

(v)

Class-Interval	5.5 - 16	16.5 - 27	27.5 - 38	38.5 - 49	49.5 - 60
Frequency	46	12	38	43	45

24. The weights (in gm) of 15 fruits are as follows. Form the grouped frequency table in inclusive form by taking class size 40. 270 209 258 384 393 377 337 292 316 227 211 244 338 218 223

(i)

Weight (in gm)	209 - 248	249 - 288	289 - 328	329 - 368	369 - 408
No. of Fruits	6	5	2	2	3

(ii)

Weight (in gm)	209 - 248	249 - 288	289 - 328	329 - 368	369 - 408
No. of Fruits	6	2	5	2	3

(iii)

Weight (in gm)	209 - 248	249 - 288	289 - 328	329 - 368	369 - 408
No. of Fruits	6	2	2	2	3

(iv)

Weight (in gm)	209 - 248	249 - 288	289 - 328	329 - 368	369 - 408
No. of Fruits	6	3	2	2	2

25. The following cumulative frequency table represents which of the following frequency distribution

Class-Interval	Cumulative Frequency
10 - 15	9
15 - 20	21
20 - 25	28
25 - 30	41
30 - 35	53

(i)

Class-Interval	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35
Frequency	9	12	7	13	12

(ii)

Class-Interval	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35
Frequency	9	17	7	13	12

(iii)

Class-Interval	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35
Frequency	9	7	12	13	12

(iv)

Class-Interval	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35
Frequency	9	12	9	13	12

Assignment Key

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

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