EduSahara™ Assignment

Name : Class Interval Concepts

Chapter : Statistics

Grade : ICSE Grade VIII

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1. Arrange the following data 36 17 15 24 19 15 38 11 37 17 in ascending order

   (i) 31 13 33 29 14 25 15 38 35 21 (ii) 30 34 15 38 32 40 19 13 30 15

   (iii) 11 15 15 17 17 19 24 36 37 38 (iv) 33 13 21 35 31 31 30 18 35 39

   (v) 33 29 31 37 14 35 30 31 22 10

2. Arrange the following data 30 26 24 23 21 26 11 36 35 25 in descending order

   (i) 13 24 26 36 11 34 33 22 22 35 (ii) 30 39 19 18 36 25 32 34 40 20

   (iii) 36 35 30 26 26 25 24 23 21 11 (iv) 20 40 29 14 39 27 37 37 25 21

   (v) 26 27 36 14 39 17 36 35 12 28

3. Given class interval 16 - 19 in exclusive form, its lower limit is

   (i) 16 (ii) 13 (iii) 19 (iv) 15 (v) 17

4. Given class interval 16 - 26 in exclusive form, its upper limit is

   (i) 25 (ii) 28 (iii) 23 (iv) 27 (v) 26

5. Given class interval 39 - 43 in exclusive form, its class size is

   (i) 4 (ii) 7 (iii) 3 (iv) 2 (v) 5

6. Given class interval 27 - 32 in exclusive form, its mid value is

   (i) 30 (ii) $\frac{117}{4}$ (iii) $\frac{61}{2}$ (iv) $\frac{57}{2}$ (v) $\frac{59}{2}$

7. If the upper and lower limit of class interval are 56 and 50 respectively, then the class interval is

   (i) 49.5-56 (ii) 50-56.5 (iii) 49.5-56.5 (iv) 50.5-55.5 (v) 50-56

8. Given class interval 23 - 26 in exclusive form, its upper limit is

   (i) 27 (ii) 25 (iii) 26 (iv) 28 (v) 23

9. Given class interval 18 - 21 in exclusive form, its class size is

   (i) 4 (ii) 5 (iii) 3 (iv) 2 (v) 1

10. Given class interval 13 - 17 in exclusive form, its class mark is

    (i) 18 (ii) 12 (iii) 14 (iv) 16 (v) 15

11. Given class interval 27 - 34 in exclusive form, its mid value is

    (i) 31 (ii) $\frac{121}{4}$ (iii) $\frac{63}{2}$ (iv) $\frac{59}{2}$ (v) $\frac{61}{2}$

12. If the upper and lower limit of class interval are 52 and 49 respectively, then the class interval is

(i) 48.5-52 (ii) 49.5-51.5 (iii) 49-52 (iv) 49-52.5 (v) 48.5-52.5

13. If the lower and upper limit of class interval are 30 and 38 respectively, then the class interval is

(i) 30-38 (ii) 29.5-38.5 (iii) 30.5-37.5 (iv) 29.5-38 (v) 30-38.5

14. The class boundaries of 19 - 23 which is in exclusive form are

(i) 18.5-23.5 (ii) 19-23.5 (iii) 18.5-23 (iv) 19-23 (v) 19.5-22.5

15. The class boundaries of 32 - 39 which is in inclusive form are

(i) 31-40 (ii) 31.5-39.5 (iii) 31.5-40 (iv) 31-39.5 (v) 32-39

16. If the lower and upper limit of class interval are 25 and 33 respectively, then the class interval is

(i) 25-33.5 (ii) 24.5-33 (iii) 25-33 (iv) 24.5-33.5 (v) 25.5-32.5

17. The class boundaries of 35 - 42 which is in exclusive form are

(i) 35.5-41.5 (ii) 34.5-42.5 (iii) 35-42 (iv) 35-42.5 (v) 34.5-42

18. The class boundaries of 31 - 38 which is in inclusive form are

(i) 30-38.5 (ii) 31-38 (iii) 30.5-39 (iv) 30-39 (v) 30.5-38.5

19. Convert the discontinuous form of the class interval 18 - 23 to continuous form

(i) 17.5-24 (ii) 17.5-23.5 (iii) 18-23 (iv) 17-23.5 (v) 17-24

20. Convert the continuous form of the class interval 41.5 - 45.5 to discontinuous form

(i) 41.5-45 (ii) 42-45.5 (iii) 42-45 (iv) 41.5-45.5 (v) 42.5-44.5

21. The class size used in the below table is

Class-Interval	14 - 23	24 - 33	34 - 43	44 - 53	54 - 63	64 - 73
Frequency	17	24	10	17	18	28

(i) 11 (ii) 7 (iii) 9 (iv) 12 (v) 10

22. The class size used in the below table is

Class-Interval	31 - 38	38 - 45	45 - 52	52 - 59	59 - 66	66 - 73	73 - 80
Frequency	21	7	4	28	26	12	8

(i) 6 (ii) 8 (iii) 7 (iv) 5 (v) 9

23. Convert the discontinuous form of the class interval 47 - 57 to continuous form

(i) 46.5-57.5 (ii) 47-57 (iii) 46-57.5 (iv) 46.5-58 (v) 46-58

24. Convert the continuous form of the class interval 49.5 - 56.5 to discontinuous form

(i) 49.5-56.5 (ii) 49.5-56 (iii) 50-56.5 (iv) 50-56 (v) 50.5-55.5

25. The class size used in the below table is

Class-Interval	27 - 36	37 - 46	47 - 56	57 - 66
Frequency	28	2	28	5

(i) 10 (ii) 12 (iii) 7 (iv) 11 (v) 9

26. The class size used in the below table is

Class-Interval	42 - 51	51 - 60	60 - 69	69 - 78	78 - 87	87 - 96	96 - 105	105 - 114
Frequency	21	23	23	24	25	7	7	17

(i) 7 (ii) 11 (iii) 9 (iv) 8 (v) 10

27. Which of the following are true?

a) The difference between the true upper limit and true lower limit is called the class mark.
b) The true lower limit of the inclusive form class interval 40 - 50 is 40.
c) The number of times a particular observation occurs is called its frequency.
d) The true lower limit of the exclusive form class interval 40 - 50 is 40.
e) Each numerical figure in a data set is called an observation.

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

28. Which of the following class intervals are in inclusive form?

a) 17 - 25 , 26 - 34 , 35 - 43,...
b) 44 - 52 , 53 - 61 , 62 - 70,...
c) 41 - 49 , 49 - 57 , 57 - 65...
d) 17 - 25 , 25 - 33 , 33 - 41,...
e) 16.5 - 25.5 , 25.5 - 34.5 , 34.5 - 43.5...

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

29. In inclusive form representation, the observation 40 falls in which class?

(i) 29-39 (ii) 30-40 (iii) 41-50 (iv) 25-35 (v) 20-30

30. In exclusive form representation, the observation 18 falls in which class?

(i) 8-18 (ii) 28-38 (iii) 13-18 (iv) 23-33 (v) 18-28

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

Class-Interval	**Frequency**
13 - 18	16
19 - 24	13
25 - 30	21
31 - 36	25
37 - 42	x

(i) $\frac{79}{2}$ (ii) $\frac{77}{2}$ (iii) $\frac{81}{2}$ (iv) $\frac{157}{4}$ (v) 40

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

Class-Interval	**Frequency**
6 - 16	16
16 - 26	4
26 - 36	18
36 - 46	4
46 - 56	x

(i) 49 (ii) 51 (iii) 50 (iv) 52 (v) 54

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

Class-Interval	Frequency
18 - 23	9
24 - 29	26
30 - 35	x
36 - 41	14
42 - 47	12

(i) $\frac{65}{2}$ (ii) $\frac{129}{4}$ (iii) 33 (iv) $\frac{67}{2}$ (v) $\frac{63}{2}$

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

Class-Interval	Frequency
14 - 24	23
24 - 34	23
34 - 44	1
44 - 54	x
54 - 64	26

(i) 51 (ii) 49 (iii) 46 (iv) 50 (v) 48

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

Class-Interval	Frequency
24 - 29	10
30 - 35	x
36 - 41	7
42 - 47	24
48 - 53	2

(i) 29.5-35.5 (ii) 29-35.5 (iii) 29.5-36 (iv) 29-36 (v) 30-35

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

Class-Interval	Frequency
29 - 35	1
35 - 41	x
41 - 47	7
47 - 53	7
53 - 59	10

(i) 35.5-40.5 (ii) 34.5-41.5 (iii) 34.5-41 (iv) 35-41 (v) 35-41.5

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

Class-Interval	Frequency
31 - 39	9
40 - 48	x
49 - 57	19
58 - 66	27
67 - 75	8

(i) 39-48.5 (ii) 40-48 (iii) 39-49 (iv) 39.5-48.5 (v) 39.5-49

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

Class-Interval	Frequency
19 - 25	10
25 - 31	12
31 - 37	23
37 - 43	16
43 - 49	x

(i) 42.5-49 (ii) 43-49.5 (iii) 42.5-49.5 (iv) 43-49 (v) 43.5-48.5

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

Class-Interval	Frequency
26 - 34	22
35 - 43	21
44 - 52	7
53 - 61	23
62 - 70	x

(i) 59 (ii) 62 (iii) 63 (iv) 64 (v) 61

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

Class-Interval	Frequency
27 - 35	21
35 - 43	28
43 - 51	21
51 - 59	x
59 - 67	22

(i) 59 (ii) 62 (iii) 60 (iv) 57 (v) 58

41. If the sample data with range 70 has to be divided into 6 class intervals, then the length of the class is

(i) 12 (ii) 15 (iii) 13 (iv) 11 (v) 9

42. If the length of the class is 9, then the number of class intervals needed to represent data with range 60 is

(i) 8 (ii) 5 (iii) 7 (iv) 10 (v) 6

43. The number of classes of class size 6 required to represent the given random sample in exclusive form

3 4 5 7 7 14 16 20 21 21 22 23 26 26 26 32 34 37 37 42 45 45 49

(i) 11 (ii) 8 (iii) 7 (iv) 9 (v) 6

44. Given class interval table, find the sum of frequencies.

Class-Interval	32 - 40	41 - 49	50 - 58	59 - 67	68 - 76	77 - 85	86 - 94
Frequency	14	15	4	10	5	27	9

(i) 83 (ii) 87 (iii) 81 (iv) 84 (v) 85

45. Given class interval table, find the sum of frequencies.

Class-Interval	22 - 31	31 - 40	40 - 49	49 - 58	58 - 67	67 - 76	76 - 85	85 - 94
Frequency	27	10	23	1	25	22	2	4

(i) 117 (ii) 111 (iii) 113 (iv) 114 (v) 115

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

46.

Class-Interval	16 - 26	27 - 37	38 - 48	49 - 59	60 - 70
Frequency	11	35	16	13	30

(i)

Class-Interval	16 - 26	26 - 36	36 - 46	46 - 56	56 - 66
Frequency	29	24	11	34	18

(ii)

Class-Interval	15.5 - 26	26.5 - 37	37.5 - 48	48.5 - 59	59.5 - 70
Frequency	11	35	16	13	30

(iii)

Class-Interval	15.5 - 26.5	26.5 - 37.5	37.5 - 48.5	48.5 - 59.5	59.5 - 70.5
Frequency	11	35	16	13	30

(iv)

Class-Interval	16.5 - 26.5	27.5 - 37.5	38.5 - 48.5	49.5 - 59.5	60.5 - 70.5
Frequency	11	35	16	13	30

(v)

Class-Interval	15.5 - 25.5	26.5 - 36.5	37.5 - 47.5	48.5 - 58.5	59.5 - 69.5
Frequency	11	35	16	13	30

47. Which of the following class intervals are in exclusive form?

a) 43 - 53 , 54 - 64 , 65 - 75,...
b) 10 - 20 , 20 - 30 , 30 - 40,...
c) 40 - 50 , 50 - 60 , 60 - 70...
d) 9.5 - 20.5 , 20.5 - 31.5 , 31.5 - 42.5...
e) 10 - 20 , 21 - 31 , 32 - 42,...

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

48. Convert the exclusive form of the class interval 12.5 - 17.5 to inclusive form

(i) 12.5-17.5 (ii) 13-17 (iii) 13.5-16.5 (iv) 13-17.5 (v) 12.5-17

49. Convert the inclusive form of the class interval 34 - 37 to exclusive form

(i) 33.5-37.5 (ii) 33-37.5 (iii) 34-37 (iv) 33-38 (v) 33.5-38

Assignment Key

1) (iii)	2) (iii)	3) (i)	4) (v)	5) (i)	6) (v)
7) (v)	8) (iii)	9) (iii)	10) (v)	11) (v)	12) (iii)
13) (i)	14) (iv)	15) (ii)	16) (iii)	17) (iii)	18) (v)
19) (ii)	20) (iii)	21) (v)	22) (iii)	23) (i)	24) (iv)
25) (i)	26) (iii)	27) (iv)	28) (iv)	29) (ii)	30) (v)
31) (i)	32) (ii)	33) (i)	34) (ii)	35) (i)	36) (iv)
37) (iv)	38) (iv)	39) (ii)	40) (i)	41) (i)	42) (iii)
43) (ii)	44) (iv)	45) (iv)	46) (iii)	47) (v)	48) (ii)
49) (i)					

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