EduSahara™ Assignment

Name : Class Interval Concepts

Chapter : Statistics

Grade : ICSE Grade VIII

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1. Arrange the following data 35 27 29 18 24 23 40 39 27 17 in ascending order

   (i) 30 35 33 39 26 22 30 13 33 22 (ii) 14 33 10 26 36 30 12 29 34 18

   (iii) 17 18 23 24 27 27 29 35 39 40 (iv) 31 18 35 21 37 31 29 17 33 23

   (v) 29 17 28 36 26 25 36 21 31 37

2. Arrange the following data 12 22 29 39 22 20 11 23 11 23 in descending order

   (i) 24 23 18 32 23 13 14 16 29 28 (ii) 39 29 23 23 22 22 20 12 11 11

   (iii) 34 28 35 19 21 24 30 27 10 32 (iv) 23 25 37 30 11 10 23 13 22 10

   (v) 31 37 26 28 35 30 35 26 34 36

3. Given class interval 14 - 18 in exclusive form, its lower limit is

   (i) 12 (ii) 16 (iii) 14 (iv) 13 (v) 15

4. Given class interval 12 - 19 in exclusive form, its upper limit is

   (i) 19 (ii) 16 (iii) 21 (iv) 18 (v) 20

5. Given class interval 23 - 33 in exclusive form, its class size is

   (i) 9 (ii) 13 (iii) 7 (iv) 10 (v) 11

6. Given class interval 44 - 46 in exclusive form, its mid value is

   (i) 44 (ii) 45 (iii) 42 (iv) 46 (v) 48

7. If the upper and lower limit of class interval are 32 and 23 respectively, then the class interval is

   (i) 23-32 (ii) 22.5-32 (iii) 23.5-31.5 (iv) 23-32.5 (v) 22.5-32.5

8. Given class interval 19 - 27 in exclusive form, its upper limit is

   (i) 27 (ii) 26 (iii) 29 (iv) 24 (v) 28

9. Given class interval 47 - 52 in exclusive form, its class size is

   (i) 6 (ii) 4 (iii) 8 (iv) 3 (v) 5

10. Given class interval 22 - 28 in exclusive form, its class mark is

    (i) 24 (ii) 28 (iii) 25 (iv) 26 (v) 23

11. Given class interval 28 - 37 in exclusive form, its mid value is

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

12. If the upper and lower limit of class interval are 18 and 13 respectively, then the class interval is

    (i) 13.5-17.5 (ii) 12.5-18 (iii) 13-18 (iv) 12.5-18.5 (v) 13-18.5

13. If the lower and upper limit of class interval are 46 and 48 respectively, then the class interval is

(i) 46.5-47.5 (ii) 45.5-48.5 (iii) 46-48 (iv) 46-48.5 (v) 45.5-48

14. The class boundaries of 49 - 52 which is in exclusive form are

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

15. The class boundaries of 32 - 38 which is in inclusive form are

(i) 31-38.5 (ii) 31-39 (iii) 31.5-38.5 (iv) 31.5-39 (v) 32-38

16. If the lower and upper limit of class interval are 49 and 57 respectively, then the class interval is

(i) 48.5-57 (ii) 48.5-57.5 (iii) 49.5-56.5 (iv) 49-57 (v) 49-57.5

17. The class boundaries of 49 - 59 which is in exclusive form are

(i) 49-59 (ii) 48.5-59 (iii) 49-59.5 (iv) 48.5-59.5 (v) 49.5-58.5

18. The class boundaries of 33 - 37 which is in inclusive form are

(i) 32-37.5 (ii) 33-37 (iii) 32.5-37.5 (iv) 32.5-38 (v) 32-38

19. Convert the discontinuous form of the class interval 42 - 44 to continuous form

(i) 41-45 (ii) 41-44.5 (iii) 41.5-45 (iv) 42-44 (v) 41.5-44.5

20. Convert the continuous form of the class interval 30.5 - 40.5 to discontinuous form

(i) 31-40 (ii) 30.5-40.5 (iii) 31.5-39.5 (iv) 30.5-40 (v) 31-40.5

21. The class size used in the below table is

Class-Interval	15 - 25	26 - 36	37 - 47	48 - 58	59 - 69	70 - 80	81 - 91
Frequency	21	21	18	15	22	23	22

(i) 11 (ii) 12 (iii) 8 (iv) 13 (v) 10

22. The class size used in the below table is

Class-Interval	29 - 34	34 - 39	39 - 44	44 - 49	49 - 54
Frequency	28	2	9	25	25

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

23. Convert the discontinuous form of the class interval 30 - 35 to continuous form

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

24. Convert the continuous form of the class interval 36.5 - 47.5 to discontinuous form

(i) 37-47.5 (ii) 36.5-47.5 (iii) 37.5-46.5 (iv) 36.5-47 (v) 37-47

25. The class size used in the below table is

Class-Interval	44 - 54	55 - 65	66 - 76	77 - 87	88 - 98
Frequency	15	11	16	23	25

(i) 10 (ii) 12 (iii) 11 (iv) 14 (v) 8

26. The class size used in the below table is

Class-Interval	37 - 47	47 - 57	57 - 67	67 - 77	77 - 87	87 - 97	97 - 107	107 - 117
Frequency	1	15	7	17	26	7	17	22

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

27. Which of the following are true?

a) Each numerical figure in a data set is called an observation.
b) The difference between the true upper limit and true lower limit is called the class mark.
c) The true lower limit of the exclusive form class interval 10 - 20 is 10.
d) The true lower limit of the inclusive form class interval 10 - 20 is 10.
e) The number of times a particular observation occurs is called its frequency.

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

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

a) 31 - 37 , 37 - 43 , 43 - 49...
b) 12.5 - 19.5 , 19.5 - 26.5 , 26.5 - 33.5...
c) 34 - 40 , 41 - 47 , 48 - 54,...
d) 13 - 19 , 20 - 26 , 27 - 33,...
e) 13 - 19 , 19 - 25 , 25 - 31,...

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

29. In inclusive form representation, the observation 52 falls in which class?

(i) 37-47 (ii) 32-42 (iii) 41-51 (iv) 53-62 (v) 42-52

30. In exclusive form representation, the observation 28 falls in which class?

(i) 23-28 (ii) 38-48 (iii) 28-38 (iv) 18-28 (v) 33-43

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

Class-Interval	Frequency
7 - 12	19
13 - 18	8
19 - 24	x
25 - 30	16
31 - 36	13

(i) $\frac{43}{2}$ (ii) $\frac{45}{2}$ (iii) 22 (iv) $\frac{85}{4}$ (v) $\frac{41}{2}$

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

Class-Interval	Frequency
3 - 13	11
13 - 23	15
23 - 33	x
33 - 43	15
43 - 53	2

(i) 26 (ii) 27 (iii) 28 (iv) 29 (v) 31

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

Class-Interval	Frequency
4 - 14	29
15 - 25	x
26 - 36	15
37 - 47	9
48 - 58	7

(i) 19 (ii) 20 (iii) 21 (iv) 23 (v) 17

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

Class-Interval	Frequency
2 - 7	2
7 - 12	8
12 - 17	6
17 - 22	10
22 - 27	x

(i) $\frac{51}{2}$ (ii) $\frac{49}{2}$ (iii) $\frac{97}{4}$ (iv) 25 (v) $\frac{47}{2}$

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

Class-Interval	Frequency
38 - 46	x
47 - 55	12
56 - 64	24
65 - 73	18
74 - 82	19

(i) 37-47 (ii) 38-46 (iii) 37.5-47 (iv) 37-46.5 (v) 37.5-46.5

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

Class-Interval	Frequency
50 - 57	5
57 - 64	10
64 - 71	4
71 - 78	x
78 - 85	7

(i) 71.5-77.5 (ii) 70.5-78.5 (iii) 71-78.5 (iv) 71-78 (v) 70.5-78

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

Class-Interval	Frequency
18 - 24	25
25 - 31	x
32 - 38	15
39 - 45	18
46 - 52	5

(i) 24-32 (ii) 24-31.5 (iii) 24.5-31.5 (iv) 24.5-32 (v) 25-31

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

Class-Interval	Frequency
18 - 26	2
26 - 34	23
34 - 42	9
42 - 50	x
50 - 58	12

(i) 42-50 (ii) 41.5-50.5 (iii) 42.5-49.5 (iv) 42-50.5 (v) 41.5-50

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

Class-Interval	Frequency
36 - 45	13
46 - 55	28
56 - 65	x
66 - 75	23
76 - 85	25

(i) 56 (ii) 55 (iii) 58 (iv) 53 (v) 57

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

Class-Interval	Frequency
28 - 33	8
33 - 38	15
38 - 43	11
43 - 48	25
48 - 53	x

(i) 54 (ii) 52 (iii) 55 (iv) 51 (v) 53

41. If the sample data with range 30 has to be divided into 10 class intervals, then the length of the class is

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

42. If the length of the class is 15, then the number of class intervals needed to represent data with range 60 is

(i) 3 (ii) 7 (iii) 1 (iv) 4 (v) 5

43. The number of classes of class size 6 required to represent the given random sample in exclusive form
1 2 4 4 5 7 9 10 11 17 17 17 20 21 22 30 31 32 34 40 40 40 42 43 45 45 48 50

(i) 8 (ii) 10 (iii) 9 (iv) 12 (v) 7

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

Class-Interval	24 - 32	33 - 41	42 - 50	51 - 59
Frequency	5	28	10	25

(i) 68 (ii) 65 (iii) 67 (iv) 69 (v) 71

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

Class-Interval	42 - 49	49 - 56	56 - 63	63 - 70	70 - 77	77 - 84	84 - 91
Frequency	21	29	20	13	23	17	14

(i) 134 (ii) 136 (iii) 137 (iv) 140 (v) 138

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

46.

Class-Interval	18 - 23	24 - 29	30 - 35	36 - 41	42 - 47	48 - 53
Frequency	17	44	46	33	24	25

(i)

Class-Interval	17.5 - 22.5	23.5 - 28.5	29.5 - 34.5	35.5 - 40.5	41.5 - 46.5	47.5 - 52.5
Frequency	17	44	46	33	24	25

(ii)

Class-Interval	17.5 - 23.5	23.5 - 29.5	29.5 - 35.5	35.5 - 41.5	41.5 - 47.5	47.5 - 53.5
Frequency	17	44	46	33	24	25

(iii)

Class-Interval	17.5 - 23	23.5 - 29	29.5 - 35	35.5 - 41	41.5 - 47	47.5 - 53
Frequency	17	44	46	33	24	25

(iv)

Class-Interval	18 - 23	23 - 28	28 - 33	33 - 38	38 - 43	43 - 48
Frequency	39	37	35	35	31	20

(v)

Class-Interval	18.5 - 23.5	24.5 - 29.5	30.5 - 35.5	36.5 - 41.5	42.5 - 47.5	48.5 - 53.5
Frequency	17	44	46	33	24	25

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

a) 31 - 36 , 36 - 41 , 41 - 46...
b) 34 - 39 , 40 - 45 , 46 - 51,...
c) 16 - 21 , 22 - 27 , 28 - 33,...
d) 16 - 21 , 21 - 26 , 26 - 31,...
e) 15.5 - 21.5 , 21.5 - 27.5 , 27.5 - 33.5...

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

48. Convert the exclusive form of the class interval 18.5 - 21.5 to inclusive form

(i) 19-21.5 (ii) 18.5-21 (iii) 19.5-20.5 (iv) 19-21 (v) 18.5-21.5

49. Convert the inclusive form of the class interval 33 - 35 to exclusive form

(i) 32.5-35.5 (ii) 33-35 (iii) 32.5-36 (iv) 32-35.5 (v) 32-36

Assignment Key

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

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