

EduSahara™ Learning Center Assignment

Grade : Class VIII, ICSE
Chapter : Statistics
Name : Class Interval Concepts
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Arrange the following data

1. 31 , 21 , 37 , 10 , 30 , 20 , 39 , 24 , 26 , 14

in ascending order

- (i) 10 , 17 , 30 , 11 , 35 , 12 , 16 , 19 , 25 , 34
(ii) 31 , 22 , 33 , 12 , 11 , 16 , 20 , 32 , 11 , 25
(iii) 34 , 37 , 35 , 12 , 37 , 31 , 21 , 20 , 13 , 38
(iv) 10 , 14 , 20 , 21 , 24 , 26 , 30 , 31 , 37 , 39
(v) 38 , 27 , 16 , 19 , 24 , 33 , 26 , 22 , 34 , 31
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Arrange the following data

2. 28 , 38 , 30 , 28 , 22 , 22 , 39 , 19 , 35 , 11

in descending order

- (i) 11 , 18 , 12 , 11 , 37 , 17 , 17 , 32 , 16 , 38
(ii) 34 , 37 , 17 , 38 , 22 , 33 , 20 , 33 , 37 , 14
(iii) 10 , 19 , 16 , 33 , 36 , 22 , 16 , 33 , 22 , 16
(iv) 39 , 38 , 35 , 30 , 28 , 28 , 22 , 22 , 19 , 11
(v) 22 , 34 , 12 , 16 , 33 , 23 , 39 , 32 , 17 , 13
-

3. Given class interval 15 - 24 in exclusive form, its lower limit is

- (i) 13 (ii) 17 (iii) 14 (iv) 15 (v) 16
-

4. Given class interval 42 - 50 in exclusive form, its upper limit is

- (i) 49 (ii) 48 (iii) 50 (iv) 52 (v) 51
-

5. Given class interval 31 - 33 in exclusive form, its class size is

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

6. Given class interval 31 - 34 in exclusive form, its mid value is

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

7. If the upper and lower limit of class interval are 41 and 32 respectively, then the class interval is

- (i) 32.5 - 40.5 (ii) 31.5 - 41 (iii) 31.5 - 41.5 (iv) 32 - 41 (v) 32 - 41.5
-

8. Given class interval 44 - 49 in exclusive form, its upper limit is

- (i) 47 (ii) 49 (iii) 50 (iv) 48 (v) 51
-

9. Given class interval 25 - 28 in exclusive form, its class size is

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

10. Given class interval 27 - 31 in exclusive form, its class mark is

- (i) 31 (ii) 29 (iii) 30 (iv) 28 (v) 27
-

11. Given class interval 19 - 25 in exclusive form, its mid value is

- (i) 22 (ii) 25 (iii) 21 (iv) 23 (v) 19
-

12. If the upper and lower limit of class interval are 50 and 41 respectively, then the class interval is

- (i) 41 - 50 (ii) 41.5 - 49.5 (iii) 40.5 - 50.5 (iv) 40.5 - 50 (v) 41 - 50.5
-

13. If the lower and upper limit of class interval are 30 and 33 respectively, then the class interval is

- (i) 29.5 - 33 (ii) 30 - 33 (iii) 30.5 - 32.5 (iv) 29.5 - 33.5 (v) 30 - 33.5
-

14. The class boundaries of 29 - 34 which is in exclusive form are

- (i) 29 - 34.5 (ii) 29 - 34 (iii) 28.5 - 34 (iv) 28.5 - 34.5 (v) 29.5 - 33.5
-

15. The class boundaries of 28 - 33 which is in inclusive form are

(i) 28 - 33 (ii) 27.5 - 34 (iii) 27 - 33.5 (iv) 27.5 - 33.5 (v) 27 - 34

16. If the lower and upper limit of class interval are 37 and 42 respectively, then the class interval is

(i) 37.5 - 41.5 (ii) 36.5 - 42 (iii) 37 - 42 (iv) 37 - 42.5 (v) 36.5 - 42.5

17. The class boundaries of 17 - 26 which is in exclusive form are

(i) 17.5 - 25.5 (ii) 17 - 26 (iii) 16.5 - 26 (iv) 16.5 - 26.5 (v) 17 - 26.5

18. The class boundaries of 48 - 53 which is in inclusive form are

(i) 47.5 - 54 (ii) 48 - 53 (iii) 47 - 53.5 (iv) 47.5 - 53.5 (v) 47 - 54

19. Convert the discontinuous form of the class interval 46 - 56 to continuous form

(i) 45 - 56.5 (ii) 45.5 - 57 (iii) 46 - 56 (iv) 45.5 - 56.5 (v) 45 - 57

20. Convert the continuous form of the class interval 20.5 - 28.5 to discontinuous form

(i) 20.5 - 28.5 (ii) 21 - 28.5 (iii) 20.5 - 28 (iv) 21 - 28 (v) 21.5 - 27.5

The class size used in the below table is

21.

Class-Interval	50 - 56	57 - 63	64 - 70	71 - 77	78 - 84	85 - 91	92 - 98
Frequency	12	14	5	5	26	14	23

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

The class size used in the below table is

22.

Class-Interval	15 - 25	25 - 35	35 - 45	45 - 55	55 - 65	65 - 75
Frequency	18	14	5	9	4	16

(i) 10 (ii) 8 (iii) 11 (iv) 13 (v) 9

23. Convert the discontinuous form of the class interval 31 - 33 to continuous form

(i) 30.5 - 34 (ii) 31 - 33 (iii) 30 - 33.5 (iv) 30.5 - 33.5 (v) 30 - 34

24. Convert the continuous form of the class interval 35.5 - 40.5 to discontinuous form

(i) 36 - 40.5 (ii) 35.5 - 40 (iii) 35.5 - 40.5 (iv) 36 - 40 (v) 36.5 - 39.5

The class size used in the below table is

25.

Class-Interval	16 - 22	23 - 29	30 - 36	37 - 43	44 - 50	51 - 57
Frequency	23	17	22	14	11	6

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

The class size used in the below table is

26.

Class-Interval	40 - 48	48 - 56	56 - 64	64 - 72	72 - 80	80 - 88	88 - 96
Frequency	12	8	22	29	8	11	30

- (i) 5 (ii) 7 (iii) 10 (iv) 9 (v) 8
-

27. Which of the following are true?

- a) The true lower limit of the inclusive form class interval 20 - 30 is 20
 - 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 20 - 30 is 20
 - d) Each numerical figure in a data set is called an observation
 - e) The number of times a particular observation occurs is called its frequency
- (i) {b,d} (ii) {a,c} (iii) {a,b,e} (iv) {a,c,d} (v) {c,d,e}
-

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

- a) 40 - 49 , 50 - 59 , 60 - 69,...
 - b) 37 - 46 , 46 - 55 , 55 - 64...
 - c) 9.5 - 19.5 , 19.5 - 29.5 , 29.5 - 39.5...
 - d) 10 - 19 , 19 - 28 , 28 - 37,...
 - e) 10 - 19 , 20 - 29 , 30 - 39,...
- (i) {c,e,a} (ii) {a,e} (iii) {b,a} (iv) {d,b,a} (v) {c,e}
-

29. In inclusive form representation, the observation 39 falls in which class?

- (i) 28 - 38 (ii) 40 - 49 (iii) 24 - 34 (iv) 29 - 39 (v) 19 - 29
-

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

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

The class mark of the class with frequency x is

31.

Class-Interval	Frequency
20 - 30	10
31 - 41	9

42 - 52	19
53 - 63	x
64 - 74	25

(i) 60 (ii) 57 (iii) 59 (iv) 55 (v) 58

The class mark of the class with frequency x is

32.

Class-Interval	Frequency
15 - 25	27
25 - 35	12
35 - 45	6
45 - 55	1
55 - 65	x

(i) 60 (ii) 61 (iii) 63 (iv) 59 (v) 57

The mid value of the class with frequency x is

33.

Class-Interval	Frequency
16 - 26	18
27 - 37	26
38 - 48	17
49 - 59	x
60 - 70	3

(i) 57 (ii) 53 (iii) 51 (iv) 54 (v) 55

The mid value of the class with frequency x is

34.

Class-Interval	Frequency
6 - 11	3
11 - 16	20
16 - 21	x
21 - 26	28
26 - 31	21

(i) $\frac{35}{2}$ (ii) $\frac{39}{2}$ (iii) $\frac{37}{2}$ (iv) 19 (v) $\frac{73}{4}$

The class boundaries of the class with frequency x is

35.

Class-Interval	Frequency
48 - 53	20
54 - 59	3
60 - 65	x
66 - 71	11
72 - 77	6

(i) 59 - 65.5 (ii) 59 - 66 (iii) 59.5 - 66 (iv) 60 - 65 (v) 59.5 - 65.5

The class boundaries of the class with frequency x is

36.

Class-Interval	Frequency
40 - 45	x
45 - 50	5
50 - 55	3
55 - 60	25
60 - 65	28

(i) 39.5 - 45 (ii) 40 - 45.5 (iii) 39.5 - 45.5 (iv) 40.5 - 44.5 (v) 40 - 45

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

37.

Class-Interval	Frequency
41 - 48	27
49 - 56	x
57 - 64	7
65 - 72	30
73 - 80	6

(i) 48 - 57 (ii) 48.5 - 57 (iii) 48 - 56.5 (iv) 48.5 - 56.5 (v) 49 - 56

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

38.

Class-Interval	Frequency
33 - 39	9
39 - 45	10
45 - 51	x
51 - 57	12
57 - 63	13

(i) 44.5 - 51 (ii) 45 - 51 (iii) 45 - 51.5 (iv) 44.5 - 51.5 (v) 45.5 - 50.5

The lower limit of the class with frequency x is

39.

Class-Interval	Frequency
10 - 20	15
21 - 31	x
32 - 42	4
43 - 53	12
54 - 64	19

(i) 24 (ii) 20 (iii) 21 (iv) 19 (v) 22

The upper limit of the class with frequency x is

40.

Class-Interval	Frequency
39 - 49	x
49 - 59	13
59 - 69	18
69 - 79	26
79 - 89	28

(i) 52 (ii) 48 (iii) 47 (iv) 49 (v) 50

41. If the sample data with range 60 has to be divided into 8 class intervals, then the length of the class is

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

42. If the length of the class is 6, then the number of class intervals needed to represent data with range 30 is

(i) 4 (ii) 7 (iii) 2 (iv) 5 (v) 6

The number of classes of class size 8 required to represent the given random sample in exclusive form

43.

2 , 3 , 4 , 7 , 11 , 15 , 16 , 16 , 21 , 23 , 23 , 25 , 27 , 28 , 28
35 , 37 , 41 , 41 , 42 , 43 , 46 , 46 , 46 , 49

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

Given class interval table, find the sum of frequencies.

44.

Class-Interval	29 - 36	37 - 44	45 - 52	53 - 60	61 - 68	69 - 76	77 - 84	85 - 92
Frequency	30	5	23	26	4	21	12	13

(i) 134 (ii) 132 (iii) 133 (iv) 135 (v) 136

Given class interval table, find the sum of frequencies.

45.	Class-Interval	14 - 23	23 - 32	32 - 41	41 - 50	50 - 59	59 - 68	68 - 77	77 - 86
	Frequency	24	3	13	21	16	11	22	26

(i) 136 (ii) 137 (iii) 135 (iv) 133 (v) 139

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

46.	Class-Interval	5 - 11	12 - 18	19 - 25	26 - 32	33 - 39
	Frequency	11	12	18	47	44

(i)	Class-Interval	4.5 - 11.5	11.5 - 18.5	18.5 - 25.5	25.5 - 32.5	32.5 - 39.5
	Frequency	11	12	18	47	44

(ii)	Class-Interval	4.5 - 10.5	11.5 - 17.5	18.5 - 24.5	25.5 - 31.5	32.5 - 38.5
	Frequency	11	12	18	47	44

(iii)	Class-Interval	5.5 - 11.5	12.5 - 18.5	19.5 - 25.5	26.5 - 32.5	33.5 - 39.5
	Frequency	11	12	18	47	44

(iv)	Class-Interval	4.5 - 11	11.5 - 18	18.5 - 25	25.5 - 32	32.5 - 39
	Frequency	11	12	18	47	44

(v)	Class-Interval	5 - 11	11 - 17	17 - 23	23 - 29	29 - 35
	Frequency	29	37	23	42	18

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

- a) 29.5 - 39.5 , 39.5 - 49.5 , 49.5 - 59.5...
- b) 30 - 39 , 40 - 49 , 50 - 59,...
- c) 30 - 39 , 39 - 48 , 48 - 57,...
- d) 57 - 66 , 66 - 75 , 75 - 84...
- e) 60 - 69 , 70 - 79 , 80 - 89,...

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

48. Convert the exclusive form of the class interval 41.5 - 45.5 to inclusive form

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

49. Convert the inclusive form of the class interval 31 - 39 to exclusive form

(i) 31 - 39 (ii) 30.5 - 40 (iii) 30 - 40 (iv) 30.5 - 39.5 (v) 30 - 39.5

Assignment Key

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

- 40) (iv)
- 41) (ii)
- 42) (iv)
- 43) (iii)
- 44) (i)
- 45) (i)
- 46) (i)
- 47) (ii)
- 48) (iii)
- 49) (iv)