

What are some examples of finding class intervals?

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Finding class intervals refers to the process of grouping numerical data into distinct categories or ranges. This is commonly done in statistical analysis to organize and simplify large sets of data. For example, if we have a data set of students' test scores ranging from 0-100, we can group them into class intervals of 10 (0-10, 11-20, 21-30, etc.) to get a better understanding of the distribution of scores. Other examples of finding class intervals include grouping data by age, income levels, or any other numerical value that can be grouped into categories for easier analysis.

Find Class Intervals (With Examples)

In a frequency distribution, a class interval represents the difference between the upper class limit and the lower class limit.

In other words, a class interval represents the width of each class in a frequency distribution.

The following examples show how to calculate class intervals for different frequency distributions.

Example 1: Calculating Class Intervals

Suppose we have the following frequency distribution that represents the number of wins by different basketball teams:

Wins	Frequency
26 - 30	2
31 - 35	3
36 - 40	7
41 - 45	8
46 - 50	4
51 - 55	3
56 - 60	2
61 - 65	1

The lower class limit and upper class limit are simply the smallest and largest possible values in each class:

Wins	Frequency	Lower Class Limit	Upper Class Limit
26 - 30	2	26	30
31 - 35	3	31	35
36 - 40	7	36	40
41 - 45	8	41	45
46 - 50	4	46	50
51 - 55	3	51	55
56 - 60	2	56	60
61 - 65	1	61	65

The class interval is the difference between the upper class limit and the lower class limit.

For example, the size of the class interval for the first class is $30 - 26 = 4$.

Similarly, the size of the class interval for the second class is $31 - 35 = 4$.

If we calculate the size of the class interval for each class in the frequency distribution, we'll find that each class interval has a size of 4.

Example 2: Calculating Class Intervals

Suppose we have the following frequency distribution that represents the exam grades received by students in a certain class:

Grade	Frequency
21-30	0
31-40	1
41-50	2
51-60	4
61-70	4
71-80	14
81-90	19
91-100	6

The lower class limit and upper class limit are simply the smallest and largest possible values in each class:

Grade	Frequency	Lower Class Limit	Upper Class Limit
21-30	0	21	30
31-40	1	31	40
41-50	2	41	45
51-60	4	51	60
61-70	4	61	70
71-80	14	71	80
81-90	19	81	90
91-100	6	91	100

For example, the size of the class interval for the first class is $30 - 21 = 9$.

Similarly, the size of the class interval for the second class is $40 - 31 = 9$.

If we calculate the size of the class interval for each class in the frequency distribution, we'll find that each class interval has a size of 9.