

# What Is A Frequency Distribution Table?

A frequency distribution table is a chart that represents values of any given sample and their frequency, i.e. the number of times the values have occurred. Through a frequency distribution table, you can easily handle the outcome of a sample through a proper organization of data.

A frequency distribution table consists of two columns: Column A and Column B. Column A lists the different values of outcomes in a given sample. Column B states the frequency of the outcomes.

## Frequency Distribution Example – Here Is The Full Concept

An example is the best way to understand a concept. Therefore, let us understand the concept of frequency distribution and the table with an example.

Suppose, you had veggies on 1<sup>st</sup>, 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 11<sup>th</sup>, 13<sup>th</sup>, 14<sup>th</sup>, 17<sup>th</sup>, 19<sup>th</sup>, 20<sup>th</sup>, 22<sup>th</sup>, 25<sup>th</sup>, 27<sup>th</sup>, 29<sup>th</sup>, 30<sup>th</sup> of a month for lunch. On 3<sup>rd</sup>, 9<sup>th</sup>, 12<sup>th</sup>, 16<sup>th</sup>, 23<sup>rd</sup>, you had a hamburger. The rest of the days, i.e. 5<sup>th</sup>, 10<sup>th</sup>, 15<sup>th</sup>, 18<sup>th</sup> you had chicken dumpling and on 21<sup>st</sup>, 24<sup>th</sup>, 26<sup>th</sup>, 28<sup>th</sup>, you had eggs.

Now you can represent this data through a frequency distribution table.

Column A (types on lunch)	Column B (no. of days)
Veggies	17
Hamburger	5
Chicken dumpling	4
Eggs	4

Study the frequency table example which shows you the number of days you had veggies. Therefore, you can now tell your mom that you had veggies seventeen days of the month.

## What Are The Different Types Of Frequency Distribution?

There are five types of frequency distribution:

- **Grouped frequency distribution**
- **Ungrouped frequency distribution**
- **Cumulative frequency distribution**
- **Relative frequency distribution**
- **Relative cumulative frequency distribution**

Each of these types has their own frequency distribution tables. However, in this blog, we will understand what a grouped and ungrouped frequency distribution is along with respective frequency table examples.

## What Is Grouped And Ungrouped Data?

Before we understand the grouped and ungrouped frequency distribution, we need to understand what grouped and ungrouped data is.

In simple terms, ungrouped data is raw data that has not been placed in any category. This implies that the data is not given any characteristics. For example, you know that 350 people are living in your area. This is raw data and is not grouped, i.e. divided into any category.

The moment this raw data is categorized, it becomes grouped data. For example, there are 50 children and 300 adults. This data is now organized as you have clear information about the number of children and adults present in your locality.

# Ungrouped Frequency Distribution Table With Example

Now, that we have understood the difference between ungrouped and grouped data, it will be easy for us to understand an ungrouped frequency distribution table.

For example, we are assuming the marks that 30 students scored in English, considering the total marks to be 50.

45, 34, 39, 23, 36, 47, 48, 34, 28, 44, 45, 43, 32, 39, 41, 38, 44, 37, 33, 38, 46, 44, 49, 43, 28, 36, 33, 32, 39, 42

Now let us make a table and see how many students got each of these marks.

Marks	Frequency (no. of students)
23	1
28	2
32	2
33	2
34	2
36	2
37	1
38	2
39	3
41	1
42	1

42	1
43	2
44	3
45	2
46	1
47	1
48	1
49	1

This is an ungrouped frequency distribution table because we are considering the individual marks are checking how many children got them.

## Grouped Frequency Distribution Table With Example

The above data can be represented in groups as well. Therefore, the next table is a grouped frequency distribution table. The groups are commonly known as class intervals. You might get the class intervals given in the question, or you have to find it yourself.

Marks	Frequency (no. of students)
0 - 10	0
10 - 20	0
20 - 30	3

30 - 40	14
40 - 50	13

The 'marks' column is the class interval. A class interval in a grouped frequency distribution table has a lower limit and an upper limit. Therefore, if we take the class interval 20 – 30, 20 is lower limit, and 30 is the upper limit.

However, this grouped frequency table represents the exclusive form of data. This means the class intervals include the lower limit and exclude the upper limit. Therefore, the class interval 20 – 30 will have values starting from 20 - 30.

This type of grouped frequency table is confusing for most students, and sometimes the collected data is not accurately analyzed. To eliminate the confusion, we can represent the grouped frequency distribution data in its inclusive form. This is where the class interval changes.

Let us take the same data and form a grouped frequency distribution table with an inclusive form of data.

Marks	Frequency (no. of students)
0 – 10	0
11 – 20	0
21 – 30	3
31 – 40	14
41 - 50	13

Notice the changes that are made in column A (marks). Therefore, if a certain sum has values like 10, 20, 30, 40, etc. you can easily understand where to put the frequency when you are making a grouped frequency distribution table.