What are some examples of left skewed histograms and how can they be interpreted?

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A left skewed histogram is a type of graph that displays a distribution where the majority of the data is concentrated on the right side, with a long tail on the left. This means that there are more data points with lower values and fewer data points with higher values.

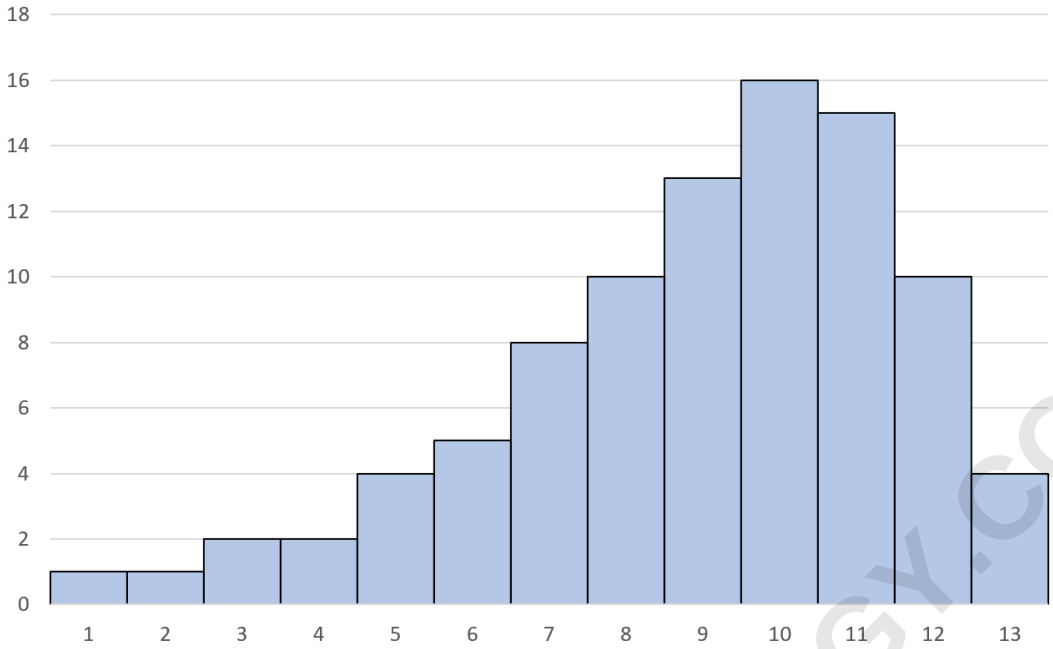
Some examples of left skewed histograms include income distribution, where the majority of people have lower incomes and only a few have very high incomes; exam scores, where most students score average or below average and only a few score very high; and house prices, where most houses are priced lower and only a few are priced very high.

Left skewed histograms can be interpreted as a distribution that is negatively skewed, meaning that the tail on the left side is longer than the tail on the right side. This indicates that there are more extreme values on the left side of the graph, pulling the mean towards the left and making it lower than the median. This type of distribution is also known as a "skewed to the left" or "skewed to the negative" distribution. It may suggest that the data has a natural lower limit, such as a minimum wage or a fixed price for a product, causing the majority of the data to cluster around that limit. It can also indicate that there are outliers or extreme values on the left side that are pulling the data in that direction. Overall, left skewed histograms can provide valuable insights into the distribution and characteristics of a dataset.

Left Skewed Histogram: Examples and Interpretation

A histogram is a type of chart that allows us to visualize the distribution of values in a dataset.

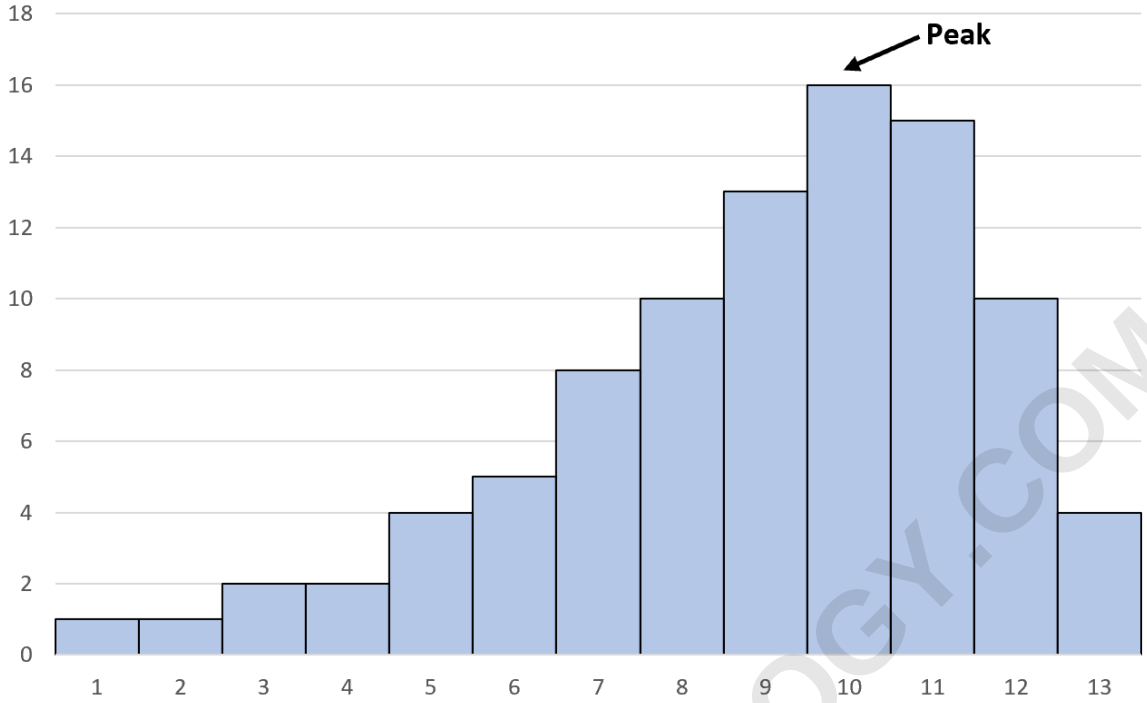
We say that a histogram is left skewed if it has a "tail" on the left side of the distribution:



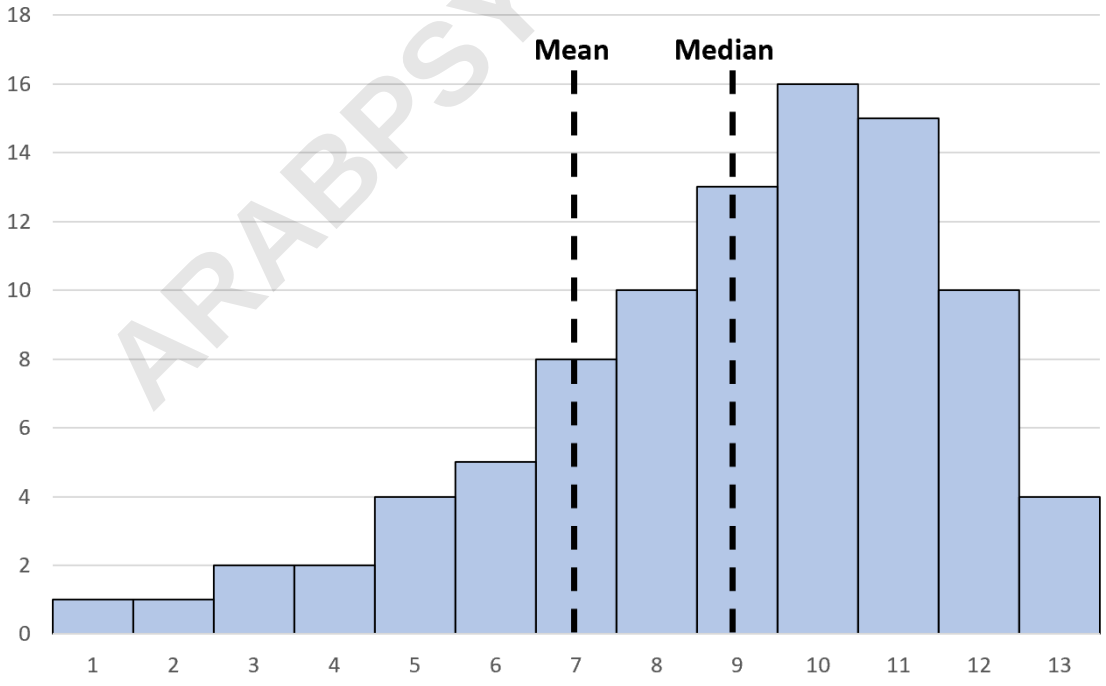
Note: Sometimes a left skewed histogram is also referred to as a *negatively skewed histogram*.

A left skewed histogram has the following two properties:

1. The peak of the distribution is on the right side.



2. The mean is less than the median.



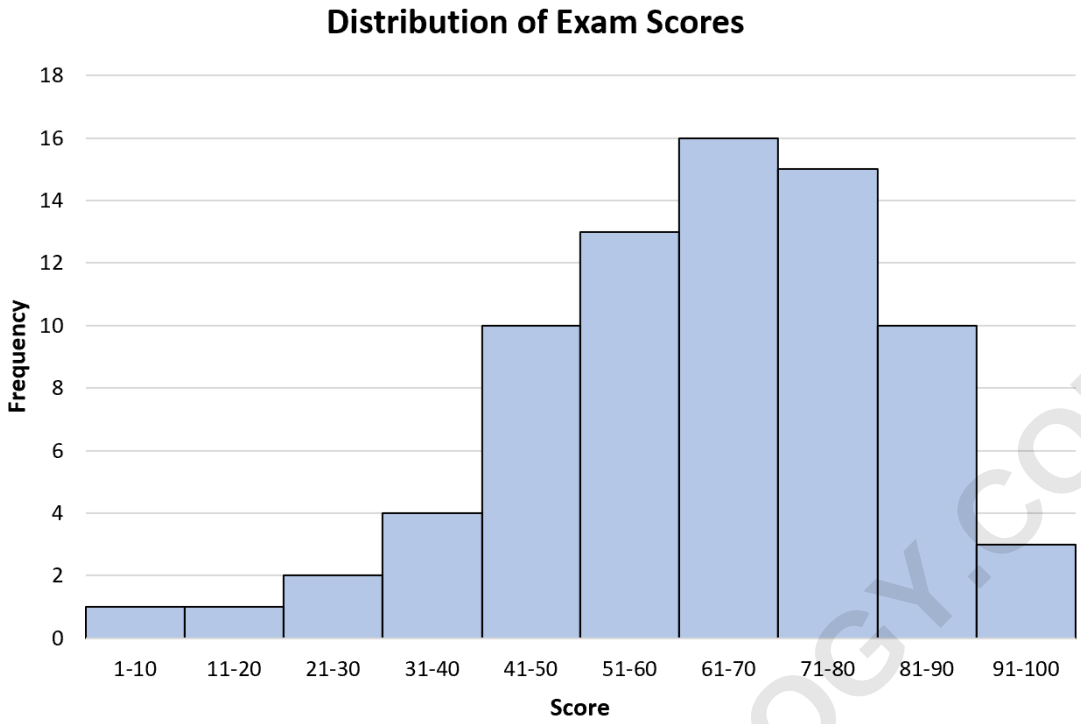
What Causes a Histogram to Be Left Skewed?

A histogram is left skewed when it is uncommon for a variable to take on a small value and much more common for a variable to take on values concentrated around a larger value.

One real-life example of a left skewed histogram would be exam scores among students.

Most students might score between 70 and 90 on a particular exam and it's extremely uncommon for many students to score near a zero.

When we create a histogram to visualize the distribution of exam scores for some class, it will naturally be left skewed:



Why is the Mean Less than the Median in a Left Skewed Histogram?

In a left skewed histogram, the mean is less than the median because the high frequency of values on the right side of the distribution causes the median value to be larger.

Dataset: 24, 45, 56, 71, 78, 80, 81, 81, 82, 83, 84, 85, 85, 89, 91, 91, 92, 93, 96, 97

Here are the mean and median values of this dataset:

Mean: 79.2Median: 83.5

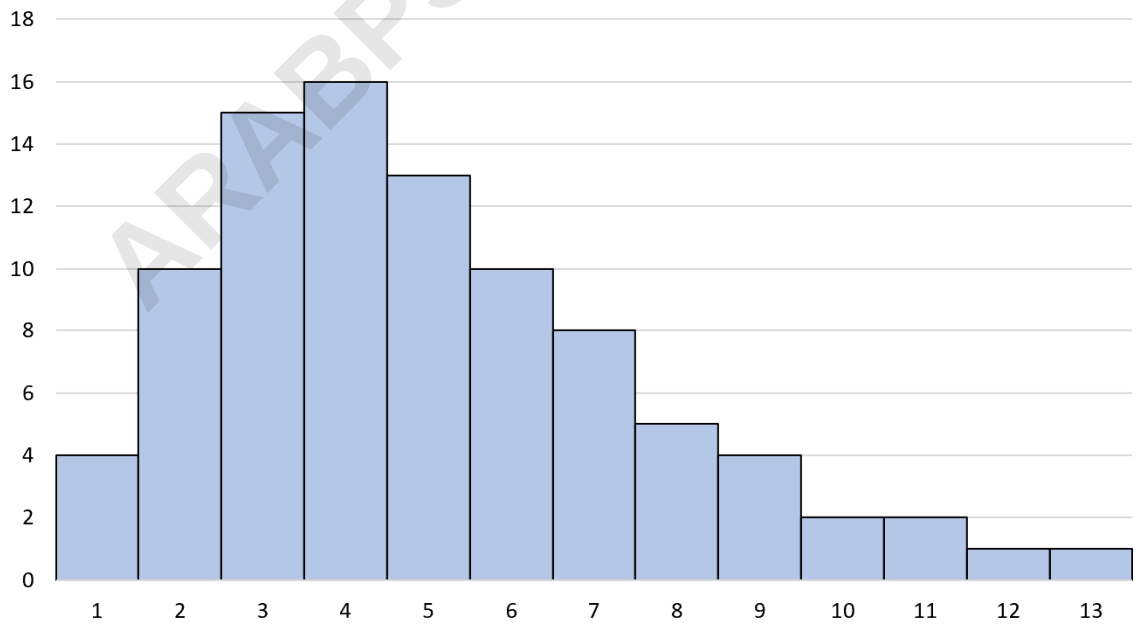
The mean value is dragged lower by the students who scored very low while the median value is located at the "middle" value of scores, which is 83.5.

If we plot this distribution, it would be a left skewed histogram with most of the values concentrated on the right side of the histogram.

The Difference Between Right Skewed & Left Skewed Histograms

The opposite of a left skewed histogram is a right skewed histogram.

This is a type of histogram that has a "tail" on the right side of the distribution:



This type of histogram has the following properties:

1. The peak of the distribution is on the left side.

2. The mean is greater than the median.

Notice that these are the exact opposite properties of a left skewed histogram.

Read more about right skewed histograms in .

The following tutorials provide additional information about histograms: