

Identifying Measures of Center on a Graph

by Sophia



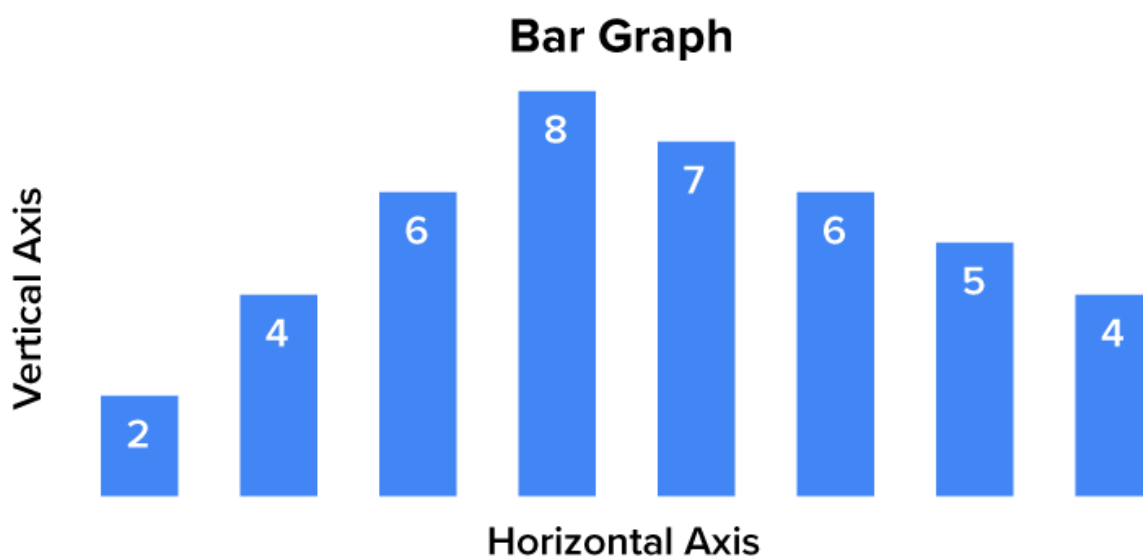
WHAT'S COVERED

This lesson discusses identifying measures of center on a graph. By the end of this lesson, you should be able to identify the mode on a graph. This lesson covers:

1. [Identifying the Mode on a Bar Graph](#)
2. [Identifying the Mode of a Histogram](#)

1. Identifying the Mode on a Bar Graph

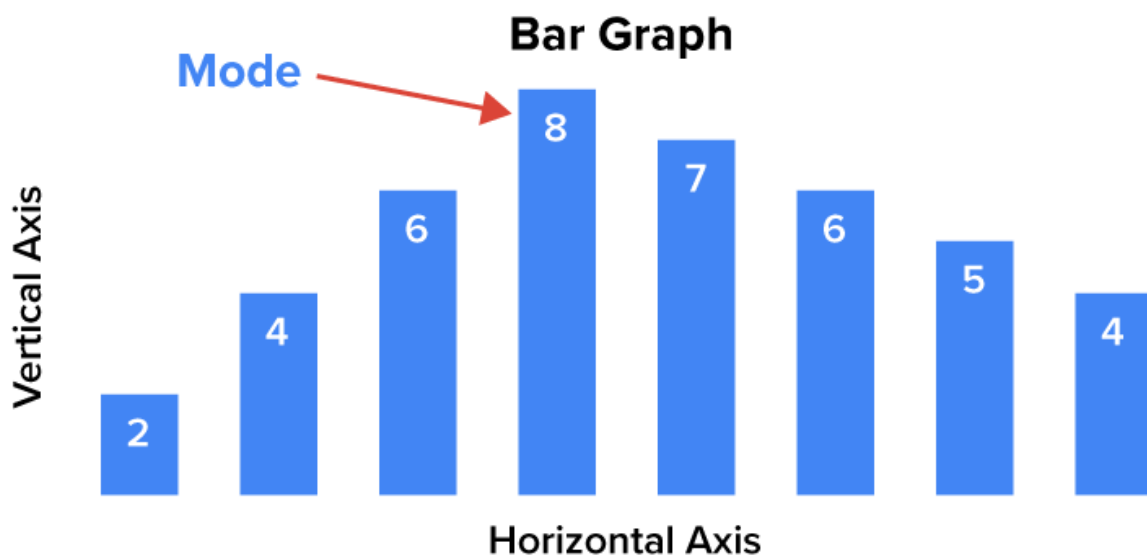
There are three measures of center: mean, median, and mode. Representing these measures of center on a graph can help communicate information visually by summarizing and organizing the data set. This communicates something meaningful with the data. Take a look at a quick bar graph to refresh your memory.



The horizontal axis tells what your variable is. The vertical axis tells how many of a particular observation there are. The individual bars are of a certain height based on how many observations of a specific value of the variable exist.

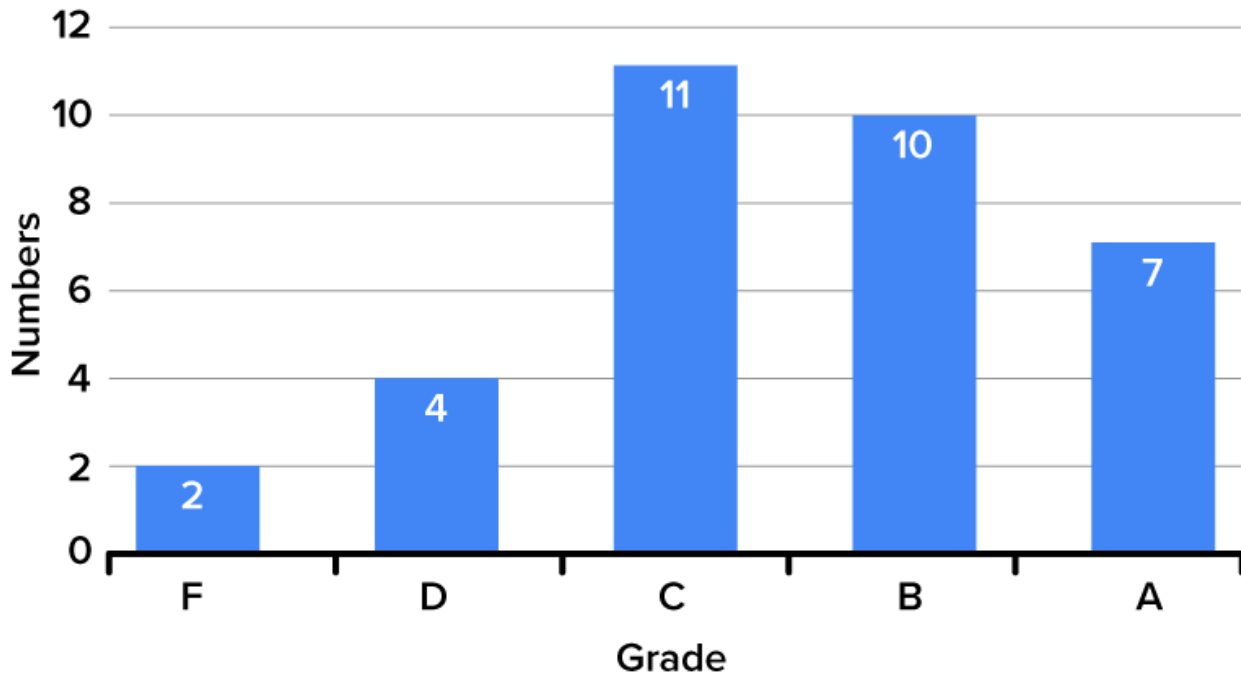
Of the three measures of center, the mean is the average of a data set. The median is the middle value, where half of the other values are larger, and half are smaller. The mode is simply the value that occurs most often.

Two graphs often used in statistics are bar graphs and histograms. In a bar graph, the mode is the value on the horizontal axis with the highest bar.



This bar graph illustrates the grade distribution for a particular exam. You can see the tallest bar in this particular graph happens to represent the grade C.

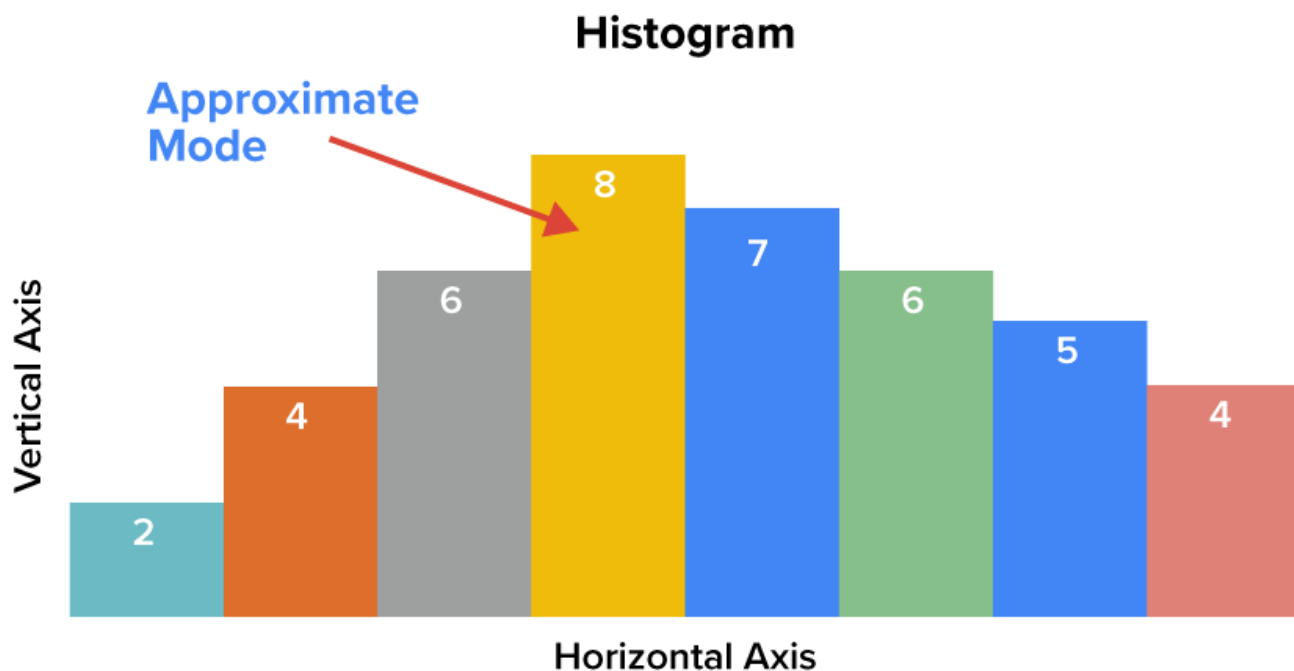
Exam Grades



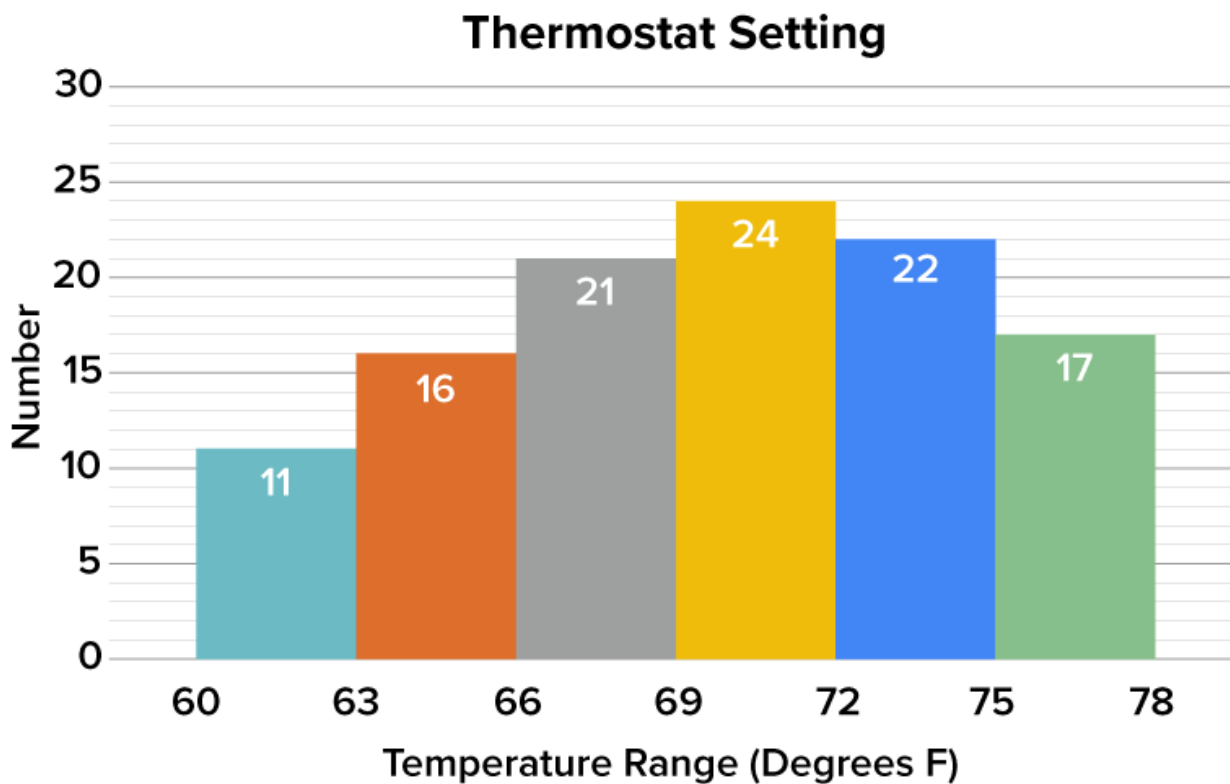
There are 11 Cs out of the entire class. This value would be considered the mode because it does occur most often in this data set.

2. Identifying the Mode of a Histogram

Histograms, on the other hand, show data grouped together in intervals. This being the case, you cannot state precisely where the mode is. If you have continuous data, it is possible that all of the data is unique, and there is no true mode. The mode is approximated by saying that it is in the center of the tallest bar.



Take a look at the thermostat settings for a group of homes.



The histogram represents the different ranges. One significant aspect of a histogram is the endpoints of the ranges that are illustrated on the horizontal axis. Here, these ranges indicate temperature, and the number inside the bar is how many homes are set to somewhere in this range.



Use the histogram above to answer the following question.

What is the approximate mode for the thermostat settings?

+

The highest value is 24, and that falls between the range of 69 and 72. With a histogram, you would say that the mode is the halfway point between 69 and 72 degrees Fahrenheit, or approximately $70\frac{1}{2}$ degrees Fahrenheit.



SUMMARY

In this lesson, you learned that the mode is the value that occurs the most often. **Identifying the mode on a bar graph** is simple. It will be the tallest bar. **Identifying the mode on a histogram** is a bit trickier because histograms show intervals. You cannot state precisely where the mode is. The approximate mode will be the center of the tallest bar.

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