

What are the mean, median, and mode of dot plots?

Authored by
stats writer

June 29, 2024

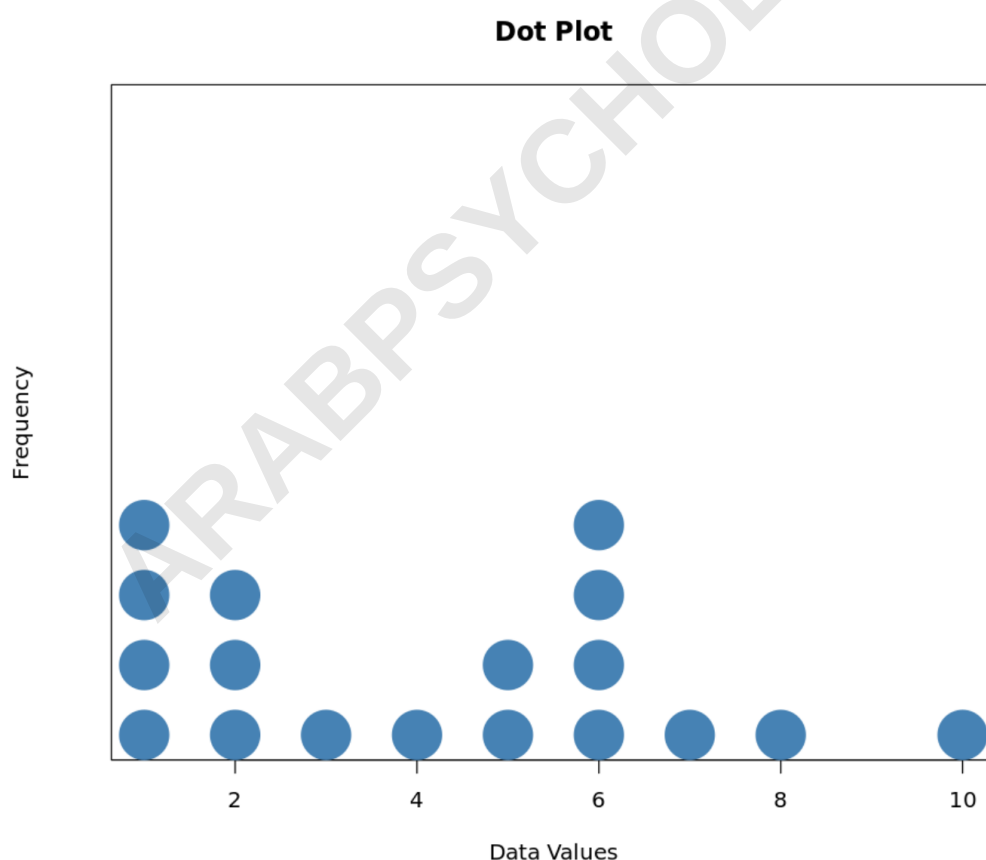
RECOMMENDED CITATION

stats writer (2024). *What are the mean, median, and mode of dot plots?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=158275>

The mean, median, and mode of dot plots are statistical measures used to describe the central tendency of a set of data points represented by dots on a graph. The mean, also known as the average, is the sum of all the data points divided by the total number of points. The median is the middle value when the data points are arranged in ascending or descending order. The mode is the most frequently occurring value in the data set. These measures provide a concise summary of the data distribution and can help in understanding the overall trend and variability of the data. They are commonly used in data analysis and can provide valuable insights into the characteristics of a given dataset.

Dot Plots: Find Mean, Median, & Mode

A dot plot is a type of plot that displays the distribution of values in a dataset using dots.



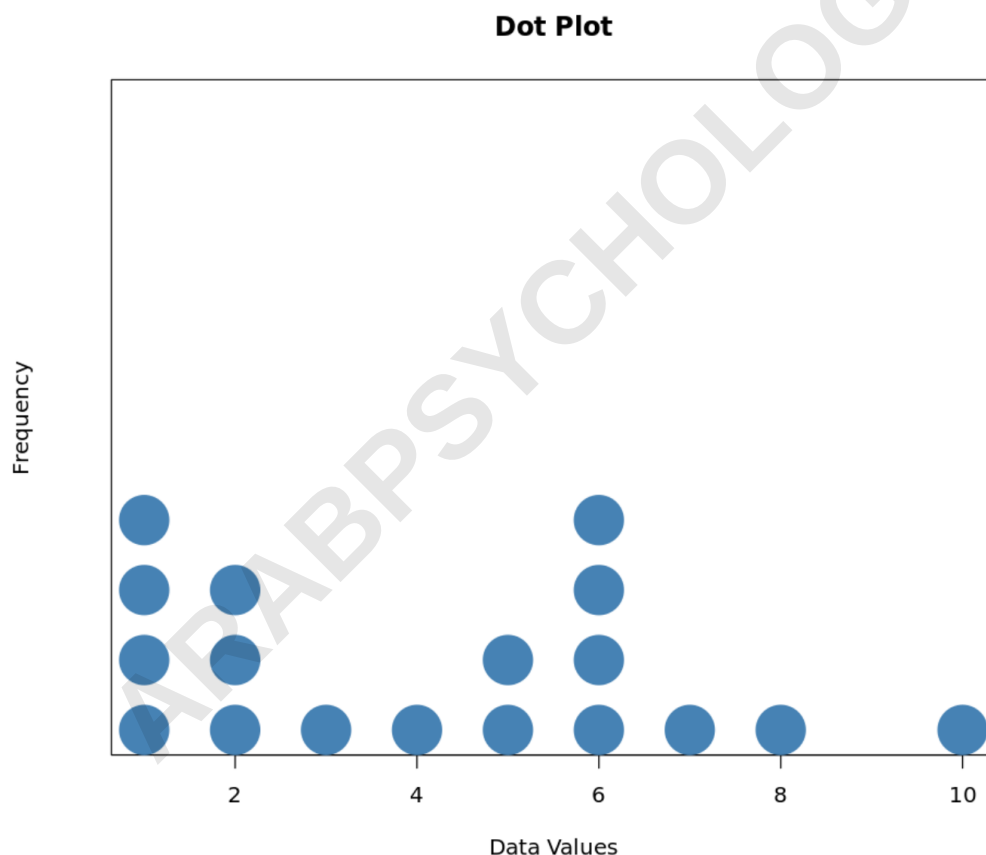
The x-axis shows the individual data values and the y-

axis shows the frequency of each value.

This tutorial explains how to calculate the mean, median, and mode of a dot plot.

Example: Calculate Mean, Median & Mode of Dot Plot

Suppose we have the following dot plot that shows the distribution of values for a given dataset:



In order to calculate the mean, median, and mode for this dot plot, we must first write out the values for the

dataset.

For example, we can see that the value "1" occurs four times, the value "2" occurs three times, the value "3" occurs one time, and so on.

We can write out the following values for this dataset:

Values: 1, 1, 1, 1, 2, 2, 2, 3, 4, 5, 5, 6, 6, 6, 6, 7, 8, 10

We can now calculate the mean, median, and mode.

Mean

To find the mean of this dataset, we can add up all of the individual values and divide by the total sample size of 18:

$$\text{Mean} = (1+1+1+1+2+2+2+3+4+5+5+6+6+6+6+7+8+10) / 18 = 4.22.$$

The mean turns out to be 4.22. This is the average value of the dataset.

Median

1, 1, 1, 1, 2, 2, 2, 3, 4, 5, 5, 6, 6, 6, 6, 7, 8, 10

There are two values in the middle: 4 and 5. Thus, the median is the average of these two values, which is 4.5.

Thus, the median is 4.5. This is the value located directly in the middle of the dataset.

Mode

To find the mode of this dataset, we can identify the values that occur most often:

1, 1, 1, 1, 2, 2, 2, 3, 4, 5, 5, 6, 6, 6, 6, 7, 8, 10

This dataset has two modes: 1 and 6. Each of these values occurs four times in the dataset.

Additional Resources

The following tutorials provide additional information on dot plots:

The following tutorials explain how to create dot plots using different software: