Measures of Center

One way to describe a data set is with its central tendency, or center. This helps identify a "typical" value in the data set. The three most common measures of center are **mean**, **median**, and **mode**.

Minutes Amari read each day this week: 120, 0, 20, 10, 10, 30, 120

Mean tells the average of the data values.

Step 1: Add all of the data values.

Step 2: Divide by the total number of data values.

120 + 0 + 20 + 10 + 10 + 30 + 120 = 310

310 ÷ 7 = 44.29

*Limitations

The mean is greatly affected by outliers and strongly skewed distributions. It is a less reliable and less useful measure of center in contexts that contain



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0, 10, 10, 20, 30, 120, 120

The median is 20.

That means it provides little additional information.

Mode tells the most common data value.

Step 1: For large data sets, it can be helpful to order the data values or keep a frequency table.

Step 2: Identify which value occurs most frequently. (Note: some data sets have multiple or none.)

0, 10, 10, 20, 30, 120, 120

The modes are 10 and 120.

*Limitations

The mode can occur anywhere, in multiple places, or not at all. It is useful when considering the probability of a result, but it is an unreliable measure of center for quantitative data.