

Measures of center:

- Mean: The sum of data values divided by the number of values.
- Median: The value in the middle when the data values are arranged from least to greatest. If there are an even number of data values, then the median is the average between the two middle values.
- Mode: The data value that appears most frequently.

Measures of spread:

- Outlier: A data value much less than or much greater than the other data values.
- Range: The difference between the least and greatest data value.
- Standard Deviation: Find the difference between each data value and the mean, and square each difference. Next, find the sum of all of the squares, and then divide the sum by one less than the number of data points. Finally, take the square root of the result.

Examples

Data set: 1, 10, 12, 15, 15, 15, 20, 22, 24, 26

- Mean:
 $(1 + 10 + 12 + 15 + 15 + 15 + 20 + 22 + 24 + 26)/10 = 160/10$
 The mean is 16.
- Median:
 1, 10, 12, 15, **15, 15**, 20, 22, 24, 26
 The median is 15.
- Mode:
 1, 10, 12, **15, 15, 15**, 20, 22, 24, 26
 The mode is 15.
- Outlier:
1, 10, 12, 15, 15, 15, 20, 22, 24, 26
 The outlier is 1, because it is much less than the other values.
- Range: $26 - 1 = 25$
- Standard deviation:
 $(16 - 1)^2 + (16 - 10)^2 + (16 - 12)^2 + 3(16 - 15)^2 + (20 - 16)^2 + (22 - 16)^2 + (24 - 16)^2 + (26 - 16)^2 = 496$
 $496/9 \approx 55.1$
 $\sqrt{55.1} \approx 7.42$
 The standard deviation is about 7.42.

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