

Name \_\_\_\_\_



## Spread the Knowledge: Understanding Range, Variance, and Standard Deviation

Have you ever looked at a set of numbers and wondered how spread out they are? Measures of spread, like range, variance, and standard deviation, can help us understand just that! Let's explore how to interpret these measures and what they tell us about our data.

First, let's talk about range. The range is simply the difference between the largest and smallest values in a dataset. For example, if you have the numbers 10, 15, 20, 25, and 30, the range would be 30 (the largest value) minus 10 (the smallest value), giving you a range of 20.

Next up is variance. Variance tells us how much the values in a dataset differ from the mean. It's calculated by finding the average of the squared differences between each value and the mean. A higher variance means the values are more spread out from the mean, while a lower variance means they're closer together.

Lastly, we have standard deviation. Standard deviation is the square root of the variance and provides a measure of how much the values in a dataset deviate from the mean. A larger standard deviation indicates greater variability in the data, while a smaller standard deviation means the values are closer to the mean.

So, why are these measures important? Well, they give us valuable insights into the variability and spread of our data. Whether we're analyzing test scores in a class or temperatures across different seasons, understanding measures of spread helps us draw meaningful conclusions and make informed decisions.