VISUAL SUMMARY

Computing the Variance and Standard Deviation

<table>
<tr><td colspan="2" align="center">If you have a
Population   Sample</td></tr>
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Population	Sample
Compute the mean: μ	Compute the mean: $\bar{X}$
Subtract the mean from each score to find the deviation scores (little x): $x = X - \mu$	Subtract the mean from each score to find the deviation scores (little x): $x = X - \bar{X}$
Square the deviation scores: x^2	Square the deviation scores: x^2
Sum the squared deviations: Σx^2	Sum the squared deviations: Σx^2
Divide the sum by N: $\sigma^2 = \dfrac{\Sigma x^2}{N}$	Divide the sum by $n-1$: $S^2 = \dfrac{\Sigma x^2}{n-1}$
The standard deviation is the square root of the variance: $\sigma = \sqrt{\sigma^2}$	The standard deviation is the square root of the variance: $S = \sqrt{S^2}$