DEF: Sample Variance $S^2 = \frac{1}{n-1} \sum_{i=1}^{n} (X_i - \overline{X})^2$

DEF: Computed Sample Variance $s^2 = \frac{1}{n-1} \sum_{i=1}^{n} (x_i - \bar{x})^2$

DEF: Sample Standard Deviation $s = \sqrt{S^2} = \sqrt{\frac{1}{n-1} \sum_{i=1}^{n} (X_i - \overline{X})^2}$

DEF: Computed Standard Deviation $s = \sqrt{s^2} = \sqrt{\frac{1}{n-1} \sum_{i=1}^{n} (x_i - \bar{x})^2}$

WHERE

$n = $ number of samples

$X_i =$ random variables representing $n$ samples (assumed independent and identically distributed)

$\overline{X} =$ random variable representing sample mean

$x_i =$ $n$ actual sample values

$\bar{x} =$ computed sample mean