

# Error Analysis

- The Average (Mean) =  $\bar{x} = \frac{\sum_{i=1}^n (x_i)}{n}$

- The Median

- The Variance =  $\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n-1}$

When you have "N" data values that are:

- **The Population:** divide by **N** when calculating Variance
- **A Sample:** divide by **N-1** when calculating Variance

- The Standard Deviation =  $\sqrt{\text{The Variance}}$

- The Coefficient of Variance (COV)

$$\equiv \frac{\text{Standard Deviation}}{\text{Average}}$$