

**Analysis**

**of**

**Data**

- ✓ The ***theoretical value*** is the expected value-usually taken from a reference or calculation.
- ✓ The ***experimental value*** is a measurement taken from data during an experiment.

✓ The *error* is the difference between the experimental value and the theoretical value

$$E = |\text{experimental} - \text{theoretical}|$$

- ✓ The ***mean*** (average) is found by dividing the sum of the data by the number of data.
- ✓ ***Standard deviation*** is a calculated value that measures the precision of data.

✓ The ***percent error*** is the percent difference between a theoretical value and an experimental value.

$$\% \text{error} = \frac{|\text{theoretical} - \text{experimental}|}{\text{theoretical}}$$