

## Descriptive Statistics Formulas

### Mean

$$\bar{X} = \frac{\sum X}{n} \quad \bar{X} = \frac{\sum fX}{n}$$

### Median

$$\text{Median} = \text{Lower Real Limit} + \left[ \frac{(0.5)(n) - \text{cf below interval}}{f \text{ in interval}} \right] i$$

### Range

$$\text{Range} = \text{High} - \text{Low}$$

### Variance

$$S^2 = \frac{SS_x}{n} \quad SS_x = \sum X^2 - \frac{(\sum X)^2}{n} \quad SS_x = \sum fX^2 - \frac{(\sum fX)^2}{n}$$

### Standard Deviation

$$S = \sqrt{\frac{SS_x}{n}} \quad SS_x = \sum X^2 - \frac{(\sum X)^2}{n} \quad SS_x = \sum fX^2 - \frac{(\sum fX)^2}{n}$$