Mean Deviation

Mean Deviation for Individual data

$$\text{M.D.}(\overline{x}) \, (\text{Mean Deviation about Mean}) = \frac{\sum \left| x_i - \overline{x} \right|}{n},$$

$$\text{M.D.}(M) \, (\text{Mean Deviation about Median}) = \frac{\sum \left| x_i - M \right|}{n}$$

Mean deviation for Discrete data

$$\text{M.D.}(\overline{x}) \, (\text{Mean Deviation about Mean}) = \frac{\sum f_i \left| x_i - \overline{x} \right|}{N},$$

$$\text{M.D.}(M) \, (\text{Mean Deviation about Median}) = \frac{\sum f_i \left| x_i - M \right|}{N}, \quad \text{Where } N = \sum f_i$$

Mean deviation for Continuous data

$$\text{M.D.}(\overline{x}) \, (\text{Mean Deviation about Mean}) = \frac{\sum f_i \left| x_i - \overline{x} \right|}{N},$$

$$\text{M.D.}(M) \, (\text{Mean Deviation about Median}) = \frac{\sum f_i \left| x_i - M \right|}{N}$$

Where $N = \sum f_i$ and x_i is the class mark of ith class interval.