SOC 5050: Week 02 Equations Quick Reference

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Median (odd n of items)

Let m = the median item's term:

$$me = \left(\frac{n+1}{2} \right)^{th} \tag{1}$$

Median (even n of items)

Let m_a = the lower, middlemost item's term:

$$m_a = \left(\frac{n+1}{2} \right)^{th} \tag{2a}$$

Let m_b = the higher, middlemost item's term:

$$m_b = \left(\frac{n}{2+1} \right)^{th} \tag{2b}$$

Let m = the median, which is the mean of the two middlemost items' terms:

$$m = \frac{m_a + m_b}{2} \tag{2c}$$

Mean

$$\overline{x} = \frac{\sum_{i=1}^{n} x}{n} \tag{3}$$

Variance

$$s^2 = \frac{\sum_{i=1}^{n} (x - \overline{x})^2}{n-1} \tag{4}$$

Standard Deviation

$$s = \sqrt{\frac{\sum_{i=1}^{n} (x - \overline{x})^2}{n-1}} \tag{5}$$

Document Details

Document produced by Christopher Prener, Ph.D. for the Saint Louis University course SOC 5050 - QUANTITATIVE ANALYSIS: APPLIED INFERENTIAL STATISTICS. See the course website and the repository `README.md` file for additional details.