Math13 - Introduction to Statistics

Cheat Sheet for Test 1

FORMULAS

Mean

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

Variance

$$S^2 = \frac{1}{n-1}\sum_{i=1}^{n} (x_i - \overline{x})^2$$

Standard Deviation

$$S = \sqrt{S^2}$$

Range

R = maximum - minimum

Interquartile Range

IQR = Q_3 - Q_1

Coefficient of Variation

$$CV = S / \overline{x}$$

Median or Q_2

1. Order the data from smallest to largest
2. For an ***odd*** number of values: $median = middle\ data\ value$
3. For an ***even*** number of values: $median = \frac{sum\ of\ middle\ two\ values}{2}$

Weighted Average

$$WA = \frac{x_1 w_1 + x_2 w_2 + \ldots + x_n w_n}{w_1 + w_2 + \ldots + w_n}$$