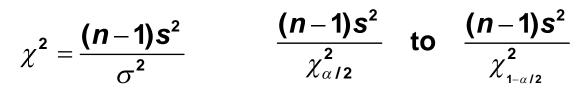
Formula Sheet

Hypothesis Test for Population Variance:

Test Statistic:

Confidence Interval:



Goodness-of-Fit, Hypothesis test for Independence, Hypothesis Test for Homogeneity:

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Goodness of fit degrees of freedom: df = k - 1

Test of Independence and Test of Homogeneity degrees of freedom: df = (R - 1)(C - 1)

Test of Independence and Test of Homogeneity Expected Frequency formula:

E = (Row total)(Column total) sample size

ANOVA

$$SSB = \left(\frac{T_1^2}{n_1} + \frac{T_2^2}{n_2} + \frac{T_3^2}{n_3} + \dots\right) - \frac{(\sum x)^2}{n}$$

$$SSW = \sum x^2 - \left(\frac{T_1^2}{n_1} + \frac{T_2^2}{n_2} + \frac{T_3^2}{n_3} + \dots\right)$$

$$MSB = \frac{SSB}{k-1} \quad \text{and} \quad MSW = \frac{SSW}{n-k}$$

$$F = \frac{\text{Variance between samples}}{\text{Variance within samples}} \quad \text{or} \quad \frac{\text{MSB}}{\text{MSW}}$$

Spearman Correlation Coefficient

$$r_{\rm s}=1-\frac{6\sum d^2}{n(n^2-1)}$$