Means and Variances

Two types of means and two types of variances are used in Expert Choice Comparion:

An Arithmetic Mean is the average interval -- and is the mean or average used in common practice. It is computed as the sum of the values divided by the number of values.

A Geometric Mean is the average ratio -- and is useful when proportions are of interest, as they are in pairwise comparisons. It is computed as the *n*th root of the product of values.

Similarly:

An Arithmetic Variance is the variability of the interval of measures computed around the arithmetic mean.

A Geometric Variance is the variability of ratio measures computed relative to the geometric mean.

It is computed as follows:

Take the ratio of each judgment to the geometric mean of all judgments for the cluster.

If this ratio is less than 1, invert it.

Multiply these ratios for all judgments and take the *n*th root.

Compute the Geometric Variance as the Log(result) / Log(maxJudg!)