Details

The input wave to StatsNPNominalSRTest is specified with *srcWave* or /P. The wave must contain exactly two values. If *srcWave* is a text wave, then each type can be designated by a letter or by a short string (less than 200 bytes). If *srcWave* is numeric, you should avoid the usual floating point waves, which can give rise to internal representations of more than two distinct values. Output to W_StatsNPSRTest includes the total number of points (*N*), the number of occurrences (*m*) of the first variable, the number of occurrences (*n*) of the second variable, and the number of runs (*u*). When both *m* and *n* are less than 300, it computes the P value (probability P(*u'*<*u*)) and the critical values using the Swed and Eisenhart algorithm. When *m* or *n* are larger than 300, it computes the mean and standard deviation of an equivalent normal distribution with the corresponding critical value.

References

Swed, F.S., and C. Eisenhart, Tables for testing randomness of grouping in a sequence of alternatives, *Ann. Math. Statist.*, *14*, 66-87, 1943.

See, in particular, Chapter 25 of:

Zar, J.H., *Biostatistical Analysis*, 4th ed., 929 pp., Prentice Hall, Englewood Cliffs, New Jersey, 1999.

See Also

Chapter III-12, **Statistics** for a function and operation overview; **StatsSRTest**.

StatsParetoCDF

StatsParetoCDF(*x*, *a*, *c*)

The StatsParetoCDF function returns the Pareto cumulative distribution function

$$F(x;a,c) = 1 - \left(\frac{a}{x}\right)^c .$$

See Also

Chapter III-12, **Statistics** for a function and operation overview; the **StatsParetoPDF** and **StatsInvParetoCDF** functions.

StatsParetoPDF

StatsParetoPDF(*x*, *a*, *c*)

The StatsParetoPDF function returns the Pareto probability distribution function

$$f(x;a,c) = \frac{c}{x}\left(\frac{a}{x}\right)^c , \qquad \begin{array}{l} a,c > 0 \\ x \geq a. \end{array}$$

See Also

Chapter III-12, **Statistics** for a function and operation overview; the **StatsParetoCDF** and **StatsInvParetoCDF** functions.

StatsPermute

StatsPermute(*waveA*, *waveB*, *dir*)

The StatsPermute function permutes elements in *waveA* based on the lexicographic order of *waveB* and the direction *dir*. It returns 1 if a permutation is possible and returns 0 otherwise. Use *dir*=1 for the next permutation and *dir*=-1 for a previous permutation.

Details

Both *waveA* and *waveB* must be numeric. The lexicographic order of elements in the index wave is set so that permutations start with the index wave *waveB* in ascending order and end in descending order. Elements of *waveA* are permuted in place according to the order of the indices in *waveB* which are clipped (after permutation) to the valid range of entries in *waveA*. *waveB* is also permuted in place in order to allow you to obtain sequential permutations. If *waveA* consists of real numbers you can permute them using the lexicographic value of the entries directly. To do so pass `$""` for *waveB*. Whenever it returns 0, neither *waveA* and *waveB* are changed.