/WSTR=*waveListString*

Specifies a string containing a semicolon-separated list of waves that contain sample data. Use *waveListString* instead of listing each wave after the flags.

/Z Ignores errors. V_flag will be set to -1 for any error and to zero otherwise.

Details

Inputs to StatsANOVA1Test are two or more 1D numerical waves containing (one wave for each group of samples). Use NaN for missing entries or use waves with different numbers of points. The standard ANOVA results are in the M_ANOVA1 wave with corresponding row and column labels. Use /T to display the results in a table. In each case you will get the two degrees of freedom values, the F value, the critical value Fc for the choice of alpha and the degrees of freedom, and the P-value for the result. V_flag will be set to -1 for any error and to zero otherwise.

In some cases the ANOVA test may not be appropriate. For example, if groups do not exhibit sufficient homogeneity of variances. Although this may not be fatal for the ANOVA test, you may get more insight by performing the variances test in **StatsVariancesTest**.

If there are only two groups this test should be equivalent to **StatsTTest**.

You can evaluate the power of an ANOVA test for a given set of degrees of freedom and noncentrality parameter using:

```
power=1-StatsNCFCDF(StatsInvFCDF((1-alpha),n1,n2),n1,n2,delta)
```

Here n1 is the Groups' degrees of freedom, n2 is the Error degrees of freedom, and delta is the noncentrality parameter. For more information see ANOVA Power Calculations Panel and the associated example experiment.

References

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; **StatsVariancesTest**, **StatsTTest**, **StatsNCFCDF**, and **StatsInvFCDF**.

StatsANOVA2NRTest

StatsANOVA2NRTest [***flags***] ***srcWave***

The StatsANOVA2NRTest operation performs a two-factor analysis of variance (ANOVA) on the data that has no replication where there is only a single datum for every factor level. *srcWave* is a 2D wave of any numeric type. Output is to the M_ANOVA2NRResults wave in the current data folder or optionally to a table.

Flags

/ALPH=*val* Sets the significance level (default 0.05).

/FOMD Estimates one missing value. You will also have to use a single or double precision wave for *srcWave* and designate the single missing value as NaN. The estimated value is printed to the history as well as the bias used to correct the sum of the squares of factor A.

/INT=*val* Sets the degree of interactivity.

Sets the degree of interactivity.

val=0: No interaction between the factors (default).

val=1: Significant interaction effect between factors.

Combination with /MODL determines which factors to test:

val	Model 1	Model 2	Model 3
1		A&B	A
0	A&B	A&B	A&B