

$$DFp = \sum_{j=1}^W (n_j - 2)$$

$$DFt = \sum_{j=1}^W n_j - 2$$

Here  $W$  is the number of Y-waves and  $N = \sum_{j=1}^W n_j$  is the total number of data points in all Y-waves.

The test statistic  $F$  for equality of slopes is given by:

$$F = \left( \frac{SSc - SSp}{numWaves - 1} \right) / \frac{SSp}{DFp}.$$

$F_c$  is the corresponding critical value.

Output is to the W\_LinearRegressionMC wave in the current data folder.

V\_flag is set to -1 for any error and to zero otherwise.

S\_waveNames is set to a semicolon-separated list of the names of the waves created by the operation.

#### References

See, in particular, Chapter 18 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; curvefit.

## StatsLogisticCDF

**StatsLogisticCDF(x, a, b)**

The StatsLogisticCDF function returns the logistic cumulative distribution function

$$F(x; a, b) = \frac{1}{1 + \exp\left(-\frac{x - a}{b}\right)}.$$

where the scale parameter  $b > 0$  and the shape parameter is  $a$ .

#### See Also

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

## StatsLogisticPDF

**StatsLogisticPDF(x, a, b)**

The StatsLogisticPDF function returns the logistic probability distribution function

$$f(x; a, b) = \frac{\exp\left(-\frac{x - a}{b}\right)}{b \left[ 1 + \exp\left(-\frac{x - a}{b}\right) \right]^2},$$