StatsCauchyPDF

StatsCauchyPDF(*x*, μ, σ)

The StatsCauchyPDF function returns the Cauchy-Lorentz probability distribution function

$$f(x;\mu,\sigma) = \frac{1}{\sigma\pi}\frac{1}{1+\left(\frac{x-\mu}{\sigma}\right)^2},$$

where μ is the location parameter and σ is the scale parameter. Use μ=0 and σ=1 for the standard form of the Cauchy-Lorentz distribution.

See Also

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

StatsChiCDF

StatsChiCDF(*x*, *n*)

The StatsChiCDF function returns the chi-squared cumulative distribution function for the specified value and degrees of freedom *n*.

$$F(x;n) = \frac{\gamma\left(\frac{n}{2},\frac{x}{2}\right)}{\Gamma\left(\frac{n}{2}\right)}.$$

where is γ(*a*,*b*) the incomplete gamma function. The distribution can also be expressed as

$$F(x;n) = 1 - gammq\left(\frac{n}{2},\frac{x}{2}\right).$$

See Also

Chapter III-12, **Statistics** for a function and operation overview; **StatsChiPDF**, **StatsInvChiCDF**, and **gammq**.

StatsChiPDF

StatsChiPDF(*x*, *n*)

The StatsChiPDF function returns the chi-squared probability distribution function for the specified value and degrees of freedom as

$$f(x;n) = \frac{\exp\left(-\frac{x}{2}\right)x^{\frac{n}{2}-1}}{2^{\frac{n}{2}}\Gamma\left(\frac{n}{2}\right)}.$$

See Also

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

StatsChiTest

StatsChiTest [***flags***] ***srcWave1***, ***srcWave2***

The StatsChiTest operation computes a χ^2 statistic for comparing two distributions or a χ^2 statistic for comparing a sample distribution with its expected values. In both cases the comparison is made on a bin-by-bin basis. Output is to the W_StatsChiTest wave in the current data folder or optionally to a table.