The defaults (a=0 and b=1) correspond to the standard beta distribution were a is the location parameter, (b-a) is the scale parameter, and p and q are shape parameters. When p<1, $f(x=a)$ returns Inf.

References

Evans, M., N. Hastings, and B. Peacock, *Statistical Distributions*, 3rd ed., Wiley, New York, 2000.

See Also

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

StatsBinomialCDF

`StatsBinomialCDF(x, p, N)`

The StatsBinomialCDF function returns the binomial cumulative distribution function

$$F(x;p,N) = \sum_{i=1}^{x} \binom{N}{i} p^i (1-p)^{N-i}, \qquad x = 1,2,...$$

where

$$\binom{N}{i} = \frac{N!}{i!(N-i)!}.$$

See Also

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

StatsBinomialPDF

`StatsBinomialPDF(x, p, N)`

The StatsBinomialPDF function returns the binomial probability distribution function

$$f(x;p,N) = \binom{N}{x} p^x (1-p)^{N-x}, \qquad x = 0,1,2,...$$

where

$$\binom{N}{x} = \frac{N!}{x!(N-x)!}.$$

is the probability of obtaining x good outcomes in N trials where the probability of a single successful outcome is p.

See Also

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

StatsCauchyCDF

`StatsCauchyCDF(x, μ, σ)`

The StatsCauchyCDF function returns the Cauchy-Lorentz cumulative distribution function

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

See Also

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