

$$f(x, \mu, \sigma, \xi) = \frac{1}{\sigma} \left[1 + \xi \left(\frac{x - \mu}{\sigma} \right) \right]^{(-1/\xi)-1} \exp \left\{ - \left[1 + \xi \left(\frac{x - \mu}{\sigma} \right)^{-1/\xi} \right] \right\},$$

where

$$1 + \xi \left(\frac{x - \mu}{\sigma} \right) > 0,$$

and $\sigma > 0$.

See Also

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

StatsGEVCDF, **StatsEValuePDF**, **StatsEValueCDF**, **StatsInvEValueCDF**

StatsHyperGCDF

StatsHyperGCDF(x, m, n, k)

The StatsHyperGCDF function returns the hypergeometric cumulative distribution function, which is the probability of getting x marked items when drawing (without replacement) k items out of a population of m items when n out of the m are marked.

Details

The hypergeometric distribution is

$$F(x; m, n, k) = \sum_{L=0}^x \frac{\binom{n}{L} \binom{m-L}{k-L}}{\binom{m}{k}},$$

where $\binom{a}{b}$ is the **binomial** function. All parameters must be positive integers and must have $m > n$ and $x < k$; otherwise it returns NaN.

References

Klotz, J.H., *Computational Approach to Statistics*.

See Also

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

StatsHyperGPDF

StatsHyperGPDF(x, m, n, k)

The StatsHyperGPDF function returns the hypergeometric probability distribution function, which is the probability of getting x marked items when drawing without replacement k items out of a population of m items where n out of the m are marked.

Details

The hypergeometric distribution is