

**StatsLinearCorrelationTest**, **StatsCircularCorrelationTest**, **StatsKendallTauTest**,  
**StatsSpearmanRhoCDF**, and **StatsInvSpearmanCDF**.

## StatsRayleighCDF

**StatsRayleighCDF(x [, s [, m]])**

The StatsRayleighCDF function returns the Rayleigh cumulative distribution function

$$F(x; \sigma, \mu) = 1 - \exp\left(-\frac{(x - \mu)^2}{2\sigma^2}\right), \quad \sigma > 0, x > \mu.$$

with defaults  $s=1$  and  $m=0$ . It returns NaN for  $s \leq 0$  and zero for  $x \leq m$ .

### See Also

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

## StatsRayleighPDF

**StatsRayleighPDF(x [, s [, m]])**

The StatsRayleighPDF function returns the Rayleigh probability distribution function

$$f(x; \sigma, \mu) = \frac{x - \mu}{\sigma^2} \exp\left(-\frac{(x - \mu)^2}{2\sigma^2}\right), \quad \sigma > 0, x > \mu.$$

with defaults  $s=1$  and  $m=0$ . It returns NaN for  $s \leq 0$  and zero for  $x \leq m$ .

### See Also

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

## StatsRectangularCDF

**StatsRectangularCDF(x, a, b)**

The StatsRectangularCDF function returns the rectangular (uniform) cumulative distribution function

$$F(x, a, b) = \begin{cases} 0 & x \leq a \\ \frac{x - a}{b - a} & a \leq x \leq b \\ 1 & x \geq b \end{cases}$$

where  $a < b$ .

### See Also

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

## StatsRectangularPDF

**StatsRectangularPDF(x, a, b)**

The StatsRectangularPDF function returns the rectangular (uniform) probability distribution function

$$f(x; a, b) = \begin{cases} \frac{1}{b - a} & a \leq x \leq b \\ 0 & otherwise \end{cases}$$