Package ‘truncnorm’

February 27, 2018

Version 1.0-8
Title Truncated Normal Distribution
Description Density, probability, quantile and random number generation functions for the truncated normal distribution.

URL https://github.com/olafmersmann/truncnorm
BugReports https://github.com/olafmersmann/truncnorm/issues
Depends R (>= 3.4.0)
Suggests testthat
License GPL (>= 2)
Encoding UTF-8
RoxygenNote 6.0.1

NeedsCompilation yes
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Repository CRAN
Date/Publication 2018-02-27 21:37:25 UTC

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The Truncated Normal Distribution

Description

Density, distribution function, quantile function, random generation and expected value function for the truncated normal distribution with mean equal to 'mean' and standard deviation equal to 'sd'.

Usage

\begin{align*}
dtruncnorm(x, a=-Inf, b=Inf, mean = 0, sd = 1) \\
ptruncnorm(q, a=-Inf, b=Inf, mean = 0, sd = 1) \\
qtruncnorm(p, a=-Inf, b=Inf, mean = 0, sd = 1) \\
rtruncnorm(n, a=-Inf, b=Inf, mean = 0, sd = 1) \\
etruncnorm(a=-Inf, b=Inf, mean=0, sd=1) \\
vtruncnorm(a=-Inf, b=Inf, mean=0, sd=1)
\end{align*}

Arguments

- `x, q` vector of quantiles.
- `p` vector of probabilities.
- `n` number of observations. If 'length(n) > 1', the length is taken to be the number required.
- `a` vector of lower bounds. These may be -Inf
- `b` vector of upper bounds. These may be Inf
- `mean` vector of means.
- `sd` vector of standard deviations.

Details

If mean or sd are not specified they assume the default values of 0 and 1, respectively. The values of a, b, mean and sd are recycled as needed.

The numerical arguments other than n are recycled to the length of the result.

Value

'dtruncnorm' gives the density, 'ptruncnorm' gives the distribution function, 'qtruncnorm' gives the quantile function, 'rtruncnorm' generates random deviates, 'etruncnorm' gives the expected value and 'vtruncnorm' the variance of the distribution.

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