Package 'TanB'

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Type Package

Title The TanB Distribution

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Author Luciano Souza <lcnsza@gmail.com>, Lucas Gallindo <lgallindo@gmail.com>, Luciano Serafim de Souza <lucianoserafimdesouza@gmail.com>

Maintainer Lucas Gallindo <lgallindo@gmail.com>

Description Density, distribution function, quantile function, random generation and survival function for the Tangent Burr Type XII Distribution as defined by SOUZA, L. New Trigonometric Class of Probabilistic Distributions. 219 p. Thesis (Doctorate in Biometry and Applied Statistics) - Department of Statistics and Information, Federal Rural University of Pernambuco, Recife, Pernambuco, 2015 (available at <http://www.openthesis.org/documents/New-trigonometric-classes-probabilistic-distributions-602633.html>) and BRITO, C. C. R. Method Distributions generator and Probability Distributions Classes. 241 p. Thesis (Doctorate in Biometry and Applied Statistics) - Department of Statistics University of Pernambuco, Recife, Pernambuco, 2014 (available upon request).

Depends R (>= 3.0.1)

Imports pracma, fdrtool

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LazyData TRUE

URL https://github.com/TrigonometricDistribution

BugReports https://github.com/TrigonometricDistribution/TanB/issues

RoxygenNote 5.0.1

NeedsCompilation no

Repository CRAN

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R topics documented:

`dtanb` *The density function of the Tanget Burr Type XII probability distribution.*

Description

The density function of the Tanget Burr Type XII probability distribution.

Usage

```
dtanb(x, c, k, s)
```

Arguments

`x`	vector of quantiles.
`c`	C parameter.
`k`	K parameter.
`s`	S parameter.

Value

A vector with n observations of the Tanget Burr Type XII distribution.

Examples

```
dtanb(0.5,32.5,3,3.5)
dtanb(0.5,2,3,3)
```

`htanb` *The hazard rate function of the Tanget Burr Type XII probability distribution.*

Description

The hazard rate function of the Tanget Burr Type XII probability distribution.

Usage

```
htanb(x, c, k, s)
```

Arguments

`x`	vector of quantiles.
`c`	C parameter.
`k`	K parameter.
`s`	S parameter.

Value

A vector with n observations of the Tanget Burr Type XII distribution.

Examples

```
htanb(0.5, 1, 1, 1)
htanb(0.5, 2, 1, 1)
```

`ptanb` *The cumulative function of the Tangent Burr XII probability distribution.*

Description

The cumulative function of the Tangent Burr XII probability distribution.

Usage

```
ptanb(q, c, k, s, lower = TRUE, log.p = FALSE)
```

Arguments

q	vector of quantiles.
c	C parameter.
k	K parameter.
s	S parameter.
lower	Lower parameter.
log.p	Log.p parameter.

Value

A vector with n observations of the Tangent Burr XII distribution.

Examples

```
ptanb(0.5, 32.5, 3, 3.5, TRUE, FALSE)
ptanb(0.5, 2, 3, 3, TRUE, FALSE)
```

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qtanb *The quantile function of the Tanget Burr Type XII probability distribution.*

Description

The quantile function of the Tanget Burr Type XII probability distribution.

Usage

```
qtanb(p, c, k, s, lower = TRUE, log.p = FALSE)
```

Arguments

p	Vector of probabilities.
c	C parameter.
k	K parameter.
s	S parameter.
lower	Lower parameter.
log.p	Log.p parameter.

Value

A vector with n observations of the Tanget Burr Type XII distribution.

Examples

```
ptanb(0.5,1,1,1,TRUE,FALSE)
ptanb(0.5,2,1,1,TRUE,FALSE)
```

`rtanb` *Generates random deviates from a TanBurrXII probability distribution.*

Description

Generates random deviates from a TanBurrXII probability distribution.

Usage

```
rtanb(n, c, k, s)
```

Arguments

`n`	Number of observations to be generated.
`c`	C parameter.
`k`	K parameter.
`s`	S parameter.

Value

A vector with n observations of the Tanget Burr Type XII distribution.

Examples

```
rtanb(1,3,2,2)
rtanb(1,0.3,0.1,0.8)
```

`stanb` *The survival function of the Tanget Burr Type XII probability distribution.*

Description

The survival function of the Tanget Burr Type XII probability distribution.

Usage

```
stanb(x, c, k, s)
```

Arguments

`x`	vector of quantiles.
`c`	C parameter.
`k`	K parameter.
`s`	S parameter.

Value

A vector with n observations of the Tanget Burr Type XII distribution.

Examples

```
ptanb(0.5, 1, 1, 1)
ptanb(0.5, 2, 1, 1)
```

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