

RECCDF**PURPOSE**

Compute the reciprocal probability density function.

DESCRIPTION

The probability density function is:

$$f(x, b) = \frac{1}{x \log(b)} \quad 1/b \leq x < 1, b > 1 \quad \text{(EQ Aux-296)}$$

where b is the shape parameter. The formula for the cumulative distribution function is:

$$F(x, b) = \frac{\log(x) + \log(b)}{\log(b)} \quad 1/b \leq x < 1, b > 1 \quad \text{(EQ Aux-297)}$$

SYNTAX

LET <y> = RECCDF(<x>,) <SUBSET/EXCEPT/FOR qualification>

where <x> is a variable, a number, or a parameter;

<y> is a variable or a parameter (depending on what <x> is) where the computed reciprocal cdf value is saved;

 is a number, parameter, or variable that specifies the shape parameter;

and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES

LET A = RECCDF(0.5, 1.5)

LET X2 = RECCDF(X1, B)

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

RECPDF	=	Compute the reciprocal probability density function.
RECPPF	=	Compute the reciprocal percent point function.
BRACDF	=	Compute the Bradford cumulative distribution function.
BRAPDF	=	Compute the Bradford probability density function.
BRAPPF	=	Compute the Bradford percent point function.
BETCDF	=	Compute the beta cumulative distribution function.
BETPDF	=	Compute the beta probability density function.
BETPPF	=	Compute the beta percent point function.

REFERENCE

"Numerical Methods for Scientists and Engineers," 2nd. Ed., Hamming, Dover Publications, 1973.

APPLICATIONS

Data Analysis

IMPLEMENTATION DATE

96/5

PROGRAM

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MULTIPLY 2 2; MULTIPLY CORNER COORDINATES 0 0 100 100
TITLE AUTOMATIC
X1LABEL X
Y1LABEL PROBABILITY
LET B = 10
X1LABEL BETA = ^B
PLOT RECCDF(X,B) FOR X = 0.1 0.01 0.99
LET B = 100
X1LABEL BETA = ^B
PLOT RECCDF(X,B) FOR X = 0.01 0.01 0.99
LET B = 5
X1LABEL BETA = ^B
PLOT RECCDF(X,B) FOR X = 0.2 0.01 0.99
LET B = 2
X1LABEL BETA = ^B
PLOT RECCDF(X,B) FOR X = 0.5 0.01 0.99
END OF MULTIPLY

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