

UNICDF**PURPOSE**

Compute the standard uniform cumulative distribution function.

DESCRIPTION

The standard uniform probability density function is:

$$f(x) = 1 \quad \text{for } 0 \leq x \leq 1 \quad \text{(EQ 8-334)}$$

The standard uniform cumulative distribution function is:

$$F(x) = x \quad \text{for } 0 \leq x \leq 1 \quad \text{(EQ 8-335)}$$

SYNTAX

LET <y2> = UNICDF(<y1>) <SUBSET/EXCEPT/FOR qualification>
 where <y1> is a variable, a number, or a parameter containing values between 0 and 1;
 <y2> is a variable or a parameter (depending on what <y1> is) where the computed uniform cdf value is stored;
 and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES

LET A = UNICDF(3)
 LET Y = UNICDF(X1)

NOTE

The general uniform probability density function is:

$$f(x) = \frac{1}{(b-a)} \quad \text{for } a \leq x \leq b \quad \text{(EQ 8-336)}$$

where a and b are the lower and upper limits of the range respectively. The location parameter is a and the scale parameter is (b-a). The general uniform cumulative distribution function is:

$$F(x) = \frac{x-a}{(b-a)} \quad \text{for } a \leq x \leq b \quad \text{(EQ 8-337)}$$

See topic (3) under the General considerations section at the beginning of this chapter for a discussion of generating cdf values for the general form of the distribution.

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

UNIPDF	=	Compute the uniform probability density function.
UNIPPF	=	Compute the uniform percent point function.
UNISF	=	Compute the uniform sparsity function.
NORCDF	=	Compute the normal cumulative distribution function.
NORPDF	=	Compute the normal probability density function.
NORPPF	=	Compute the normal percent point function.
SEMCDF	=	Compute the semi-circular cumulative distribution function.
SEMPDF	=	Compute the semi-circular probability density function.
SEMPPF	=	Compute the semi-circular percent point function.

REFERENCE

- “Continuous Univariate Distributions - 2,” Johnson and Kotz, Houghton Mifflin, 1970 (chapter 25).
 “Statistical Distributions,” 2nd. Edition, Evans, Hastings, and Peacock, John Wiley and Sons (chapter 35).

APPLICATIONS

Data Analysis

IMPLEMENTATION DATE

94/4

PROGRAM

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YLIMITS 0 1
MAJOR YTIC NUMBER 6
MINOR YTIC NUMBER 1
YTIC DECIMAL 1
XLIMITS 0 1
XTIC OFFSET 0.05 0.05
TITLE AUTOMATIC
XILABEL X
YILABEL PROBABILITY
PLOT UNICDF(X) FOR X = 0 0.01 1
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