

UNIPPF**PURPOSE**

Compute the standard uniform percent point function.

DESCRIPTION

The standard uniform probability density function is:

$$f(x) = 1 \quad \text{for } 0 \leq x \leq 1 \quad \text{(EQ 8-340)}$$

The standard uniform percent point function is:

$$G(p) = p \quad \text{(EQ 8-341)}$$

The input value is a real number between 0 and 1.

SYNTAX

LET <y2> = UNIPPF(<y1>) <SUBSET/EXCEPT/FOR qualification>

where <y1> is a variable, a number, or a parameter in the range 0 to 1;

<y2> is a variable or a parameter (depending on what <y1> is) where the computed uniform pdf value is stored; and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES

LET A = UNIPPF(0.9)

LET Y = UNIPPF(P)

NOTE

The general uniform probability density function is:

$$f(x) = \frac{1}{(b-a)} \quad \text{for } a \leq x \leq b \quad \text{(EQ 8-342)}$$

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 percent point function is:

$$G(p) = a + p(b-a) \quad \text{(EQ 8-343)}$$

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

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

| | | |
|--------|---|---|
| UNICDF | = | Compute the uniform cumulative distribution function. |
| UNIPDF | = | Compute the uniform probability density 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

```
XLIMITS 0 1
MAJOR XTIC NUMBER 6
MINOR XTIC NUMBER 1
XTIC DECIMAL 1
YLIMITS 0 1
YTIC OFFSET 0.05 0.05
TITLE AUTOMATIC
XILABEL PROBABILITY
YILABEL X
PLOT UNIPPF(X) FOR X = 0.01 .01 0.99
```

