DISPPF

PURPOSE
Compute the discrete uniform percent point function.

DESCRIPTION
The discrete uniform probability density function is :

$$p(x, n) = \frac{1}{n+1} \qquad \text{for } x = 0, 1, 2, \ldots, n \qquad \textbf{(EQ 8-167)}$$

The discrete uniform percent point function is:

$$G(p) = (n+1)p - 1 \qquad \textbf{(EQ 8-168)}$$

Since G(p) is discrete, the above formula is truncated to an integer value. The input value is a real number between 0 and 1.

SYNTAX
LET <y> = DISPPF(<p>,<n>)   <SUBSET/EXCEPT/FOR qualification>
where <p> is a number, variable or parameter in the range 0 to 1;
    <y> is a variable or a parameter (depending on what <y1> is) where the computed discrete uniform ppf value is stored;
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES
LET A = DISPPF(0.9)
LET Y = DISPPF(X1)

DEFAULT
None

SYNONYMS
None

RELATED COMMANDS
DISCDF	=	Compute the discrete uniform cumulative distribution function.
DISPDF	=	Compute the discrete uniform probability density function.
UNIPDF	=	Compute the uniform cumulative distribution function.
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.

REFERENCE
"Statistical Distributions," 2nd. Edition, Evans, Hastings, and Peacock, John Wiley and Sons (chapter 36).

"Discrete Distributions," Johnson and Kotz, Houghton-Mifflin, 1970 (chapter 10).

APPLICATIONS
Data Analysis

IMPLEMENTATION DATE
94/9

PROGRAM
        XLIMITS 0 1
        MAJOR XTIC NUMBER 6
        MINOR XTIC NUMBER 1
        XTIC DECIMAL 1
        YLIMITS 0 20
        YTIC OFFSET 1 1
        TITLE AUTOMATIC
        X1LABEL X
        Y1LABEL PROBABILITY
        PLOT DISPPF(X,20) FOR X = 0 0.01 1