ANGCDF

PURPOSE
Compute the anglit probability density function.

DESCRIPTION
The anglit distribution has the following probability density function:

$$f(x) = \sin\left(2x + \frac{\pi}{2}\right) \qquad -\frac{\pi}{4} \le x \le \frac{\pi}{4} \qquad \textbf{(EQ Aux-10)}$$

The cumulative distribution function is:

$$F(x) = \left[\sin\left(x + \frac{\pi}{4}\right)\right]^2 \qquad -\frac{\pi}{4} \le x \le \frac{\pi}{4} \qquad \textbf{(EQ Aux-11)}$$

SYNTAX
LET <y> = ANGCDF(<x>)   <SUBSET/EXCEPT/FOR qualification>
where <y> is a number, parameter, or variable;
     <x> is a variable or a parameter (depending on what <y> is) where the computed anglit cdf value is stored;
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES
LET A = ANGCDF(3)
LET Y = ANGCDF(X1)

DEFAULT
None

SYNONYMS
None

RELATED COMMANDS
ANGPDF	=	Compute the anglit probability density function.
ANGPPF	=	Compute the anglit percent point function.
COSCDF	=	Compute the cosine cumulative distribution function.
COSPDF	=	Compute the cosine cumulative distribution function.
COSPPF	=	Compute the cosine percent point function.
NORCDF	=	Compute the normal cumulative distribution function.
NORPDF	=	Compute the normal probability density function.
NORPPF	=	Compute the normal percent point function.
UNICDF	=	Compute the uniform cumulative distribution function.
UNIPDF	=	Compute the uniform probability density function.
UNIPPF	=	Compute the uniform percent point function.

REFERENCE
"The Percent Point Function," Filliben, unpublished manuscript, 1970.

APPLICATIONS
Data Analysis

IMPLEMENTATION DATE
95/9

PROGRAM
    TITLE AUTOMATIC
    LET START = -PI/4
    LET STOP = PI/4
    PLOT ANGCDF(X) FOR X = START 0.01 STOP