ANGPDF

PURPOSE

Compute the anglit probability density function.

DESCRIPTION

The anglit distribution has the following probability density function:

$$f(x) = \sin\left(2x + \frac{\pi}{2}\right) \qquad -\frac{\pi}{4} \le x \le \frac{\pi}{4} \qquad \textbf{(EQ Aux-12)}$$

SYNTAX

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

EXAMPLES

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

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

ANGCDF	=	Compute the anglit cumulative distribution 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"The Percent Point Function," Filliben, unpublished manuscript, 1970.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 ANGPDF(X) FOR X = START 0.01 STOP
```