

ARCCSC**PURPOSE**

Compute the arccosecant for a variable or parameter.

DESCRIPTION

The arccosecant is the angle whose cosecant is equal to the given value. The angle is limited to values between 0 and π . By default, the angle is returned in radian units. To use degree values, enter the command ANGLE UNITS DEGREES (ANGLE UNITS RADIANS resets it). Input values in the range -1 to 1 generate an error message.

SYNTAX

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

where <y1> is a number, parameter, or variable;

<y2> is a variable or a parameter (depending on what <y1> is) where the computed arccosecant value is stored;

and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES

LET A = ARCCSC(-2)

LET A = ARCCSC(A1)

LET X2 = ARCCSC(X1-4)

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

ARCCOS	=	Compute arccosine.
ARCCOSH	=	Compute hyperbolic arccosine.
ARCCOT	=	Compute arccotangent.
ARCCOTH	=	Compute hyperbolic arccotangent.
ARCCSCH	=	Compute hyperbolic arccosecant.
ARCSEC	=	Compute secant.
ARCSECH	=	Compute hyperbolic arcsecant.
ARCSIN	=	Compute arcsine.
ARCSINH	=	Compute hyperbolic arcsine.
ARCTAN	=	Compute arctangent.
ARCTANH	=	Compute hyperbolic arctangent.

APPLICATIONS

Trigonometry

IMPLEMENTATION DATE

Pre-1987

PROGRAM

```
XILABEL COSECANT(Y)
YILABEL ANGLE (RADIANS)
TITLE ARCCSC FOR X = -10 TO 10
PLOT ARCCSC(X) FOR X = 1 .01 2 AND
PLOT ARCCSC(X) FOR X = 2 .1 10 AND
PLOT ARCCSC(X) FOR X = -1 -.01 -2 AND
PLOT ARCCSC(X) FOR X = -2 -.1 -10
LINE DOT
MOVEDATA -10 0
DRAWDATA 10 0
MOVEDATA 1 2
DRAWDATA 1 -2
MOVEDATA -1 2
DRAWDATA -1 -2
```

