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 \( \pi \). 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 \(<y2> = \text{ARCCSC}(<y1>)\) <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

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<td>ARCTAN</td>
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APPLICATIONS
Trigonometry

IMPLEMENTATION DATE
Pre-1987
PROGRAM
X1LABEL COSECANT(Y)
Y1LABEL 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