CSC Trigonometric Library Functions

CSC

PURPOSE
Compute the cosecant for a variable or parameter.

DESCRIPTION
The cosecant is defined for all real numbers except integer multiples of π. The range is 1 to plus infinity and minus infinity to -1. By default, the angle is specified in radian units. To use degree values, enter the command ANGLE UNITS DEGREES (ANGLE UNITS RADIANS resets it).

SYNTAX
LET <y2> = CSC(<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 cosecant value is stored;
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES
LET A = CSC(-2)
LET A = CSC(A1)
LET X2 = CSC(PI/2)

DEFAULT
None

SYNONYMS
None

RELATED COMMANDS
- SIN = Compute sine.
- COS = Compute cosine.
- TAN = Compute tangent.
- COT = Compute cotangent.
- SEC = Compute secant.
- ARCCOS = Compute arccosine.
- ARCSIN = Compute arcsine.
- ARCTAN = Compute arctangent.
- ARCCOT = Compute arccotangent.
- ARCSEC = Compute arcsecant.
- ARCCSC = Compute arccosecant.

APPLICATIONS
Trigonometry

IMPLEMENTATION DATE
Pre-1987
PROGRAM
TITLE CSC(X) FOR X = -3.1 TO 3.1
X1LABEL ANGLE (RADIANS)
Y1LABEL CSC(X)
YLIMITS -20 20
XLIMITS -3 3
XTIC OFFSET 0.2 0.2
PLOT CSC(X) FOR X = 0.01 0.01 3.14 AND
PLOT CSC(X) FOR X = -0.01 -0.01 -3.14
LINE DOTTED
MOVEDATA -3.14 1
DRAWDATA 3.14 1
MOVEDATA -3.14 -1
DRAWDATA 3.14 -1
MOVEDATA 0 20
DRAWDATA 0 -20