

ARCCOS**PURPOSE**

Compute the arccosine for a variable or parameter.

DESCRIPTION

The arccosine is the angle whose cosine is equal to the given value. The angle is limited to values between zero 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). Values outside the range -1 to 1 generate an error message.

SYNTAX

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

EXAMPLES

```
LET A = ARCCOS(-0.5)
LET X2 = ARCCOS(X1)
LET X2 = ARCCOS(X1-4)
```

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

ARCCOSH	=	Compute hyperbolic arccosine.
ARCCOT	=	Compute arccotangent.
ARCCOTH	=	Compute hyperbolic arccotangent.
ARCCSC	=	Compute arccosecant.
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 COS(Y)
YILABEL ANGLE (RADIANS)
TITLE ARCCOS(X) FOR X = -1 TO 1
YLIMITS 0 3
YTIC OFFSET 0 0.2
PLOT ARCCOS(X) FOR X = -1 .01 1
```

