

LOG10**PURPOSE**

Compute the base 10 logarithm of a number.

DESCRIPTION

The base 10 logarithm is the inverse of the function:

$$y = 10^x \quad (\text{EQ 6-98})$$

That is, given the value of y , the log is the value of the exponent. The input value must be greater than zero.

Logarithms are a commonly used transformation. The two primary reasons are to symmetrize a skewed data set or to reduce the magnitude of large scale numbers.

SYNTAX

LET <y2> = LOG10(<y1>) <SUBSET/EXCEPT/FOR qualification>

where <y1> is a variable or a parameter containing decimal number(s);

<y2> is a variable or a parameter (depending on what <y1> is) where the computed base 10 logarithms are stored; and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES

LET A = LOG10(14)

LET X2 = LOG10(X1)

LET X2 = LOG10(X1-4)

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

LOG2	=	Compute the base 2 logarithms of a number.
LN	=	Compute the natural logarithm of a number.
LOG	=	Specify logarithmic scales on either the X or Y axis.

APPLICATIONS

Data transformations

IMPLEMENTATION DATE

Pre-1987

PROGRAM

TITLE AUTOMATIC

PLOT LOG10(X) FOR X = .01 .01 9.9

