VARIANCE

PURPOSE

Compute the variance of a variable.

DESCRIPTION

The variance is a common measure of the spread of a distribution or a variable. The formula is;

$$\text{VARIANCE} = \frac{\sum_{i=1}^{N} (x_i - \bar{x})^2}{N - 1} \qquad \textbf{(EQ 2-17)}$$

SYNTAX

LET <par> = VARIANCE <y> <SUBSET/EXCEPT/FOR qualification>

where <y> is the variable for which the variance is to be computed;

<par> is a parameter where the computed variance is saved;

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

EXAMPLES

```
LET V = VARIANCE Y1
LET V = VARIANCE Y1 SUBSET TAG > 0
```

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

MEAN	=	Compute the mean of a variable.
STANDARD DEVIATION	=	Compute the standard deviation of a variable.
RANGE	=	Compute the range of a variable.
WEIGHTED VARIANCE	=	Compute the weighted variance of a variable.
VARIANCE PLOT	=	Generate a variance versus subset plot.

APPLICATIONS

Data Analysis

IMPLEMENTATION DATE

Pre-1987

PROGRAM

```
LET Y1 = NORMAL RANDOM NUMBERS FOR I = 1 1 100
LET VAR = VARIANCE Y1
```