SKEWNESS

PURPOSE
Compute the skewness (or the standardized third central moment) of a variable.

DESCRIPTION
The skewness measures the lack of symmetry in a variable. The formula is:

$$\text{skewness} = \frac{\sum_{i=1}^{N} (x_i - \bar{x})^3}{(N-1)s^3}$$

(EQ 2-11)

where s is the standard deviation and N is the number of observations.

SYNTAX
LET <par> = SKEWNESS <y>   <SUBSET/EXCEPT/FOR qualification>
where <y> is a response variable;
          <par> is a parameter where the skewness is stored;
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES
LET A = SKEWNESS Y1
LET A = SKEWNESS Y1 SUBSET TAG = 2

DEFAULT
None

SYNONYMS
STANDARDIZED THIRD CENTRAL MOMENT
STANDARDIZED 3RD CENTRAL MOMENT

RELATED COMMANDS
SKEWNESS PLOT   =   Generate a skewness versus subset plot.
MEAN   =   Compute the mean of a variable.
STANDARD DEVIATION   =   Compute the standard deviation of a variable.
KURTOSIS   =   Compute the Kurtosis of a variable.

APPLICATIONS
Exploratory Data Analysis

IMPLEMENTATION DATE
Pre-1987

PROGRAM
LET Y1 = NORMAL RANDOM NUMBERS FOR I = 1 1 100
LET SKEW = SKEWNESS Y1