COEFFICIENT OF VARIATION

PURPOSE
   Compute the coefficient of variation of a variable.

DESCRIPTION
   The coefficient of variation is:

   \[ cv = \frac{\text{standard deviation}}{\text{mean}} \]

SYNTAX
   LET <par> = COEFFICIENT OF VARIATION <y> <SUBSET/EXCEPT/FOR qualification>
   where <y> is a response variable;
   <par> is a parameter where the coefficient of variation value is saved;
   and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES
   LET CV = COEFFICIENT OF VARIATION Y1
   LET CV = COEFFICIENT OF VARIATION Y1 SUBSET TAG > 2

NOTE
   Versions prior to 94/11 treated this command as a synonym for RELATIVE STANDARD DEVIATION. The relative standard deviation is:

   \[ \text{relsd} = 100 \times \frac{\text{sd}}{|\text{mean}|} \]

   That is, with the relative standard deviation, the sign of the mean is ignored.

DEFAULT
   None

SYNONYMS
   COEFFICIENT VARIATION

RELATED COMMANDS
   RELATIVE STANDARD DEVIATION = Compute the standard deviation of a variable.
   MEAN = Compute the mean of a variable.
   STANDARD DEVIATION = Compute the standard deviation of a variable.
   RELATIVE SD PLOT = Generate a relative standard deviation (versus subset) plot.

APPLICATIONS
   Data Analysis

IMPLEMENTATION DATE
   94/11 (earlier versions use a different definition)

PROGRAM
   LET Y1 = NORMAL RANDOM NUMBERS FOR I = 1 1 100
   LET CV = COEFFICIENT OF VARIATION X1