

PRODUCT**PURPOSE**

Compute the product of the elements in a variable.

SYNTAX

LET <par> = PRODUCT <x1> <SUBSET/EXCEPT/FOR qualification>
 where <x1> is a response variable;
 <par> is a parameter where the computed product is stored;
 and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES

```
LET PROD = PRODUCT Y1
LET PROD = PRODUCT Y1 SUBSET TAG > 2
```

NOTE

This command is related to, but distinct from, the CUMULATIVE PRODUCT command. The PRODUCT command computes the product of all the elements in a variable and returns a single scalar value (i.e., $X(1)*X(2)*...*X(N)$). The CUMULATIVE PRODUCT command returns a variable where element I is the product of elements 1 through I of the original variable.

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

PRODUCT PLOT	=	Generate a product versus subset plot.
CUMULATIVE PRODUCT	=	Compute the cumulative product of a variable.
SUM	=	Compute the sum of the elements in a variable.
SEQUENTIAL DIFFERENCE	=	Compute the sequential differences of a variable.
INTEGRAL	=	Compute the integral of the elements in a variable.

APPLICATIONS

Rare Usage

IMPLEMENTATION DATE

Pre-1987

PROGRAM

```
. THIS EXAMPLE COMPUTES FACTORIALS
LET N = 10
LOOP FOR K = 1 1 N
  LET Y1 = SEQUENCE 1 1 K
  LET A = PRODUCT Y1
  PRINT K A
END OF LOOP
```