

MATRIX ROW**PURPOSE**

Copy a row of a matrix into a variable.

DESCRIPTION

This command is useful for generating row statistics for matrices. For small matrices, the matrix transpose command can be used (and then the rows of the original matrix correspond to columns in the transposed matrix). However, if the number of rows is large, the transposed matrix can exceed the variable limit or the maximum number of columns for a matrix limit. The MATRIX ROW can be used in conjunction with the LOOP command to handle these cases.

SYNTAX

LET <var> = MATRIX ROW <mat> <rowid>
 where <mat> is a matrix for which the row is to be extracted;
 <rowid> is a number or parameter that specifies the row number to be extracted;
 and <var> is a variable where the resulting row is saved.

EXAMPLES

LET C = MATRIX ROW A 3

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

MATRIX REPLACE ROW	=	Replace a row in a matrix.
MATRIX DEFINITION	=	Set a matrix definition.
MATRIX ELEMENT	=	Extract an element of the matrix.
MATRIX REPLACE ELEMENT	=	Replace an element of the matrix.
MATRIX SUBMATRIX	=	Define a matrix submatrix.

APPLICATIONS

Linear Algebra

IMPLEMENTATION DATE

93/10

PROGRAM

```
. COMPUTE ROW MEANS FOR THE FOLLOWING MATRIX
READ MATRIX M
14 37 32
19 42 17
12 17 10
END OF DATA
.
LET NROW = MATRIX NUMBER OF COLUMNS M
.
LOOP FOR K = 1 1 NROW
  LET TEMP = MATRIX ROW M K
  LET A = MEAN TEMP
  LET ROWMEAN(K) = A
END OF LOOP
PRINT ROWMEAN
```

Values of 27.66, 26, and 13 are printed for the ROWMEAN variable.