LOGICAL OR

PURPOSE
Carry out the logical disjunction of 2 variables where true values are coded as 1 and false values are coded as 0.

DESCRIPTION
Logical or means that the result is true if either or both of the input values are true. Otherwise, the result is false. For example, the logical or of the 4-element variable 1 1 0 0 and the 4-element variable 1 0 1 0 is the 4-element variable 1 1 1 0. The logical sequence T F T F T T F F F T F T (T = true, F = false) can be coded as a "logical" variable as follows:

LET Y = DATA 1 0 1 0 1 1 0 0 0 1 0 1

For long sequences, you can use the SERIAL READ command. The IND function can be helpful in converting a numeric variable that is not coded with 0 and 1's to one that is.

SYNTAX
LET <v3> = LOGICAL OR <v1> <v2>   <SUBSET/EXCEPT/FOR qualification>
where <v1> is the first variable;
    <v2> is the second variable;
    <v3> is the resultant variable;
and where the <SUBSET/EXCEPT/FOR qualification> is optional (and rarely used in this context).

EXAMPLES
LET Y3 = LOGICAL OR Y1 Y2

DEFAULT
None

SYNONYMS
None

RELATED COMMANDS
LOGICAL AND	=	Carries out a logical and.
LOGICAL NAND	=	Carries out a logical negative and.
LOGICAL NOR	=	Carries out a logical nor.
LOGICAL XOR	=	Carries out a logical xor.
LOGICAL IFF	=	Carries out a logical if-and-only-if.
LOGICAL NOT	=	Carries out a logical not.

REFERENCE
"Handbook of Mathematical Tables and Functions," Edition 5, Burington, McGraw-Hill, 1973 (page 132).

APPLICATIONS
Mathematics

IMPLEMENTATION DATE
87/10

PROGRAM
LET Y1 = DATA 1 1 0 0
LET Y2 = DATA 1 0 1 0
LET Y3 = LOGICAL OR Y1 Y2
SET WRITE DECIMALS 0
WRITE Y1 Y2 Y3