POLYNOMIAL ADDITION

PURPOSE

Carry out the addition of 2 polynomials with real coefficients.

SYNTAX

LET <v3> = POLYNOMIAL ADDITION <v1> <v2> <SUBSET/EXCEPT/FOR qualification>
where <v1> is the variable whose elements are the ordered real coefficients of the first polynomial;
<v2> is the variable whose elements are the ordered real coefficients of the second polynomial;
<v3> is the variable whose elements are the ordered real coefficients of the resultant polynomial;
and where the <SUBSET/EXCEPT/FOR qualification> is optional and rarely used in this context.

EXAMPLES

LET Y3 = POLYNOMIAL ADDITION Y1 Y2

NOTE

The first element of the variable is the coefficient of the constant term, the second element is the coefficient of the linear term, the third element is the coefficient of the quadratic term, the fourth element is the coefficient of the cubic term, and so on. Thus the polynomial $4 + 11*X + 37*X^2 + 8*X^3 + 19*X^4$ can be stored in the variable Y with the following command:

LET Y = DATA 4 11 37 8 19

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

LET	=	Evaluates general functions.
POLYNOMIAL SUBTRACTION	=	Carries out a polynomial subtraction.
POLYNOMIAL MULTIPLICATION	=	Carries out a polynomial multiplication.
POLYNOMIAL DIVISION	=	Carries out a polynomial division.
POLYNOMIAL SQUARE	=	Carries out a polynomial square.
POLYNOMIAL EVALUATION	=	Carries out a polynomial evaluation.
PLOT	=	Plots data or functions
COMPLEX ADDITION	=	Carries out a complex addition.
COMPLEX ROOTS	=	Computes the roots of a complex polynomial.
VECTOR ADDITION	=	Carries out a vector addition.
MATRIX ADDITION	=	Carries out a matrix addition.

APPLICATIONS

Mathematics

IMPLEMENTATION DATE

87/10

PROGRAM

```
LET Y1 = DATA 4 11 37 8 19
LET Y2 = DATA 1 2 1
LET Y3 = POLYNOMIAL ADDITION Y1 Y2
SET WRITE DECIMALS 0
WRITE Y1 Y2 Y3
```