FIBONNACCI NUMBERS

PURPOSE

Generate a sequence of Fibonnacci numbers of length N where N is specified by the user.

DESCRIPTION

The Fibonacci sequence is defined by:

$$\begin{aligned} Fib(i) &= Fib(i-1) + Fib(i-2) && \text{for } i > 1 \\ &= 1 && \text{for } i = 1 \\ &= 0 && \text{for } i = 0 \end{aligned}$$

SYNTAX

LET <resp> = FIBONNACCI NUMBERS FOR I = <start> <inc> <stop>

where <resp> is a variable where the Fibonnacci numbers are stored;

<start> is a number or parameter that is the first element of <resp> in which the Fibonnacci numbers are stored (it is almost always 1);

<inc> is a number or parameter that specifies the row increment in <resp> for storing the Fibonnacci numbers (it is almost always 1);

and <stop> is a number or parameter that specifies the last row of <resp> in which to store the Fibonnacci numbers.

EXAMPLES

LET YFIB = FIBONNACCI NUMBERS FOR I = 1 1 100

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

SEQUENCE	=	Generate a sequence of numbers.
PATTERN	=	Generate numbers with a specific pattern.
PRIME NUMBERS	=	Generate prime numbers.
DATA	=	Place numbers in a variable.

APPLICATIONS

Mathematics

IMPLEMENTATION DATE

87/10

PROGRAM

```
LET YFIB = FIBONNACCI NUMBERS FOR I = 1 1 20
PRINT YFIB
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