MSD

PURPOSE

Return the most significant digit of the number.

DESCRIPTION

This is the first non-zero leading digit. For example, the most significant digit of 3.14 is 3 while the most significant digit of 0.00234 is 2. The sign of the digit is not returned.

SYNTAX

LET <y2> = MSD(<y1>) <SUBSET/EXCEPT/FOR qualification>
where <y1> is a decimal number, parameter, or variable;
<y2> is a variable or a parameter (depending on what <y1> is) where the computed most significant digits are stored;
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES

LET A = MSD(.00234)
LET A = MSD(A1)

DEFAULT

None

SYNONYMS

None

RELATED COMMANDS

MOD	=	Compute the modulo of two numbers.
INT	=	Compute the integer portion of number.
FRACT	=	Compute the fractional portion of number.

APPLICATIONS

Data transformation

IMPLEMENTATION DATE

88/12

PROGRAM

```
LET Y1 = NORMAL RANDOM NUMBERS FOR I = 1 1 100
LET Y2 = MSD(Y1)
SET WRITE DECIMALS 0; PRINT Y1 Y2 FOR I = 1 1 15
```

The following output is generated.

```
-1.073          1.000
 0.573          5.000
-0.873          8.000
 0.234          2.000
-0.455          4.000
-0.525          5.000
-0.706          7.000
 0.032          3.000
 1.191          1.000
 0.270          2.000
-0.149          1.000
-0.197          1.000
-0.243          2.000
-0.841          8.000
-0.104          1.000
```