Symbols

Symbols are defined with an equals sign.

```
N = 212^17
```

No result is printed when a symbol is defined. To see the value of a symbol, just evaluate it.

N

```
N = 3529471145760275132301897342055866171392
```

Symbols can have more that one letter. Everything after the first letter is displayed as a subscript.

```
NA = 6.02214~10^23 NA N_A = 6.02214 \times 10^{23}
```

A symbol can be the name of a Greek letter.

```
xi = 1/2
xi
\xi = \frac{1}{2}
```

Greek letters can appear in subscripts.

```
\begin{array}{l} {\rm Amu} \ = \ 2.0 \\ {\rm Amu} \end{array} A_{\mu} = 2.0
```

The following example shows how a symbol is scanned to find Greek letters.

```
alphamunu = 1 \alpha_{\mu\nu} = 1
```

Symbol definitions are evaluated serially until a terminal symbol is reached. The following example sets A = B followed by B = C. Then when A is evaluated, the result is C.

```
A = BB = CA
```

$$A = C$$

Although A=C is printed, inside the program the binding of A is still B, as can be seen with the binding function.

binding(A)

B

The quote function returns its argument unevaluated and can be used to clear a symbol. The following example clears A so that its evaluation goes back to being A instead of C.

```
A = quote(A)
```

A

A