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.

```
Amu = 2.0
Amu
```

$A_\mu = 2.0$

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

```
alphamunu = 1
alphamunu
```

$\alpha_{\mu\nu} = 1$

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 = B
B = C
A
```

$A = C$

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