

Conjugate

+ 0 0 0

Plus

+ y is the conjugate of y. For example, +3j4 is 3j_4.	+ is defined as in elementary arithmetic, and is extended to complex numbers as usual.
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A complex number y multiplied by its conjugate produces a real number equal to the square of its magnitude $|y|$. For example:

```
3j4 * 3j_4
25
```

The function `j` multiplies its argument by the square root of negative one:

```
]i=: i. 5
0 1 2 3 4
```

```
j. i
0 0j1 0j2 0j3 0j4
```

```
]y=: i + 2 * j. i
0 1j2 2j4 3j6 4j8
```

```
+y
0 1j_2 2j_4 3j_6 4j_8
```

```
y * +y
0 5 20 45 80
```

```
=: y * +y
0 2.23607 4.47214 6.7082 8.94427
```

```
|y
0 2.23607 4.47214 6.7082 8.94427
```

The conjugate of y can also be expressed as $(|y*y)\%y$. For example:

```
(|y*y)%y
0 1j_2 2j_4 3j_6 4j_8
```