

Square Root

 $\% : 0 \ 0 \ 0$ 

Root

$\% : y$ is the square root of $y$ . If $y$ is negative, the result is an imaginary number. For example, $\% : -4 \leftrightarrow 0j2$ .	$x \% : y$ is the $x$ root of $y$ . Thus, $3 \% : 8$ is 2, and $2 \% : y$ is $\% : y$ . In general, $x \% : y \leftrightarrow y^{\%x}$ .
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For example:

```

y=: i. 7
y
0 1 2 3 4 5 6

2 %: y
0 1 1.41421 1.73205 2 2.23607 2.44949

%: y
0 1 1.41421 1.73205 2 2.23607 2.44949

r=: 1 2 3 4
z=: r %:/ y
z
0 1      2      3      4      5      6
0 1 1.41421 1.73205      2 2.23607 2.44949
0 1 1.25992 1.44225 1.5874 1.70998 1.81712
0 1 1.18921 1.31607 1.41421 1.49535 1.56508

```

```

r ^~ z
0 1 2 3 4 5 6
0 1 2 3 4 5 6
0 1 2 3 4 5 6
0 1 2 3 4 5 6

```

See agreement in Section II B, and note use of  $\sim$