

**sqrt()** — Square root[Description](#)[Syntax](#)[Conformability](#)[Diagnostics](#)[Also see](#)

## Description

`sqrt(Z)` returns the elementwise square root of  $Z$ .

## Syntax

*numeric matrix* `sqrt` (*numeric matrix*  $Z$ )

## Conformability

`sqrt(Z)`

*Z*:  $r \times c$   
*result*:  $r \times c$

## Diagnostics

`sqrt(Z)` returns missing when  $Z$  is real and  $Z < 0$ ; that is, `sqrt(-4) = .` but `sqrt(-4+0i) = 2i`.

## Also see

[M-5] [cholesky\(\)](#) — Cholesky square-root decomposition

[M-4] [scalar](#) — Scalar mathematical functions