

_diag() — Replace diagonal of a matrix[Description](#)[Syntax](#)[Conformability](#)[Diagnostics](#)[Also see](#)

Description

`_diag(Z, v)` replaces the diagonal of the matrix Z with v . Z need not be square.

1. If v is a vector, the vector replaces the principal diagonal.
2. If v is 1×1 , each element of the principal diagonal is replaced with v .
3. If v is a void vector (1×0 or 0×1), Z is left unchanged.

Syntax

```
void _diag(numeric matrix Z, numeric vector v)
```

Conformability

`_diag(Z, v)`:

input:

Z : $n \times m, n \leq m$

v : $1 \times 1, 1 \times n$, or $n \times 1$

or

Z : $n \times m, n > m$

v : $1 \times 1, 1 \times m$, or $m \times 1$

output:

Z : $n \times m$

Diagnostics

`_diag(Z, v)` aborts with error if Z or v is a view.

Also see

[M-5] **diag()** — Create diagonal matrix

[M-4] **manipulation** — Matrix manipulation