

blockdiag() — Block-diagonal matrix

Description

blockdiag(Z₁, Z₂) returns a block-diagonal matrix with Z₁ in the upper-left corner and Z₂ in the lower right, that is,

\[
\begin{bmatrix}
Z₁ & 0 \\
0 & Z₂
\end{bmatrix}
\]

Z₁ and Z₂ may be either real or complex and need not be of the same type.

Syntax

```
numeric matrix  blockdiag(numeric matrix Z₁, numeric matrix Z₂)
```

Remarks and examples

To create a block diagonal matrix of Z₁, Z₂, Z₃, code

```
: blockdiag(Z₁, blockdiag(Z₂,Z₃))
```

Conformability

blockdiag(Z₁, Z₂):

- Z₁: \(r₁ \times c₁\)
- Z₂: \(r₂ \times c₂\)
- result: \(r₁ + r₂ \times c₁ + c₂\)

Diagnostics

None. Either or both Z₁ and Z₂ may be void.

Also see

[M-4] Standard — Functions to create standard matrices