Re() — Extract real or imaginary part

Syntax

real matrix \( \text{Re}(\text{numeric matrix } Z) \)

real matrix \( \text{Im}(\text{numeric matrix } Z) \)

Description

\( \text{Re}(Z) \) returns a real matrix containing the real part of \( Z \). \( Z \) may be real or complex.

\( \text{Im}(Z) \) returns a real matrix containing the imaginary part of \( Z \). \( Z \) may be a real or complex. If \( Z \) is real, \( \text{Im}(Z) \) returns a matrix of zeros.

Conformability

\( \text{Re}(Z), \text{Im}(Z) \):

\[
\begin{align*}
\text{Z:} & \quad r \times c \\
\text{result:} & \quad r \times c
\end{align*}
\]

Diagnostics

\( \text{Re}(Z) \), if \( Z \) is real, literally returns \( Z \) and not a copy of \( Z \). This makes execution of \( \text{Re}() \) applied to real arguments instant.

Also see

[M-5] C() — Make complex

[M-4] scalar — Scalar mathematical functions

[M-4] utility — Matrix utility functions