abs() — Absolute value (length)

Syntax

\[ \text{real matrix abs(numeric matrix Z)} \]

Description

For \( Z \) real, \( \text{abs}(Z) \) returns the elementwise absolute values of \( Z \).

For \( Z \) complex, \( \text{abs}(Z) \) returns the elementwise length of each element. If \( Z = a + bi \), returned is \( \sqrt{a^2 + b^2} \), although the calculation is not made in that way. The method actually used prevents overflow.

Conformability

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

Diagnostics

\( \text{abs(.)} \) returns . (missing).

Also see

[M-4] scalar — Scalar mathematical functions