abs() — Absolute value (length)

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.

Syntax

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

Conformability

\[
\text{abs}(Z): \\
Z: \quad r \times c \\
\text{result:} \quad r \times c
\]

Diagnostics

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

Also see

[M-4] Scalar — Scalar mathematical functions