Title

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isreal( ) — Storage type of matrix

Description

`isreal(`*X*`)` returns 1 if *X* is a `real` and returns 0 otherwise.

`iscomplex(`*X*`)` returns 1 if *X* is a `complex` and returns 0 otherwise.

`isstring(`*X*`)` returns 1 if *X* is a `string` and returns 0 otherwise.

`ispointer(`*X*`)` returns 1 if *X* is a `pointer` and returns 0 otherwise.

Syntax

real scalar `isreal(`*transmorphic matrix X*`)`

real scalar `iscomplex(`*transmorphic matrix X*`)`

real scalar `isstring(`*transmorphic matrix X*`)`

real scalar `ispointer(`*transmorphic matrix X*`)`

Remarks and examples

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These functions base their results on storage type. `isreal()` is not the way to check whether a number is real, since it might be stored as a complex and yet still be a real number, such as $2 + 0$i. To determine whether *x* is real, you want to use `isrealvalues(`*X*`)`; see [M-5] **isrealvalues( )**.

Conformability

`isreal(`*X*`)`, `iscomplex(`*X*`)`, `isstring(`*X*`)`, `ispointer(`*X*`)`:

X:	$r \times c$
result:	1×1

Diagnostics

These functions return 1 or 0; they cannot fail.

Also see

[M-5] **isrealvalues( )** — Whether matrix contains only real values

[M-5] **eltype( )** — Element type and organizational type of object

[M-4] **utility** — Matrix utility functions