

## 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

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  $2 + 0i$ . 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*:  $1 \times 1$

## Diagnostics

These functions return 1 or 0; they cannot fail.

## Also see

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

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

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

Stata, Stata Press, Mata, NetCourse, and NetCourseNow are registered trademarks of StataCorp LLC. Stata and Stata Press are registered trademarks with the World Intellectual Property Organization of the United Nations. StataNow is a trademark of StataCorp LLC. Other brand and product names are registered trademarks or trademarks of their respective companies. Copyright © 1985–2025 StataCorp LLC, College Station, TX, USA. All rights reserved.



For suggested citations, see the FAQ on [citing Stata documentation](#).