strtoreal( ) — Convert string to real

Description Syntax Remarks and examples Conformability Diagnostics Also see

Description

`strtoreal(`*S*`)` returns *S* converted to real. Elements of *S* that cannot be converted are returned as `.` (missing value).

`_strtoreal(`*S*`, `*R*`)` does the same as above—it returns the converted values in *R*—and it returns the number of elements that could not be converted. In such cases, the corresponding value of *R* contains `.` (missing).

Syntax

real matrix `strtoreal(`*string matrix S*`)`

real scalar `_strtoreal(`*string matrix S*`, `*R*`)`

Remarks and examples

`strtoreal("1.5")` returns (numeric) 1.5.

`strtoreal("-2.5e+1")` returns (numeric) −25.

`strtoreal("not a number")` returns (numeric) `.` (missing).

Typically, `strtoreal(`*S*`)` and `_strtoreal(`*S*`, `*R*`)` are used with scalars, but if applied to a vector or matrix *S*, element-by-element results are returned.

In performing the conversion, leading and trailing blanks are ignored: `"1.5"` and `" 1.5 "` both convert to (numeric) 1.5, but `"1.5 kilometers"` converts to `.` (missing). Use `strtoreal(tokens(`*S*`)[1])` to convert just the first space-delimited part.

All Stata numeric formats are understood, such as 0, 1, −2, 1.5, 1.5e+2, and −1.0x+8, as well as the missing-value codes `.`, `.a`, `.b`, ..., `.z`.

Thus using `strtoreal(`*S*`)`, if an element of *S* converts to `.` (missing), you cannot tell whether the element was valid and equal to `"."` or the element was invalid and so defaulted to `.` (missing), such as if *S* contained `"cat"` or `"dog"` or `"1.5 kilometers"`.

When it is important to distinguish between these cases, use `_strtoreal(`*S*`, `*R*`)`. The conversion is returned in *R* and the function returns the number of elements that were invalid. If `_strtoreal()` returns 0, then all values were valid.

Conformability

`strtoreal(`*S*`)`:

input:

S: $r \times c$

output:

result: $r \times c$

`_strtoreal(`*S*`, `*R*`)`:

input:

S: $r \times c$

output:

R: $r \times c$

result: 1×1

Diagnostics

`strtoreal(`*S*`)` returns a missing value wherever an element of *S* cannot be converted to a number.

`_strtoreal(`*S*`, `*R*`)` does the same, but the result is returned in *R*.

Also see

[M-5] **strofreal( )** — Convert real to string

[M-4] **String** — String manipulation functions