**strtoreal() — Convert string to real**

### 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 x c

output:
result: r x c

strtoreal(S, R):

input:
S: r x c

output:
R: r x c
result: 1 x 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