

## floatround() — Round to float precision

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## Description

`floatround(x)` returns  $x$  rounded to IEEE 4-byte real (float) precision. `floatround()` is the element-by-element equivalent of Stata's `float()` function. The Mata function could not be named `float()` because the word `float` is reserved in Mata.

## Syntax

*real matrix* `floatround(real matrix x)`

## Remarks and examples

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```
: printf(" %21x\n", .1)
+1.999999999999999aX-004
: printf(" %21x\n", floatround(.1))
+1.99999a0000000X-004
```

## Conformability

```
floatround(x):
  x:      r × c
result:    r × c
```

## Diagnostics

`floatround(x)` returns missing (.) if  $x < -1.ffffeX+7e$  (approximately  $-1.70141173319e+38$ ) or  $x > 1.ffffeX+7e$  (approximately  $1.70141173319e+38$ ).

In contrast with most functions, `floatround(x)` returns the same kind of missing value as  $x$  if  $x$  contains missing; . if  $x == .$ , .a if  $x == .a$ , .b if  $x == .b$ , ..., and .z if  $x == .z$ .

## Also see

[M-4] [utility](#) — Matrix utility functions