floatround() — Round to float precision

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

```
: printf("  %21x\n", .1)
   +1.999999999999aX-004
: printf("  %21x\n", floatround(.1))
   +1.99999a0000000X-004
```

Conformability

`floatround(`*x*`)`:

x:	$r \times c$
result:	$r \times c$

Diagnostics

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