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))  
   +1.9999900000000X-004

Conformability

floatround(x):

  x:    r × c
  result:  r × 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