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### ***Rocky Enterprise Linux 9.2 Manual Pages on command 'floorf.3'***

#### ***\$ man floorf.3***

FLOOR(3)                      Linux Programmer's Manual                      FLOOR(3)

#### NAME

floor, floorf, floorl - largest integral value not greater than argument

#### SYNOPSIS

```
#include <math.h>

double floor(double x);

float floorf(float x);

long double floorl(long double x);

Link with -lm.
```

Feature Test Macro Requirements for glibc (see feature\_test\_macros(7)):

```
floorf(), floorl():

    _ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

    /* Since glibc 2.19: */ _DEFAULT_SOURCE

    /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE
```

#### DESCRIPTION

These functions return the largest integral value that is not greater than x.

For example, floor(0.5) is 0.0, and floor(-0.5) is -1.0.

## RETURN VALUE

These functions return the floor of x.

If x is integral, +0, -0, NaN, or an infinity, x itself is returned.

## ERRORS

No errors occur. POSIX.1-2001 documents a range error for overflows, but see NOTES.

## ATTRIBUTES

For an explanation of the terms used in this section, see attributes(7).

??

?Interface ? Attribute ? Value ?

??

?floor(), floorf(), floorl() ? Thread safety ? MT-Safe ?

??

## CONFORMING TO

C99, POSIX.1-2001, POSIX.1-2008.

The variant returning double also conforms to SVr4, 4.3BSD, C89.

## NOTES

SUSv2 and POSIX.1-2001 contain text about overflow (which might set errno to ERANGE, or raise an FE\_OVERFLOW exception). In practice, the result cannot overflow on any current machine, so this error-handling stuff is just nonsense. (More precisely, overflow can happen only when the maximum value of the exponent is smaller than the number of mantissa bits. For the IEEE-754 standard 32-bit and 64-bit floating-point numbers the maximum value of the exponent is 128 (respectively, 1024), and the number of mantissa bits is 24 (respectively, 53).)

## SEE ALSO

ceil(3), lrint(3), nearbyint(3), rint(3), round(3), trunc(3)

## COLOPHON

This page is part of release 5.10 of the Linux man-pages project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at

