NAME

lrint, lrintf, lrintl, llrint, llrintf, llrintl - round to nearest integer

SYNOPSIS

#include <math.h>

long int lrint(double *x***);**
long int lrintf(float *x***);**
long int lrintl(long double *x***);**

long long int llrint(double *x***);**
long long int llrintf(float *x***);**
long long int llrintl(long double *x***);**

Link with *-lm*.

Feature Test Macro Requirements for glibc (see feature_test_macros(7)):

All functions shown above:
_XOPEN_SOURCE >= 600 || _ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L;
or *cc -std=c99*

DESCRIPTION

These functions round their argument to the nearest integer value, using the current rounding direction (see fesetround(3)).

Note that unlike the rint(3) family of functions, the return type of these functions differs from that of their arguments.

RETURN VALUE

These functions return the rounded integer value.

If *x* is a NaN or an infinity, or the rounded value is too large to be stored in a *long* (*long long* in the case of the **ll*** functions), then a domain error occurs, and the return value is unspecified.

ERRORS

See math_error(7) for information on how to determine whether an error has occurred when calling these functions.

The following errors can occur:

Domain error: *x* is a NaN or infinite, or the rounded value is too large
An invalid floating-point exception (**FE_INVALID**) is raised.

These functions do not set *errno*.

VERSIONS

These functions first appeared in glibc in version 2.1.

ATTRIBUTES

Multithreading (see pthreads(7))

The **lrint**(), **lrintf**(), **lrintl**(), **llrint**(), **llrintf**(), and **llrintl**() functions are thread-safe.

CONFORMING TO

C99, POSIX.1-2001.

SEE ALSO

ceil(3), floor(3), lround(3), nearbyint(3), rint(3), round(3)

COLOPHON

This page is part of release 3.74 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 http://www.kernel.org/doc/man-pages/.