## NAME

lround, lroundf, lroundl, llround, llroundf, llroundl − round to nearest integer

## SYNOPSIS

**#include <math.h>**

**long int lround(double** *x***);**
**long int lroundf(float** *x***);**
**long int lroundl(long double** *x***);**

**long long int llround(double** *x***);**
**long long int llroundf(float** *x***);**
**long long int llroundl(long double** *x***);**

Link with *−lm*.

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

All functions shown above:
_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

## DESCRIPTION

These functions round their argument to the nearest integer value, rounding halfway cases away from zero, regardless of the current rounding direction (see **fenv**(3)).

Note that unlike the **round**(3) and **ceil**(3), 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

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

| Interface | Attribute | Value |
|---|---|---|
| **lround**(), **lroundf**(), **lroundl**(), **llround**(), **llroundf**(), **llroundl**() | Thread safety | MT-Safe |

## CONFORMING TO

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

## SEE ALSO

**ceil**(3), **floor**(3), **lrint**(3), **nearbyint**(3), **rint**(3), **round**(3)

## COLOPHON

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