

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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