NAME

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

LIBRARY

Math library (*libm*, *−lm*)

SYNOPSIS

```
#include <math.h>

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

long long llround(double x);
long long llroundf(float x);
long long llroundl(long double x);
```

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 were added in glibc 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

STANDARDS

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

SEE ALSO

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