

NAME

fmod, fmodf, fmodl - floating-point remainder function

SYNOPSIS

```
#include <math.h>
```

```
double fmod(double x, double y);
```

```
float fmodf(float x, float y);
```

```
long double fmodl(long double x, long double y);
```

Link with *-lm*.

Feature Test Macro Requirements for glibc (see [feature_test_macros\(7\)](#)):

```
fmodf(), fmodl():
```

```
_BSD_SOURCE || _SVID_SOURCE || _XOPEN_SOURCE >= 600 || _ISOC99_SOURCE ||
```

```
_POSIX_C_SOURCE >= 200112L;
```

```
or cc -std=c99
```

DESCRIPTION

The **fmod()** function computes the floating-point remainder of dividing x by y . The return value is $x - n * y$, where n is the quotient of x / y , rounded toward zero to an integer.

RETURN VALUE

On success, these functions return the value $x - n*y$, for some integer n , such that the returned value has the same sign as x and a magnitude less than the magnitude of y .

If x or y is a NaN, a NaN is returned.

If x is an infinity, a domain error occurs, and a NaN is returned.

If y is zero, a domain error occurs, and a NaN is returned.

If x is $+0$ (-0), and y is not zero, $+0$ (-0) is returned.

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 an infinity

errno is set to **EDOM** (but see **BUGS**). An invalid floating-point exception (**FE_INVALID**) is raised.

Domain error: y is zero

errno is set to **EDOM**. An invalid floating-point exception (**FE_INVALID**) is raised.

CONFORMING TO

C99, POSIX.1-2001. The variant returning *double* also conforms to SVr4, 4.3BSD, C89.

BUGS

Before version 2.10, the glibc implementation did not set *errno* to **EDOM** when a domain error occurred for an infinite x .

SEE ALSO

[remainder\(3\)](#)

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/>.