Rocky Enterprise Linux 9.2 Manual Pages on command 'remainderl.3'

C:\>man remainderl.3

REMAINDER(3) Linux Programmer's Manual REMAINDER(3)

NAME

drem, dremf, dreml, remainder, remainderf, remainderl - floating-point remainder function

SYNOPSIS

```
#include <math.h>
/* The C99 versions */
double remainder(double x, double y);
float remainderf(float x, float y);
long double remainderl(long double x, long double y);
/* Obsolete synonyms */
double drem(double x, double y);
float dremf(float x, float y);
long double dreml(long double x, long double y);
```

Link with -lm.

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

remainder():

_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L || _XOPEN_SOURCE >= 500 || /* Since glibc 2.19: */ _DEFAULT_SOURCE || /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE

remainderf(), remainderl():

_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

|| /* Since glibc 2.19: */ _DEFAULT_SOURCE

|| /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE

drem(), dremf(), dreml():

/* Since glibc 2.19: */ _DEFAULT_SOURCE

|| /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE

DESCRIPTION

These functions compute the remainder of dividing x by y. The return value is x-n*y, where n is the value x / y, rounded to the nearest integer. If the absolute value of x-n*y is 0.5, n is chosen to be even.

These functions are unaffected by the current rounding mode (see fenv(3)).

The drem() function does precisely the same thing.

RETURN VALUE

On success, these functions return the floating-point remainder, x-n*y. If the re? turn value is 0, it has the sign of x.

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

If x is an infinity, and y is not a NaN, a domain error occurs, and a NaN is re? turned.

If y is zero, and x is not a NaN, a domain error occurs, and a NaN 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 and y is not a NaN

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

These functions do not set errno for this case.

Domain error: y is zero

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

ATTRIBUTES

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

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?Interface ? Attribute ? Value ?

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?drem(), dremf(), dreml(), ? Thread safety ? MT-Safe ?

?remainder(), remainderf(), ? ? ?

?remainderl() ? ? ?

??

CONFORMING TO

The functions remainder(), remainderf(), and remainderl() are specified in C99, POSIX.1-2001, and POSIX.1-2008.

The function drem() is from 4.3BSD. The float and long double variants dremf() and dreml() exist on some systems, such as Tru64 and glibc2. Avoid the use of these functions in favor of remainder() etc.

BUGS

Before glibc 2.15, the call

```
remainder(nan(""), 0);
```

returned a NaN, as expected, but wrongly caused a domain error. Since glibc 2.15, a silent NaN (i.e., no domain error) is returned.

Before glibc 2.15, errno was not set to EDOM for the domain error that occurs when x is an infinity and y is not a NaN.

EXAMPLE

The call "remainder(29.0, 3.0)" returns -1.

SEE ALSO

div(3), fmod(3), remquo(3)

COLOPHON

This page is part of release 5.05 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 https://www.kernel.org/doc/man-pages/.

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