



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

\$ man imaxdiv.3

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

NAME

div, ldiv, lldiv, imaxdiv - compute quotient and remainder of an integer division

SYNOPSIS

```
#include <stdlib.h>

div_t div(int numerator, int denominator);

ldiv_t ldiv(long numerator, long denominator);

lldiv_t lldiv(long long numerator, long long denominator);

#include <inttypes.h>

imaxdiv_t imaxdiv(intmax_t numerator, intmax_t denominator);
```

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

```
lldiv():
    _ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L
```

DESCRIPTION

The div() function computes the value numerator/denominator and returns the quotient and remainder in a structure named div_t that contains two integer members (in unspecified order) named quot and rem. The quo?

tient is rounded toward zero. The result satisfies $quot * denominator + remainder = numerator$.

The `ldiv()`, `lldiv()`, and `imaxdiv()` functions do the same, dividing numbers of the indicated type and returning the result in a structure of the indicated name, in all cases with fields `quot` and `rem` of the same type as the function arguments.

RETURN VALUE

The `div_t` (etc.) structure.

ATTRIBUTES

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

???

?Interface ? Attribute ? Value ?

???

?div(), ldiv(), lldiv(), imaxdiv() ? Thread safety ? MT-Safe ?

???

CONFORMING TO

POSIX.1-2001, POSIX.1-2008, C89, C99, SVr4, 4.3BSD. The functions `ldiv()` and `imaxdiv()` were added in C99.

EXAMPLES

After

```

    div_t q = div(-5, 3);
```

the values `q.quot` and `q.rem` are -1 and -2, respectively.

SEE ALSO

`abs(3)`, `remainder(3)`

COLOPHON

This page is part of release 5.10 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/>.