



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

C:\>man div.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 quotient is rounded toward zero.

The result satisfies `quot*denominator+rem = 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).

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?Interface ? Attribute ? Value ?

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

??

CONFORMING TO

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

EXAMPLE

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 5.05 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/>.