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### ***Rocky Enterprise Linux 9.2 Manual Pages on command 'nextdownf.3'***

**\$ man nextdownf.3**

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

#### **NAME**

nextup, nextupf, nextupl, nextdown, nextdownf, nextdownl - return next floating-point number toward positive/negative infinity

#### **SYNOPSIS**

```
#define _GNU_SOURCE    /* See feature_test_macros(7) */

#include <math.h>

double nextup(double x);

float nextupf(float x);

long double nextupl(long double x);

double nextdown(double x);

float nextdownf(float x);

long double nextdownl(long double x);

Link with -lm.
```

#### **DESCRIPTION**

The nextup(), nextupf(), and nextupl() functions return the next representable floating-point number greater than x.

If x is the smallest representable negative number in the corresponding type, these functions return -0. If x is 0, the returned value is the smallest representable positive number of the corresponding type.

If x is positive infinity, the returned value is positive infinity. If x is negative infinity, the returned value is the largest representable finite negative number of the corresponding type.

If x is Nan, the returned value is NaN.

The value returned by nextdown(x) is -nextup(-x), and similarly for the other types.

## RETURN VALUE

See DESCRIPTION.

## VERSIONS

These functions first appeared in glibc in version 2.24.

## 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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?nextup(), nextupf(), nextupl(),    ? Thread safety ? MT-Safe ?

?nextdown(), nextdownf(), nextdownl() ?                      ?                      ?

??

## CONFORMING TO

These functions are described in IEEE Std 754-2008 - Standard for Floating-Point Arithmetic and ISO/IEC TS 18661.

## SEE ALSO

nearbyint(3), nextafter(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/>.