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

**\$ man nextdownf.3**

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#### **NAME**

nextup, nextupf, nextupl, nextdown, nextdownf, nextdownl - return next floating-point num?

ber 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).

?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 Arith?

metic 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/>.

GNU

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