



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

**C:\>man nextupf.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 nega-

tive infinity, the returned value is the largest representable finite negative num?

ber 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).

??

?Interface                   ? Attribute   ? Value   ?

??

?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 5.05 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/>.