



Linux Ubuntu 26.04 Manual Pages on command 'nextup.3'

\$ man nextup.3

nextup(3) Library Functions Manual nextup(3)

NAME

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

LIBRARY

Math library (libm, -lm)

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);
```

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` or `-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

sponding 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.

ATTRIBUTES

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

[illegible]

?	Interface	?	Attribute	?	Value	?
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[illegible]

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

? nextdownl() ? ? ?

[illegible]

STANDARDS

These functions are described in IEEE Std 754-2008 - Standard for Floating-Point Arithmetic

and ISO/IEC TS 18661.

HISTORY

glibc 2.24.

SEE ALSO

```
nearbyint(3), nextafter(3)
```

Linux man-pages 6.17

2026-02-08

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