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# Red Hat Enterprise Linux Release 9.2 Manual Pages on 'nextupl.3' command

### \$ man nextupl.3

NEXTUP(3)

Linux Programmer's Manual

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#### NAME

nextup, 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 repre? sentable 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 at? tributes(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 5.10 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/.

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