

**NAME**

copysign, copysignf, copysignl - copy sign of a number

**SYNOPSIS**

```
#include <math.h>
```

```
double copysign(double x, double y);
```

```
float copysignf(float x, float y);
```

```
long double copysignl(long double x, long double y);
```

Link with *-lm*.

Feature Test Macro Requirements for glibc (see [feature\\_test\\_macros\(7\)](#)):

```
copysign(), copysignf(), copysignl():
```

```
  _SVID_SOURCE || _BSD_SOURCE || _XOPEN_SOURCE >= 600 || _ISOC99_SOURCE ||
```

```
  _POSIX_C_SOURCE >= 200112L;
```

```
  or cc -std=c99
```

**DESCRIPTION**

The **copysign()**, **copysignf()**, and **copysignl()** functions return a value whose absolute value matches that of *x*, but whose sign bit matches that of *y*.

For example, *copysign(42.0, -1.0)* and *copysign(-42.0, -1.0)* both return *-42.0*.

**RETURN VALUE**

On success, these functions return a value whose magnitude is taken from *x* and whose sign is taken from *y*.

If *x* is a NaN, a NaN with the sign bit of *y* is returned.

**ERRORS**

No errors occur.

**ATTRIBUTES**

**Multithreading** (see [pthreads\(7\)](#))

The **copysign()**, **copysignf()**, and **copysignl()** functions are thread-safe.

**CONFORMING TO**

C99, POSIX.1-2001. This function is defined in IEC 559 (and the appendix with recommended functions in IEEE 754/IEEE 854).

**NOTES**

On architectures where the floating-point formats are not IEEE 754 compliant, these functions may treat a negative zero as positive.

**SEE ALSO**

[signbit\(3\)](#)

**COLOPHON**

This page is part of release 3.74 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 <http://www.kernel.org/doc/man-pages/>.