

NAME

copysign, copysignf, copysignl – copy sign of a number

LIBRARY

Math library (*libm*, *-lm*)

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);
```

Feature Test Macro Requirements for glibc (see **feature_test_macros(7)**):

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

```
_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L
```

```
    /* Since glibc 2.19: */ _DEFAULT_SOURCE
```

```
    /* glibc <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE
```

DESCRIPTION

These 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

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

Interface	Attribute	Value
copysign() , copysignf() , copysignl()	Thread safety	MT-Safe

VERSIONS

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

STANDARDS

C11, POSIX.1-2008.

This function is defined in IEC 559 (and the appendix with recommended functions in IEEE 754/IEEE 854).

HISTORY

C99, POSIX.1-2001, 4.3BSD.

SEE ALSO

signbit(3)