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

STANDARDS

C99, POSIX.1-2001, POSIX.1-2008. 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)