

**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():**

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

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

```
|| /* Glibc versions <= 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
<b>copysign(), copysignf(), copysignl()</b>	Thread safety	MT-Safe

**CONFORMING TO**

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)**

**COLOPHON**

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