

**NAME**

signbit – test sign of a real floating-point number

**LIBRARY**

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

**SYNOPSIS**

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

```
int signbit(x);
```

Feature Test Macro Requirements for glibc (see **feature\_test\_macros(7)**):

```
signbit():
```

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

**DESCRIPTION**

**signbit()** is a generic macro which can work on all real floating-point types. It returns a nonzero value if the value of  $x$  has its sign bit set.

This is not the same as  $x < 0.0$ , because IEEE 754 floating point allows zero to be signed. The comparison  $-0.0 < 0.0$  is false, but *signbit*( $-0.0$ ) will return a nonzero value.

NaNs and infinities have a sign bit.

**RETURN VALUE**

The **signbit()** macro returns nonzero if the sign of  $x$  is negative; otherwise it returns zero.

**ERRORS**

No errors occur.

**ATTRIBUTES**

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

Interface	Attribute	Value
signbit()	Thread safety	MT-Safe

**STANDARDS**

POSIX.1-2001, POSIX.1-2008, C99. This function is defined in IEC 559 (and the appendix with recommended functions in IEEE 754/IEEE 854).

**SEE ALSO**

**copysign(3)**