

**NAME**

sincos, sincosf, sincosl - calculate sin and cos simultaneously

**SYNOPSIS**

```
#define _GNU_SOURCE /* See feature\_test\_macros\(7\)
*/"
#include <math.h>

void sincos(double x, double *sin, double *cos);
void sincosf(float x, float *sin, float *cos);
void sincosl(long double x, long double *sin, long double *cos);
```

Link with *-lm*.

**DESCRIPTION**

Several applications need sine and cosine of the same angle  $x$ . These functions compute both at the same time, and store the results in *\*sin* and *\*cos*.

If  $x$  is a NaN, a NaN is returned in *\*sin* and *\*cos*.

If  $x$  is positive infinity or negative infinity, a domain error occurs, and a NaN is returned in *\*sin* and *\*cos*.

**RETURN VALUE**

These functions return *void*.

**ERRORS**

See [math\\_error\(7\)](#) for information on how to determine whether an error has occurred when calling these functions.

The following errors can occur:

Domain error:  $x$  is an infinity

An invalid floating-point exception (**FE\_INVALID**) is raised.

These functions do not set *errno*.

**VERSIONS**

These functions first appeared in glibc in version 2.1.

**ATTRIBUTES**

For an explanation of the terms used in this section, see [attributes\(7\)](#).

Interface	Attribute	Value
<b>sincos()</b> , <b>sincosf()</b> , <b>sincosl()</b>	Thread safety	MT-Safe

**CONFORMING TO**

These functions are GNU extensions.

**SEE ALSO**

[cos\(3\)](#), [sin\(3\)](#), [tan\(3\)](#)

**COLOPHON**

This page is part of release 4.10 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 <https://www.kernel.org/doc/man-pages/>.