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## ***Rocky Enterprise Linux 9.2 Manual Pages on command 'tanl.3'***

**\$ man tanl.3**

TAN(3) Linux Programmer's Manual TAN(3)

### NAME

tan, tanf, tanl - tangent function

### SYNOPSIS

```
#include <math.h>

double tan(double x);

float tanf(float x);

long double tanl(long double x);
```

Link with -lm.

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

```
tanf(), tanl():

_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

|| /* Since glibc 2.19: */ _DEFAULT_SOURCE

|| /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE
```

### DESCRIPTION

These functions return the tangent of x, where x is given in radians.

### RETURN VALUE

On success, these functions return the tangent of x.

If x is a NaN, a NaN is returned.

If x is positive infinity or negative infinity, a domain error occurs, and a NaN is returned.

If the correct result would overflow, a range error occurs, and the functions return

HUGE\_VAL, HUGE\_VALF, or HUGE\_VALL, respectively, with the mathematically correct sign.

## 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

errno is set to EDOM (but see BUGS). An invalid floating-point exception (FE\_INFINITE) is raised.

Range error: result overflow

An overflow floating-point exception (FE\_OVERFLOW) is raised.

## ATTRIBUTES

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

?Interface      ? Attribute      ? Value    ?

?tan(), tanf(), tanl() ? Thread safety ? MT-Safe ?

## CONFORMING TO

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

The variant returning double also conforms to SVr4, 4.3BSD, C89.

BUGS

Before version 2.10, the glibc implementation did not set `errno` to `EDOM` when a domain error occurred.

## SEE ALSO

acos(3), asin(3), atan(3), atan2(3), cos(3), ctan(3), sin(3)

## COLOPHON

This page is part of release 5.10 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/>.

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