



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

**C:\>man atan.3**

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

### NAME

atan, atanf, atanl - arc tangent function

### SYNOPSIS

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

```
double atan(double x);
```

```
float atanf(float x);
```

```
long double atanl( long double x);
```

Link with -lm.

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

atanf(), atanl():

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

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

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

### DESCRIPTION

These functions calculate the principal value of the arc tangent of  $x$ ; that is the value whose tangent is  $x$ .

### RETURN VALUE

On success, these functions return the principal value of the arc tangent of  $x$  in radians; the return value is in the range  $[-\pi/2, \pi/2]$ .

If  $x$  is a NaN, a NaN is returned.

If  $x$  is  $+0$  ( $-0$ ),  $+0$  ( $-0$ ) is returned.

If x is positive infinity (negative infinity), +pi/2 (-pi/2) is returned.

## ERRORS

No errors occur.

## ATTRIBUTES

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

??

?Interface            ? Attribute   ? Value   ?

??

?atan(), atanf(), atanl() ? Thread safety ? MT-Safe ?

??

## CONFORMING TO

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

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

## SEE ALSO

acos(3), asin(3), atan2(3), carg(3), catan(3), cos(3), sin(3), tan(3)

## COLOPHON

This page is part of release 5.05 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/>.