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**():

_BSD_SOURCE || _SVID_SOURCE || _XOPEN_SOURCE >= 600 || _ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L;

or cc -std=c99

DESCRIPTION

The **atan**() function calculates 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.

CONFORMING TO

C99, POSIX.1-2001. 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 3.54 of the Linux man-pages project. A description of the project, and information about reporting bugs, can be found at http://www.kernel.org/doc/man-pages/.

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