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

**\$ man acosf.3**

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

NAME

acos, acosf, acosl - arc cosine function

SYNOPSIS

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

```
double acos(double x);
```

```
float acosf(float x);
```

```
long double acosl(long double x);
```

Link with -lm.

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

acosf(), acosl():

```
_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 arc cosine of  $x$ ; that is the value whose cosine is  $x$ .

RETURN VALUE

On success, these functions return the arc cosine of  $x$  in radians; the return value is in the range  $[0, \pi]$ .

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

If  $x$  is  $+1$ ,  $+0$  is returned.

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

If x is outside the range [-1, 1], a domain error occurs, and a NaN is returned.

## 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 outside the range [-1, 1]

`errno` is set to `EDOM`. An invalid floating-point exception (`FE_INVALID`) is raised.

## ATTRIBUTES

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

??

?Interface            ? Attribute   ? Value   ?

??

?acos(), acosf(), acosl() ? 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

`asin(3)`, `atan(3)`, `atan2(3)`, `cacos(3)`, `cos(3)`, `sin(3)`, `tan(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/>.