



Rocky Enterprise Linux 9.2 Manual Pages on command 'coshl.3'

C:\>man coshl.3

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

NAME

cosh, coshf, coshl - hyperbolic cosine function

SYNOPSIS

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

```
double cosh(double x);
```

```
float coshf(float x);
```

```
long double coshl(long double x);
```

Link with -lm.

Feature Test Macro Requirements for glibc (see feature_test_macros(7)):

coshf(), coshl():

```
_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 hyperbolic cosine of x, which is defined mathematically

as:

$$\cosh(x) = (\exp(x) + \exp(-x)) / 2$$

RETURN VALUE

On success, these functions return the hyperbolic cosine of x.

If x is a NaN, a NaN is returned.

If x is +0 or -0, 1 is returned.

