## NAME

cexp, cexpf, cexpl − complex exponential function

## SYNOPSIS

**#include <complex.h>**

**double complex cexp(double complex** *z***);**
**float complex cexpf(float complex** *z***);**
**long double complex cexpl(long double complex** *z***);**

Link with *−lm*.

## DESCRIPTION

These functions calculate e (2.71828..., the base of natural logarithms) raised to the power of *z*.

One has:

cexp(I * z) = ccos(z) + I * csin(z)

## VERSIONS

These functions first appeared in glibc in version 2.1.

## ATTRIBUTES

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

| Interface | Attribute | Value |
|---|---|---|
| **cexp**(), **cexpf**(), **cexpl**() | Thread safety | MT-Safe |

## CONFORMING TO

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

## SEE ALSO

**cabs**(3), **cexp2**(3), **clog**(3), **cpow**(3), **complex**(7)

## COLOPHON

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