

NAME

cexp, cexpf, cexpl – complex exponential function

LIBRARY

Math library (*libm*, *-lm*)

SYNOPSIS

```
#include <complex.h>
```

```
double complex cexp(double complex z);
```

```
float complex cexpf(float complex z);
```

```
long double complex cexpl(long double complex z);
```

DESCRIPTION

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

One has:

$$\text{cexp}(I * z) = \text{ccos}(z) + I * \text{csin}(z)$$

ATTRIBUTES

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

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

STANDARDS

C11, POSIX.1-2008.

HISTORY

glibc 2.1. C99, POSIX.1-2001.

SEE ALSO

[cabs\(3\)](#), [cexp2\(3\)](#), [clog\(3\)](#), [cpow\(3\)](#), [complex\(7\)](#)