

**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**

The function calculates  $e$  (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.

**CONFORMING TO**

C99.

**SEE ALSO**

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

**COLOPHON**

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