

NAME

`exp2`, `exp2f`, `exp2l` – base-2 exponential function

SYNOPSIS

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

```
double exp2(double x);
float exp2f(float x);
long double exp2l(long double x);
```

Link with `-lm`.

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

```
exp2(), exp2f(), exp2l():
    _ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L
```

DESCRIPTION

These functions return the value of 2 raised to the power of x .

RETURN VALUE

On success, these functions return the base-2 exponential value of x .

For various special cases, including the handling of infinity and NaN, as well as overflows and underflows, see **exp(3)**.

ERRORS

See **math_error(7)** for information on how to determine whether an error has occurred when calling these functions.

For a discussion of the errors that can occur for these functions, see **exp(3)**.

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
exp2() , exp2f() , exp2l()	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

cbrt(3), **cexp2(3)**, **exp(3)**, **exp10(3)**, **sqrt(3)**

COLOPHON

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