

NAME

exp2, exp2f, exp2l – base-2 exponential function

LIBRARY

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

SYNOPSIS

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

```
double exp2(double x);
```

```
float exp2f(float x);
```

```
long double exp2l(long double x);
```

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 were added in glibc 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

STANDARDS

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

The variant returning *double* also conforms to SVr4, 4.3BSD.

SEE ALSO

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