

**NAME**

`cbrt`, `cbtrf`, `cbtrl` - cube root function

**SYNOPSIS**

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

```
double cbrt(double x);
```

```
float cbtrf(float x);
```

```
long double cbtrl(long double x);
```

Link with `-lm`.

Feature Test Macro Requirements for glibc (see [feature\\_test\\_macros\(7\)](#)):

**cbrt()**:

```
_BSD_SOURCE || _SVID_SOURCE || _XOPEN_SOURCE >= 500 ||  
_XOPEN_SOURCE && _XOPEN_SOURCE_EXTENDED || _ISOC99_SOURCE ||  
_POSIX_C_SOURCE >= 200112L;  
or cc -std=c99
```

**cbtrf()**, **cbtrl()**:

```
_BSD_SOURCE || _SVID_SOURCE || _XOPEN_SOURCE >= 600 || _ISOC99_SOURCE ||  
_POSIX_C_SOURCE >= 200112L;  
or cc -std=c99
```

**DESCRIPTION**

The `cbrt()` function returns the (real) cube root of  $x$ . This function cannot fail; every representable real value has a representable real cube root.

**RETURN VALUE**

These functions return the cube root of  $x$ .

If  $x$  is  $+0$ ,  $-0$ , positive infinity, negative infinity, or NaN,  $x$  is returned.

**ERRORS**

No errors occur.

**ATTRIBUTES**

**Multithreading** (see [pthreads\(7\)](#))

The `cbrt()`, `cbtrf()`, and `cbtrl()` functions are thread-safe.

**CONFORMING TO**

C99, POSIX.1-2001.

**SEE ALSO**

[pow\(3\)](#), [sqrt\(3\)](#)

**COLOPHON**

This page is part of release 3.74 of the Linux *man-pages* project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at <http://www.kernel.org/doc/man-pages/>.