

**NAME**

cbirt, cbrtf, cbrtl – cube root function

**SYNOPSIS**

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

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

```
float cbrtf(float x);
```

```
long double cbrtl(long double x);
```

Link with `-lm`.

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

**cbrt()**:

```
_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L || _XOPEN_SOURCE >= 500 /* Since
glibc 2.19: */ _DEFAULT_SOURCE /* Glibc versions <= 2.19: */ _BSD_SOURCE ||
_SVID_SOURCE
```

**cbrtf(), cbrtl()**:

```
_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L /* Since glibc 2.19: */ _DE-
FAULT_SOURCE /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE
```

**DESCRIPTION**

These functions return 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**

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

| Interface                                       | Attribute     | Value   |
|---|---------------|---------|
| <b>cbrt()</b> , <b>cbrtf()</b> , <b>cbrtl()</b> | Thread safety | MT-Safe |

**CONFORMING TO**

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

**SEE ALSO**

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

**COLOPHON**

This page is part of release 4.16 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 <https://www.kernel.org/doc/man-pages/>.