Rocky Enterprise Linux 9.2 Manual Pages on command 'exp.3'

$ man exp.3

EXP(3) Linux Programmer's Manual EXP(3)

NAME

exp, expf, expl - base-e exponential function

SYNOPSIS

#include <math.h>

double exp(double x);

float expf(float x);

long double expl(long double x);

Link with -lm.

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

expf(), expl():

_ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L

|| /* Since glibc 2.19: */ _DEFAULT_SOURCE

|| /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE

DESCRIPTION

These functions return the value of e (the base of natural logarithms)

raised to the power of x.

RETURN VALUE

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

If x is a NaN, a NaN is returned.

If x is positive infinity, positive infinity is returned.

If x is negative infinity, +0 is returned.

If the result underflows, a range error occurs, and zero is returned.

If the result overflows, a range error occurs, and the functions return +HUGE_VAL, +HUGE_VALF, or +HUGE_VALL, respectively.

ERRORS

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

The following errors can occur:

Range error, overflow

errno is set to ERANGE. An overflow floating-point exception (FE_OVERFLOW) is raised.

Range error, underflow

errno is set to ERANGE. An underflow floating-point exception (FE_UNDERFLOW) is raised.

ATTRIBUTES

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

Interface	Attribute	Value
exp(), expf(), expl()	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), cexp(3), exp10(3), exp2(3), expm1(3), sqrt(3)

COLOPHON

This page is part of release 5.10 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/.

2017-09-15 EXP(3)