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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'expt.3' command

\$ man expf.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 -Im.

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 `at?` `tributes(7)`.

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?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

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