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

$ man gammaf.3

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

NAME

  gamma, gammaf, gammal - (logarithm of the) gamma function

SYNOPSIS

  #include <math.h>

  double gamma(double x);

  float gammaf(float x);

  long double gammal(long double x);

  Link with -lm.

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

  gamma():

    _XOPEN_SOURCE

      || /* Since glibc 2.19: */ _DEFAULT_SOURCE

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

  gammaf(), gammal():

    _XOPEN_SOURCE >= 600 || (_XOPEN_SOURCE && _ISOC99_SOURCE)

      || /* Since glibc 2.19: */ _DEFAULT_SOURCE

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

DESCRIPTION

These functions are deprecated: instead, use either the tgamma(3) or
the lgamma(3) functions, as appropriate.

For the definition of the Gamma function, see tgamma(3).

*BSD version

The libm in 4.4BSD and some versions of FreeBSD had a gamma() function
that computes the Gamma function, as one would expect.

glibc version

Glibc has a gamma() function that is equivalent to lgamma(3) and com?
putes the natural logarithm of the Gamma function.

RETURN VALUE

See lgamma(3).

ERRORS

See lgamma(3).

ATTRIBUTES

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

??
?Interface   ? Attribute   ? Value   ?
??
?gamma(), gammaf(), gammal() ? Thread safety ? MT-Unsafe race:signgam ?
??

CONFORMING TO

Because of historical variations in behavior across systems, this func?
tion is not specified in any recent standard. It was documented in
SVID 2.

NOTES

History

4.2BSD had a gamma() that computed $\ln(|Gamma(|x|)|)$, leaving the sign
of Gamma(|x|) in the external integer signgam. In 4.3BSD the name was
changed to lgamma(3), and the man page promises

"At some time in the future the name gamma will be rehabilitated
and used for the Gamma function"

This did indeed happen in 4.4BSD, where gamma() computes the Gamma

function (with no effect on signgam). However, this came too late, and

we now have tgamma(3), the "true gamma" function.

SEE ALSO

lgamma(3), signgam(3), tgamma(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/.

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