



Linux Ubuntu 26.04 Manual Pages on command 'fmal.3'

\$ man fmal.3

fma(3) Library Functions Manual fma(3)

NAME

fma, fmaf, fmal - floating-point multiply and add

LIBRARY

Math library (libm, -lm)

SYNOPSIS

```
#include <math.h>

double fma(double x, double y, double z);

float fmaf(float x, float y, float z);

long double fmal(long double x, long double y, long double z);
```

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

```
fma(), fmaf(), fmal():

    _ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L
```

DESCRIPTION

These functions compute $x * y + z$. The result is rounded as one ternary operation according to the current rounding mode (see fenv(3)).

RETURN VALUE

These functions return the value of $x * y + z$, rounded as one ternary operation.

If x or y is a NaN, a NaN is returned.

If x times y is an exact infinity, and z is an infinity with the opposite sign, a domain error occurs, and a NaN is returned.

If one of x or y is an infinity, the other is 0, and z is not a NaN, a domain error occurs, and a NaN is returned.

