Use Stack Overflow for Teams at work to find answers in a private and secure environment. Get your first 10 users free. **Sign up.** 

# printf and long double

Asked 8 years, 10 months ago Active 1 month ago Viewed 225k times



I am using the latest gcc with Netbeans on Windows. Why doesn't long double work? Is the printf specifier %lf wrong?

52

Code:



10

```
i.
```

```
#include <stdio.h>
int main(void)
{
    float aboat = 32000.0;
    double abet = 5.32e-5;
    long double dip = 5.32e-5;
    printf("%f can be written %e\n", aboat, aboat);
    printf("%f can be written %e\n", abet, abet);
    printf("%lf can be written %le\n", dip, dip);
    return 0;
}
```

#### Output:



gcc

printf

long-double





bytes.com/topic/c/answers/... - gameboy Nov 3 '10 at 20:09

obviously there is a problem with MinGW and long double – gameboy Nov 3 '10 at 20:11 possible duplicate of can't print correctly a long double in C – phucly Sep 21 '15 at 7:48

### 8 Answers

By using our site, you acknowledge that you have read and understand our Cookie Policy, Privacy Policy, and our Terms of Service.

merany and recommic formation what what who herany had no capport for coence foring accusion

14

(microsoft C compiler use 64 bits long double for various reasons).







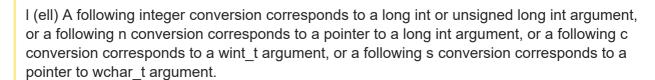
**44k** 7 75 127

bytes.com/topic/c/answers/... - gameboy Nov 3 '10 at 20:52



## From the printf manpage:

42



and

L A following a, A, e, E, f, F, g, or G conversion corresponds to a long double argument. (C99 allows %LF, but SUSv2 does not.)

So, you want %Le , not %le

Edit: Some further investigation seems to indicate that Mingw uses the MSVC/win32 runtime(for stuff like printf) - which maps long double to double. So mixing a compiler (like gcc) that provides a native long double with a runtime that does not seems to .. be a mess.

edited Nov 3 '10 at 17:24

answered Nov 3 '10 at 16:25



nos

182k 45 439 335

I found linux.die.net/man/3/printf, but %Lf or %Le also not working - gameboy Nov 3 '10 at 16:41

Which compiler are you using with Netbeans on Windows? - nos Nov 3 '10 at 16:56

latest gcc and MinGW – gameboy Nov 3 '10 at 17:13



Yes -- for long double, you need to use %Lf (i.e., upper-case 'L').

37



answered Nov 3 '10 at 16:23 Jerry Coffin



**399k** 58 499 941



If you are using MinGW, the problem is that by default, MinGW uses the I/O resp. formatting functions from the Microsoft C runtime, which doesn't support 80 bit floating point numbers ( long

By using our site, you acknowledge that you have read and understand our Cookie Policy, Privacy Policy, and our Terms of Service.

+50

Depending on the nature of your project, you might also want to globally #define printf

\_\_mingw\_printf or use -D\_\_USE\_MINGW\_ANSI\_STDIO (which enables the MinGW versions of all the printf -family functions).

edited Apr 23 '14 at 14:15

answered Feb 20 '13 at 19:16





Was having this issue testing long doubles, and alas, I came across a fix! You have to compile your project with -D\_\_USE\_MINGW\_ANSI\_STDIO:





Jason Huntley@centurian /home/developer/dependencies/Python-2.7.3/test \$ gcc main.c

Jason Huntley@centurian /home/developer/dependencies/Python-2.7.3/test \$ a.exe c=0.000000

Jason Huntley@centurian /home/developer/dependencies/Python-2.7.3/test \$ gcc main.c - D USE MINGW ANSI STDIO

Jason Huntley@centurian /home/developer/dependencies/Python-2.7.3/test \$ a.exe c=42.000000

#### Code:

```
Jason Huntley@centurian /home/developer/dependencies/Python-2.7.3/test
$ cat main.c
#include <stdio.h>
int main(int argc, char **argv)
{
   long double c=42;
   c/3;
   printf("c=%Lf\n",c);
   return 0;
}
```

answered Mar 15 '13 at 20:19



**Jason Huntley 3,109** 2 14

24



In C99 the length modifier for long double seems to be L and not 1. man fprintf (or equivalent for windows) should tell you for your particular platform.





edited Nov 3 '10 at 17:13

answered Nov 3 '10 at 16:23



Jens Gustedt

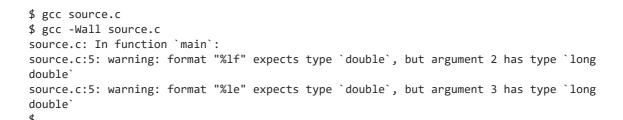
By using our site, you acknowledge that you have read and understand our Cookie Policy, Privacy Policy, and our Terms of Service.



As has been said in other answers, the correct conversion specifier is "%Lf".

2

You might want to turn on the format warning by using -wformat (or -wall, which includes - wformat) in the gcc invocation



answered Nov 3 '10 at 16:34





0

printf and scanf function in C/C++ uses Microsoft C library and this library has no support for 10 byte long double. So when you are using printf and scanf function in your C/C++ code to print a long double as output and to take some input as a long double, it will always give you wrong result.



If you want to use long double then you have to use "\_\_mingw\_printf" and "\_\_mingw\_scanf" function instead of printf and scanf. It has support for 10 byte long double.

Or you can define two macro like this : " #define printf \_\_mingw\_printf " and " #define scanf mingw scanf "

Use standard format for long double : %Lf

answered Jul 27 at 7:52



By using our site, you acknowledge that you have read and understand our Cookie Policy, Privacy Policy, and our Terms of Service.