

**NAME**

nan, nanf, nanl - return 'Not a Number'

**SYNOPSIS**

```
#include <math.h>
```

```
double nan(const char *tagp);  
float nanf(const char *tagp);  
long double nanl(const char *tagp);
```

Link with *-lm*.

Feature Test Macro Requirements for glibc (see [feature\\_test\\_macros\(7\)](#)):

```
nan(), nanf(), nanl():  
_XOPEN_SOURCE >= 600 || _ISOC99_SOURCE || _POSIX_C_SOURCE >= 200112L;  
or cc -std=c99
```

**DESCRIPTION**

These functions return a representation (determined by *tagp*) of a quiet NaN. If the implementation does not support quiet NaNs, these functions return zero.

The call *nan(char-sequence)* is equivalent to:

```
strtod(NAN(char-sequence), NULL);
```

Similarly, calls to **nanf()** and **nanl()** are equivalent to analogous calls to [strtof\(3\)](#) and [strtold\(3\)](#).

The argument *tagp* is used in an unspecified manner. On IEEE 754 systems, there are many representations of NaN, and *tagp* selects one. On other systems it may do nothing.

**VERSIONS**

These functions first appeared in glibc in version 2.1.

**CONFORMING TO**

C99, POSIX.1-2001. See also IEC 559 and the appendix with recommended functions in IEEE 754/IEEE 854.

**SEE ALSO**

[isnan\(3\)](#), [strtod\(3\)](#), [math\\_error\(7\)](#)

**COLOPHON**

This page is part of release 3.74 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 <http://www.kernel.org/doc/man-pages/>.