

C LIBRARY FUNCTION - TANH

http://www.tutorialspoint.com/c_standard_library/c_function_tanh.htm

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Description

The C library function **double tanh***double*x returns the hyperbolic tangent of **x**.

Declaration

Following is the declaration for tanh function.

```
double tanh(double x)
```

Parameters

- **x** – This is the floating point value.

Return Value

This function returns hyperbolic tangent of x.

Example

The following example shows the usage of tanh function.

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

int main ()
{
    double x, ret;
    x = 0.5;

    ret = tanh(x);
    printf("The hyperbolic tangent of %lf is %lf degrees", x, ret);

    return(0);
}
```

Let us compile and run the above program that will produce the following result –

```
The hyperbolic tangent of 0.500000 is 0.462117 degrees
Loading [MathJax]/jax/output/HTML-CSS/fonts/TeX/fontdata.js
```