

JAVA.LANG.MATH.COSH METHOD

http://www.tutorialspoint.com/java/lang/math_cosh.htm

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Description

The **java.lang.Math.cosh** method returns the hyperbolic cosine of a double value. Special cases:

- If the argument is NaN, then the result is NaN.
- If the argument is infinite, then the result is positive infinity.
- If the argument is zero, then the result is 1.0.

The computed result must be within 2.5 ulps of the exact result.

Declaration

Following is the declaration for **java.lang.Math.cosh** method

```
public static double cosh(double x)
```

Parameters

- **x** -- The number whose hyperbolic cosine is to be returned.

Return Value

This method returns the hyperbolic cosine of x.

Exception

- NA

Example

The following example shows the usage of lang.Math.cosh method.

```
package com.tutorialspoint;

import java.lang.*;

public class MathDemo {

    public static void main(String[] args) {

        // get two double numbers
        double x = 45.0;
        double y = 180.0;

        // convert them to radians
        x = Math.toRadians(x);
        y = Math.toRadians(y);

        // print their hyperbolic cosine
        System.out.println("Math.cosh(" + x + ")=" + Math.cosh(x));
        System.out.println("Math.cosh(" + y + ")=" + Math.cosh(y));
    }
}
```

Let us compile and run the above program, this will produce the following result:

```
Math.cosh(0.7853981633974483)=1.3246090892520057
Math.cosh(3.141592653589793)=11.591953275521519
```

