

JAVA.LANG.STRICTMATH.COSH METHOD

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

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Description

The **java.lang.StrictMath.cosh** method returns the hyperbolic cosine of a double value. The hyperbolic cosine of x is defined to be $(e^x + e^{-x})/2$ where **e** is **Euler's number**. It includes these 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.

Declaration

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

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

Parameters

- **x** -- This is 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 **java.lang.StrictMath.cosh** method.

```
package com.tutorialspoint;

import java.lang.*;

public class StrictMathDemo {

    public static void main(String[] args) {

        double d1 = (60*(Math.PI))/180 , d2 = 0.0, d3 = (1.0/0.0) ;

        // returns the hyperbolic cosine of specified angle in radian
        double coshValue = StrictMath.cosh(d1);
        System.out.println("Hyperbolic cosine of d1 = " + coshValue);

        coshValue = StrictMath.cosh(d2);
        System.out.println("Hyperbolic cosine of d2 = " + coshValue);

        coshValue = StrictMath.cosh(d3);
        System.out.println("Hyperbolic cosine of d3 = " + coshValue);
    }
}
```

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

```
Hyperbolic cosine of d1 = 1.600286857702386
Hyperbolic cosine of d2 = 1.0
```

Hynerbolic cosine of d3 = Infinity

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