

JAVA.LANG.STRICTMATH.LOG1P METHOD

http://www.tutorialspoint.com/java/lang/strictmath_log1p.htm

Copyright © tutorialspoint.com

Description

The **java.lang.StrictMath.log1p** method returns the natural logarithm of the sum of the argument and 1. For small values x , the result of **log1p** x is much closer to the true result of $\ln(1 + x)$ than the floating-point evaluation of **log1.0** + x . It includes some cases:

- If the argument is NaN or less than -1, then the result is NaN.
- If the argument is positive infinity, then the result is positive infinity.
- If the argument is negative one, then the result is negative infinity.
- If the argument is zero, then the result is a zero with the same sign as the argument.

Declaration

Following is the declaration for **java.lang.StrictMath.log1p** method

```
public static double log1p(double x)
```

Parameters

- **x** -- This is the value.

Return Value

This method returns the value $\ln x + 1$, the natural log of $x + 1$.

Exception

- **NA**

Example

The following example shows the usage of **java.lang.StrictMath.log1p** method.

```
package com.tutorialspoint;

import java.lang.*;

public class StrictMathDemo {

    public static void main(String[] args) {

        double d1 = 90 , d2 = 0.0 , d3 = (1.0/0.0);

        // returns the natural logarithm of the sum of the argument and 1
        double log1pValue = StrictMath.log1p(d1);
        System.out.println("Logarithm value of double (d1 + 1) with base 10 : " + log1pValue);

        log1pValue = StrictMath.log1p(d2);
        System.out.println("Logarithm value of double (d2 + 1) with base 10 : " + log1pValue);

        log1pValue = StrictMath.log1p(d3);
        System.out.println("Logarithm value of double (d3 + 1) with base 10 : " + log1pValue);
    }
}
```

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

```
Logarithm value of double (d1+1) with base 10 : 4.51085950651685  
Logarithm value of double (d2+1) with base 10 : 0.0  
Logarithm value of double (d3+1) with base 10 : Infinity
```

Loading [MathJax]/jax/output/HTML-CSS/jax.js