

JAVA.LANG.STRICTMATH.EXPM1 METHOD

http://www.tutorialspoint.com/java/lang/strictmath_expm1.htm

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Description

The **java.lang.StrictMath.expm1** method returns **$e^x - 1$** . For values of x near 0, the exact sum of **$\text{expm1}x + 1$** is much closer to the true result of **e^x** than **$\text{exp}x$** . It includes some cases:

- If the argument is NaN, the result is NaN.
- If the argument is positive infinity, then the result is positive infinity.
- If the argument is negative infinity, then the result is -1.0.
- 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.expm1** method

```
public static double expm1(double x)
```

Parameters

- **x** -- This is the exponent to raise e to in the computation of $e^x - 1$.

Return Value

This method returns the value $e^x - 1$.

Exception

- **NA**

Example

The following example shows the usage of **java.lang.StrictMath.expm1** method.

```
package com.tutorialspoint;

import java.lang.*;

public class StrictMathDemo {

    public static void main(String[] args) {

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

        /*  returns (Euler's number e raised to the power of a double value)-1
        i.e  $e^x - 1$  */

        double eulerValue = StrictMath.expm1(d1);
        System.out.println("Value = " + eulerValue);
        eulerValue = StrictMath.expm1(d2);
        System.out.println("Value = " + eulerValue);
        eulerValue = StrictMath.expm1(d3);
        System.out.println("Value = " + eulerValue);
    }
}
```

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

```
Value = 0.0
```

Value = -1.0
Value = Infinity

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