

JAVA.MATH.BIGINTEGER.NEXTPROBABLEPRIME METHOD

http://www.tutorialspoint.com/java/math/biginteger_nextprobableprime.htm

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Description

The **java.math.BigInteger.nextProbablePrime** returns the first integer greater than this BigInteger that is probably prime. The probability that the number returned by this method is composite does not exceed 2^{-100} .

This method will never skip over a prime when searching: if it returns p , there is no prime q such that $this < q < p$.

Declaration

Following is the declaration for **java.math.BigInteger.nextProbablePrime** method

```
public BigInteger nextProbablePrime()
```

Parameters

- NA

Return Value

This method returns the first integer greater than this BigInteger that is probably prime.

Exception

- **ArithmeticException** - if this < 0

Example

The following example shows the usage of `math.BigInteger.nextProbablePrime` method

```
package com.tutorialspoint;

import java.math.*;

public class BigIntegerDemo {

    public static void main(String[] args) {

        // create 2 BigInteger objects
        BigInteger bi1, bi2;

        bi1 = new BigInteger("20");

        // assign nextProbablePrime value of bi1 to bi2
        bi2 = bi1.nextProbablePrime();

        String str = "Next probable prime after " + bi1 + " is " + bi2;

        // print bi2 value
        System.out.println( str );
    }
}
```

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

```
Next probable prime after 20 is 23
```

```
Loading [MathJax]/jax/output/HTML-CSS/fonts/TeX/fontdata.js
```