Java Math class

Java Math.abs() method

The **java.lang.Math.abs()** method returns the absolute (Positive) value of a int value.

```
public class AbsExample1
{
   public static void main(String args[])
   {
      int x = 78;
      int y = -48;
      //print the absolute value of int type
      System.out.println(Math.abs(x));
      System.out.println(Math.abs(y));
}}
```

Output:

```
78
48
```

```
public class AbsExample3
{
   public static void main(String args[])
   {
      float x = -73.02f;
      float y = -428.0f;
      //print the absolute value of float type
      System.out.println(Math.abs(x));
      System.out.println(Math.abs(y));
   }
}
```

Output:

```
73.02
428.0
```

Java Math.max() method

The Java.lang.math.max() is an inbuilt method in Java which is used to return Maximum or Largest value from the given two arguments.

```
public class MaxExample1
{
   public static void main(String args[])
   {
      int x = 20;
      int y = 50;
      //print the maximum of two numbers
      System.out.println(Math.max(x, y));
   }
}
```

Output:

```
50
```

Java Math.min() method

The Java.lang.math.min() is an inbuilt method in Java which is used to return Minimum or Lowest value from the given two arguments.

```
public class MinExample1
{
   public static void main(String args[])
   {
      int x = 20;
      int y = 50;
      //print the minimum of two numbers
      System.out.println(Math.min(x, y));
   }
}
```

Output:

```
20
```

Java Math.round() method

The **java.lang.Math.round()** is used round of the decimal numbers to the nearest value. This method is used to return the closest long to the argument,

```
public class RoundExample1
{
public static void main(String[] args)
{
double x = 79.52;
// find the closest int for the double
System.out.println(Math.round(x));
}
}
```

Output:

```
80
```

Java Math.sqrt() method

The **java.lang.Math.sqrt()** is used to return the square root of a number.

```
public class SqrtExample1
{
   public static void main(String[] args)
   {
      double x = 81.0;
      // Input positive value, Output square root of x
      System.out.println(Math.sqrt(x));
   }
}
```

Output:

```
9.0
```

Java Math.pow() method

The **java.lang.Math.pow()** is used to return the value of first argument raised to the power of the second argument.

```
public class PowExample1
{
   public static void main(String[] args)
   {
      double x = 5;
      double y = 4;
      //returns 5 power of 4 i.e. 5*5*5*5
      System.out.println(Math.pow(x, y));
   }
}
```

Output:

```
625.0
```

Java Math.addExact() method

The **java.lang.Math.addExact()** returns the sum of its arguments.

```
public class AddExactExample1
{
   public static void main(String[] args)
   {
      int a = 469;
      int b = 737;
      // Input two positive value, Output addition of a and b
      System.out.println(Math.addExact(a, b));
   }
}
```

Output:

```
1206
```

Java Math.subtractExact() method

The **java.lang.Math.subtractExact()** returns the difference of the arguments.

```
public class SubtractExactExample1
{
   public static void main(String[] args)
   {
      long a = 732;
      long b = 190;
      // Input two values, Output subtraction of a and b
      System.out.println(Math.subtractExact(a, b));
   }
}
```

Output:

```
542
```

Java Math.multiplyExact() method

The **java.lang.Math.mutliplyExact()** returns the product of the arguments.

```
public class MultiplyExactExample1
{
   public static void main(String[] args)
   {
      int a = 739;
      int b = 5;
      // Input two values, Output multiplication of a and b
      System.out.println(Math.multiplyExact(a, b));
   }
}
```

Output:

```
3695
```

Java Math.log() method

The **java.lang.Math.log()** is used to find out the Logarithmic Value of any number.

```
public class LogExample1
{
   public static void main(String[] args)
   {
      double x = 38.9;
      // Input positive double, output logarithm of x
      System.out.println(Math.log(x));
   }
}
```

Output:

```
3.6609942506244004
```

Java Math.log10() method

The **java.lang.Math.log10()** is used to find out the Logarithmic of a number when the base is 10. This method returns the base 10 logarithm of a double value.

```
public class Log10Example1
{
   public static void main(String[] args)
   {
      double x = 38.9;
      // Input positive double, output logarithm of x
      System.out.println(Math.log10(x));
   }
}
```

Output:

```
1.5899496013257077
```

Java Math.sin() method

The **java.lang.Math.sin()** is used to return the trigonometric sine of an angle.

```
public class SinExample1
{
   public static void main(String[] args)
   {
      double a = 60;
      // converting values to radians
      double b = Math.toRadians(a);
      System.out.println(Math.sin(b));
   }
}
```

Output:

```
0.8660254037844386
```

Trigonometric Math Methods

Method	Description
Math.sin()	It is used to return the trigonometric Sine value of a Given double value.
Math.cos()	It is used to return the trigonometric Cosine value of a Given double value.
Math.tan()	It is used to return the trigonometric Tangent value of a Given double value.
Math.asin()	It is used to return the trigonometric Arc Sine value of a Given double value
Math.acos()	It is used to return the trigonometric Arc Cosine value of a Given double value.
Math.atan()	It is used to return the trigonometric Arc Tangent value of a Given double value.