Math Class in Java

'Math' Class in Java:

The Java Math class has many methods that allows you to perform mathematical tasks on numbers.

Here, **java.lang.Math** class provides a set of inbuilt methods for performing common mathematical operations. Here are some of the commonly used methods available in the **Math** class:

1. **Math.abs(x):** Returns the absolute value of a number x.
2. **Math.max(a, b):** Returns the greater of two numbers a and b.
3. **Math.min(a, b):** Returns the smaller of two numbers a and b.
4. **Math.sqrt(x):** Returns the square root of a number x.
5. **Math.pow(a, b):** Returns a raised to the power of b.
6. **Math.round(x):** Returns the closest long or int value to a floating-point number x.
7. **Math.ceil(x):** Returns the smallest integer greater than or equal to x.
8. **Math.floor(x):** Returns the largest integer less than or equal to x.

Example Programs:

1. Math.pow(a, b): Returns a raised to the power of b

```
import java.lang.Math;
import java.util.Scanner;
public class MathPower {

    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
```

```
        System.out.println("Enter the number to find the
power");
        int n=sc.nextInt();
        System.out.println("Enter the exponent to find the
power");
        int m=sc.nextInt();
        System.out.println("The Power of "+n+" is
"+Math.pow(n, m));
    }

}
```

Output:

```
Enter the number to find the power
2
Enter the exponent to find the power
5
The Power of 2 is 32.0
```

2. Math.sqrt(x): Returns the square root of a number x.

```
import java.lang.Math;
import java.util.Scanner;
public class MathSqrt {

    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter the number to find the
square root");
        int n=sc.nextInt();
        System.out.println("The Square root of "+n+" is
"+Math.sqrt(n));
    }

}
```

Output:

```
Enter the number to find the square root
225
The Square root of 225 is 15.0
```