Some Helpful Math Functions:

Here is a listing of some helpful Math functions that are available in Java. For a full list of math functions `google` "Java Math Class Oracle Docs".

The Function	A Description	An Example
`Math.pow(x,y)`	Finds the value of x^y.	`Math.pow(3,4);` `// returns 81.0`
`Math.sqrt(x)`	Finds the value of $\sqrt{x}$.	`Math.sqrt(8);` `// returns 2.828...`
`Math.abs(x)`	Finds the value of $\|x\|$.	`Math.abs(-7.2);` `// returns 7.2`
`Math.round(x)`	Rounds the number to the nearest integer.	`Math.round(3.567);` `// returns = 4`
`Math.floor(x)`	Finds $\lfloor x \rfloor$, the largest integer that is less than or equal to the argument.	`Math.floor(7.8);` `// returns 7`
`Math.ceil(x)`	Finds $\lceil x \rceil$, the smallest integer that is greater than or equal to the argument.	`Math.ceil(2.3)` `// returns 3`
`Math.sin(x)`	Finds the sin of x, where x is and radians.	`Math.sin(Math.Pi/2)` `// returns 1.0`
`Math.cos(x)`	Finds the cos of x, where x is and radians.	`Math.cos(Math.Pi)` `// returns -1.0`
`Math.tan(x)`	Finds the tan of x, where x is and radians.	`Math.tan(Math.Pi/4)` `// returns` ≈ 1.0
`Math.toRadians(ang)`	Converts `ang` from degrees to radians.	`Math.sin(` `Math.toRadians(180))` `// returns` ≈ 0.0
`Math.asin(x)`	Finds the arcsin of a ratio x in radians.	`Math.asin(1.0)` `// returns 1.57...`
`Math.acos(x)`	Finds the arccos of a ratio x in radians.	`Math.acos(1.0/`$\sqrt{2}$`)` `// returns 1.57...`
`Math.atan(x)`	Finds the arctan of a ratio x in radians.	`Math.toDegrees(` `Math.atan(1))` `// returns` 45^0

Here is a full example:

```
1  /**
2   * This shows some examples from the Math class.
3   *
4   * Author: Mr. Dagler
5   */
6
7  import java.util.*;
8
```

```
 9 class MathExample {
10   public static void main(String[] args) {
11     System.out.println(3+"^"+4+" = "+Math.pow(3,4));
12     System.out.println(4+"^("+3+"/"+2+ ") = "+Math.pow(4,3.0/2.0));
13     System.out.println("Sqrt["+8+"] = "+Math.sqrt(8));
14     System.out.println("|"+-7.2+"| = "+Math.abs(7.2));
15     System.out.println("Round["+3. +"] = "+ Math.round(3.6));
16     System.out.println("Floor["+7.8+"] = "+Math.floor(7.8));
17     System.out.println("Ceiling["+2.3+"] = "+Math.ceil(2.3));
18     System.out.println("sin(pi/2) = "+Math.sin(Math.PI/2));
19     System.out.println("cos(pi) = "+Math.cos(Math.PI));
20     System.out.println("tan(pi/4) = "+Math.tan(Math.PI/4));
21     System.out.println("sin(180^0) = "+Math.sin(Math.toRadians(180)));
22     System.out.println("asin(1.0) = "+Math.asin(1.0));
23     System.out.println("acos(1.0/Sqrt[2]) = "+Math.acos(0.70710678));
24     System.out.println("atan(1.0) = "+Math.toDegrees(Math.atan(1)));
25   }
26 }
```