Math

Java Math

- The Math.max(x,y) method can be used to find the highest value of x and y
- The Math.min(x,y) method can be used to find the lowest value of x and y
- The Math.sqrt(x) method returns the square root of x
- The Math.abs(x) method returns the absolute (positive) value of x
- Math.random() returns a random number between 0.0 (inclusive), and 1.0 (exclusive)
- import java.lang.Math;

Python Math

- The min() and max() functions can be used to find the lowest or highest value in an iterable
- The abs() function returns the absolute (positive) value of the specified number:
- The pow(x, y) function returns the value of x to the power of y (x^y)
- Python has also a built-in module called math, which extends the list of mathematical functions. To use it, you must import the math module.
- Import math

C++ Math

- The max(x,y) function can be used to find the highest value of x and y
- And the min(x,y) function can be used to find the lowest value of x and y.
- Other functions, such as sqrt (square root), round (rounds a number) and log (natural logarithm), can be found in the <cmath> header file.
- #include <cmath>

Java:-

```java
// import java.lang.Math;

public class Mathexample {
    Run | Debug
    public static void main(String[] args) {
        System.out.println((int)(Math.random()));
        System.out.println(2*Math.PI);
    }

}
```

Python:-

```
[3]  min(25,2)
     2

[4]  max(25,2)
     25

[6]  import random
     random.randint(1,100)
     73

[11] random.random()
     0.5011019037009437
```

C++:-

```cpp
#include <iostream>
// #include <cmath>
using namespace std;

int main() {
  // cout << sqrt(64) << endl;
  // cout << round(2.6) << "\n";
  // cout << log(2) << "\n";
  cout << min(45,65) << endl;
  return 0;
}
```

Task.....

- Write code to find the minimum and maximum values among three integers entered by the user.
- Find Absolute value using user input.
- Generate a random integer within a given range(0 to 100).
- Calculate the Area and Circumference of a Circle. ($A = \pi r^2$ and $C = 2\pi r$)
- Calculate the Square Root and Cube Root of a Number.
- Calculate the Hypotenuse of a Right Triangle. ($h^2 = p^2 + b^2$)