Evaluate the value of y in the following snippets?

- double y = Math.round (2.5 + Math.random());
-    int x= 3.14;
  int y= (int) Math.abs(x);
- double y = Math.pow(25,0.5)+Math.ceil(4.2);
- double y = Math.round (14.7) + Math.floor (7.9);
- double y = Math.ceil(46.6)
- double y = Math.abs(x) when x= -9.99
- double y = Math.floor(46.6)
- int y = Math.sqrt(Math.max(9,16));
- double y = Math.abs(Math.min(-2.83, -5.83));
- double y = Math.sqrt(Math.floor(16.3));

Programming Questions

- WAP to print the area of equilateral triangle whose side is given by the user.

  Area= $\frac{\sqrt{3}}{4}a^2$

- WAP to print the area of scalene triangle whose sides are given by the user.

  Area= $\sqrt{s(s-a)(s-b)(s-c)}\ where\ s = a + b + c/2.$

- WAP to print the time period of the simple pendulum.

  T = $2\pi\sqrt{l/g}$ where length will be given by the user and take g=9.8.

- WAP to print the value of $a^3 + b^4 + f^2\ where\ value\ of\ a, b\ and\ f\ will\ be\ given\ by\ the\ user.$

- WAP to print the value of diagonal of a rectangle when the length and breadth will be given by the user.

Solutions of the program

WAP to print the area of equilateral triangle whose side is given by the user.

```java
import java.util.Scanner;
public class area_equi
{
    void main()
    {
        Scanner sc = new Scanner(System.in);
        int a = sc.nextInt();
        double area = (Math.sqrt(3)/4)*a*a;
        System.out.print("The area is:" +area);
    }
}
```

WAP to print the area of scalene triangle whose sides are given by the user.

```java
import java.util.Scanner;
public class area_scalene{
    void main() {
        Scanner sc = new Scanner(System.in);
        double a,b,c;
        a= sc.nextDouble();
        b = sc.nextDouble();
        c = sc.nextDouble();
        double area;
        s = (a+b+c)/2;
        area = Math.sqrt(s*(s-a)*(s-b)*(s-c));
        System.out.println("The area is: " +area);
    }
}
```

Solutions of the program

WAP to print the time period of the simple pendulum.

```java
import java.util.Scanner;
public class time_period
{
    void main()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the length of the pendulum");
        int l = sc.nextInt();
        double g=9.8;
        double time_period = 2*3.14*Math.sqrt(l/g);
        System.out.print("The time period  is:" +time_period);
    }
}
```

WAP to print the value of $a^3 + b^4 + f^2$ where value of a,b and f will be given by the user.

```java
import java.util.Scanner;
public class equation{
    void main() {
        Scanner sc = new Scanner(System.in);
        double a,b,f;
        a= sc.nextDouble();
        b = sc.nextDouble();
        f = sc.nextDouble();
        double result;
        result = Math.pow(a,3)+Math.pow(b,4)+Math.pow(f,2);
        System.out.println("The result of the equation is: "
+result);
    }
}
```

Solutions of the program

WAP to print the value of diagonal of a rectangle when the length and breadth will be given by the user.

```java
import java.util.Scanner;
public class diagonal
{
    void main()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the length and breadth of the pendulum");
        int l = sc.nextInt();
        int b = sc.nextInt();
        double diagonal = Math.sqrt(l*l+b*b);
        System.out.print("The diagonal is:" +diagonal);
    }
}
```