Switch statement → Floor-space of the room

Hard 18 minutes

Residents of the country of Malevia often experiment with the plan of their rooms. Rooms can be triangular, rectangular, and round.

Write a program that calculates the floorage of the rooms.

Input data format

The type of the room shape and the relevant parameters.

Output data format

The area of the resulting room.

Note that the value of 3.14 is used instead of the number π in Malevia.

Hint

Input format used by the Malevians:

```
triangle
a
b
c
```

where a, b and c — lengths of the triangle sides.

```
rectangle
a
b
```

where a and b — lengths of the rectangle sides.

```
circle
r
```

where r — circle radius.

Note, the input values (a, b, c, r) are doubles and your answer should be, too.

Report a typo

Sample Input 1:

```
rectangle
4
10
```

Sample Output 1:

```
40.0
```

Sample Input 2:

```
circle
5
```

Sample Output 2:

```
78.5
```

Sample Input 3:

```
triangle
3
4
5
```

Sample Output 3:

```
6.0
```

Write a program

Code Editor IDE

Java

```
import java.util.*;
class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        String shape = scanner.next();
        switch (shape) {
            case "triangle":
                double a = scanner.nextDouble();
                double b = scanner.nextDouble();
                double c = scanner.nextDouble();
                double p = (a + b + c) / 2;

                double sTriango = Math.sqrt(p * (p - a) * (p - b) * (p - c));
                System.out.println(sTriango);
                break;
            case "rectangle":
                double w = scanner.nextDouble();
                double l = scanner.nextDouble();

                double sRetangle = w * l;
                System.out.println(sRetangle);
                break;
            case "circle":
                double r = scanner.nextDouble();
                double sCircle = Math.pow(r, 2) * 3.14;

                System.out.println(sCircle);
                break;
            default: System.out.println("Not found!");
                break;
        }

        scanner.close();
    }
}

```

✓ Correct.

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