

Rajalakshmi Engineering College

Name: Roshan S

Email: 241501170@rajalakshmi.edu.in

Roll no: 241501170

Phone: 9677031330

Branch: REC

Department: AI & ML - Section 1

Batch: 2028

Degree: B.E - AI & ML

Scan to verify results



2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 1_Q5

Attempt : 1

Total Mark : 10

Marks Obtained : 10

Section 1 : Coding

1. Problem Statement:

Emily has a beautiful circular garden in her backyard. She's interested in calculating two important measurements for her garden: the circumference and the area. To do this, she needs a program that can take the radius of her circular garden as input and provide the calculated circumference and area as output. The formulas she should use are as follows:

To calculate the circumference (C) of a circle, you can use the formula:

$$C = 2 * \pi * r$$

$$A = \pi * r^2$$

Where:

C represents the circumference.

A represents the area.

π (pi) is approximately 3.14159.

r is the radius of the circle.

Emily is not a programmer, and she needs your help to create a program that will make these calculations for her garden.

Input Format

The first line of input contains a single double-point number radius, representing the radius of the circle.

Output Format

The output should consist of two lines:

The first line should print the circumference of the circle rounded to 2 decimal places, followed by the unit "meters".

The second line should print the area of the circle rounded to 2 decimal places, followed by the unit "square meters".

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 3.0

Output: Circumference: 18.85 meters

Area: 28.27 square meters

Answer

```
// You are using Java  
import java.util.Scanner;
```

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

```
// Read radius as a double  
double radius = sc.nextDouble();  
  
// Pi value as per the problem specification  
double pi = 3.14159;  
  
// Calculate circumference and area  
double circumference = 2 * pi * radius;  
double area = pi * radius * radius;  
  
// Format output to 2 decimal places  
System.out.printf("Circumference: %.2f meters\n", circumference);  
System.out.printf("Area: %.2f square meters\n", area);  
  
sc.close();  
}  
}
```

Status : Correct

Marks : 10/10