

# Rajalakshmi Engineering College

Name: Puvanesu R  
Email: 241901085@rajalakshmi.edu.in  
Roll no: 241901085  
Phone: 6382355104  
Branch: REC  
Department: CSE (CS) - Section 1  
Batch: 2028  
Degree: B.E - CSE (CS)

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## 2024\_28\_III\_OOPS Using Java Lab

### 2028\_REC\_OOPS using Java\_Week 1\_Q5

Attempt : 1  
Total Mark : 10  
Marks Obtained : 6

#### **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.

$\pi$  (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***

```
import java.util.*;
class area{
    public static void main(String[] arg){
        Scanner g=new Scanner(System.in);
        float a=g.nextFloat();
        double c=2*Math.PI*a;
        double ar=Math.PI*a*a;
```

```
        System.out.println("Circumference: "+Math.round(c*100.0)/100.0+"  
meters");  
        System.out.println("Area: "+Math.round(ar*100.0)/100.0+" square meters");  
    }  
}
```

**Status :** Partially correct

**Marks :** 6/10