

# Rajalakshmi Engineering College

Name: RANNESH KHUMAR B R  
Email: 240701422@rajalakshmi.edu.in  
Roll no: 2116240701  
Phone: 9042350670  
Branch: REC  
Department: CSE - Section 8  
Batch: 2028  
Degree: B.E - CSE

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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 : 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.

$\pi$  (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***

```
// You are using Java
import java.util.Scanner;
import java.text.DecimalFormat;
class Main{
    public static void main(String[] args){
        Scanner scan=new Scanner(System.in);
        double r=scan.nextDouble();
```

```
double area=r*r*3.14159f;  
double cir=2*r*3.14159f;  
  
DecimalFormat df=new DecimalFormat("#.00");  
String roundA=df.format(area);  
String roundC=df.format(cir);  
  
System.out.println("Circumference: "+roundC +" meters");  
System.out.println("Area: "+roundA +" square meters");  
}  
}
```

**Status :** Correct

**Marks : 10/10**