

```

//46 FINDING DIAMETER,CIRCUMFERENCE AND AREA OF CIRCLE
/**
 * C program to find diameter, circumference and area of a circle using
functions
 */

#include <stdio.h>
#include <math.h> // Used for constant PI referred as M_PI

/* Function declaration */
double getDiameter(double radius);
double getCircumference(double radius);
double getArea(double radius);

int main()
{
    float radius, dia, circ, area;

    /* Input radius of circle from user */
    printf("Enter radius of circle: ");
    scanf("%f", &radius);

    dia = getDiameter(radius); // Call getDiameter function
    circ = getCircumference(radius); // Call getCircumference function
    area = getArea(radius); // Call getArea function

    printf("Diameter of the circle = %.2f units\n", dia);
    printf("Circumference of the circle = %.2f units\n", circ);
    printf("Area of the circle = %.2f sq. units", area);

    return 0;
}

/**
 * Calculate diameter of circle whose radius is given
 */
double getDiameter(double radius)
{
    return (2 * radius);
}

/**
 * Calculate circumference of circle whose radius is given
 */
double getCircumference(double radius)
{
    return (2 * M_PI * radius); // M_PI = PI = 3.14 ...
}

```

```
/**
 * Find area of circle whose radius is given
 */
double getArea(double radius)
{
    return (M_PI * radius * radius); // M_PI = PI = 3.14 ...
}
Output
Enter radius of the circle: 10
Diameter of the circle = 20.00 units
Circumference of the circle = 62.83 units
Area of the circle = 314.16 sq. units
```