

## CTSD PRACTICAL 2023

### ❖ PRACTICAL : 2

#### 1. Write a c program to calculate Area of Rectangle, Perimeter of a Rectangle and Diagonal of a Rectangle.

```
#include <stdio.h>
#include <math.h>

int main() {
    float l, b, a, p, d;

    printf("Enter the length of rectangle: ");
    scanf("%f", &l);
    printf("Enter the breadth of rectangle: ");
    scanf("%f", &b);

    a = l * b;
    p = 2 * (l + b);
    d = sqrt(l * l + b * b);

    printf("Area: %0.3f\n", a);
    printf("Perimeter: %0.3f\n", p);
    printf("Diagonal: %0.3f\n", d);

    return 0;
}
```

#### OUTPUT:

```
Enter the length of rectangle: 10.5
Enter the breadth of rectangle: 7
Area: 73.500
Perimeter: 35.000
Diagonal: 12.619.
```

#### 2. Write a c program to calculate Area of square, Perimeter of a square and Diagonal of a square.

##### AREA OF SQUARE PROGRAM:

```
#include<stdio.h>
#include<conio.h>
```

```

int main()
{
    float len, area;
    printf("Enter length of Square: ");
    scanf("%f", &len);
    area = len*len;
    printf("\nArea = %0.2f", area);
    getch();
    return 0;
}

```

#### OUTPUT:

Enter length of Square: 2.5  
Area: 6.25

#### Perimeter of the square program:

```

#include<stdio.h>
#include<conio.h>
int main()
{
    float len, perimeter;
    printf("Enter length of Square: ");
    scanf("%f", &len);
    perimeter = 4*len;
    printf("\nPerimeter = %0.2f", perimeter);
    getch();
    return 0;
}

```

#### OUTPUT:

ENTER LENGTH OF SQUARE: 2.5  
PERIMETER: 10.00

#### DIAGONAL OF SQUARE PROGRAM:

```

#include <bits/stdc++.h>

double find Diagonal(double s)
{
    return sqrt(2) * s;
}

```

```
int main()
{
    double S = 10;
    cout << findDiagonal(S);

    return 0;
}
```

**OUTPUT:**

14.1421

**3. Write a c program to calculate total area ofCylinder and volume of a cylinder.**

```
#include<stdio.h>
#include<math.h>

int main(){

    float r,h;
    float surface_area,volume;

    printf("Enter size of radius and height of a cylinder : ");
    scanf("%f%f",&r,&h);

    surface_area = 2 * M_PI * r * (r + h);
    volume = M_PI * r * r * h;

    printf("Surface area of cylinder is: %.3f",surface_area);
    printf("\nVolume of cylinder is : %.3f",volume);

    return 0;
}
```

**Output:**

Enter size of radius and height of a cylinder: 4 10  
Surface area of cylinder is: 351.858  
Volume of cylinder is: 502.655