



Circle

**Radius, diameter, area,
circumference and
draw circle using
graphics**

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Ask the user to enter any one value from these and display remaining three using the given data...like if user enter radius.. you have to find diameter, area and circumference of circle and also display the circle of that radius....etc.

```
#include<iostream>
```

```
#include<dos.h>
```

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

```
#include<cmath>
```

```
using namespace std;
```

```
int main()
```

$$\{$$

```
int ch;
```

```
float rad,diam,area,cir;
```

```
cout<<"\n\t\t===== \n\n";
```

```
cout<<"\t\t\t\t CIRCLE\n\n";
```

```
cout<< "t\t=====\\n\\n\\n";
```

```
cout<<" Enter choice for input to find remaining parts \n\n";
```

```
cout<<"\t1-Radius  of Circle\n";
```

```
cout<<"\t2-Diameter of a Circle\n";

cout<<"\t3-Area of a Circle\n";

cout<<"\t4-Circumference of Circle\n\t";

cin>>ch;

switch(ch)

{

    case 1:

        // float rad;

        cout<<"\tEnter Radius of Circle :t";

        cin>>rad;

        cout<<"\n\t ===== " "<<endl;

        cout<<"\n\t Diameter of a Circle is : "<<2.0*rad;

        cout<<"\n\n\t Area of a Circle is : "<<3.1416*rad*rad;

        cout<<"\n\n\t Circumference of Circle is : "<<2.0*3.1416*rad;

        cout<<"\n\n\t =====

"<<endl;

        break;

    case 2:

        // float diam,rad;

        cout<<"\tEnter Diameter of Circle :t";

        cin>>diam;
```

```
        rad=diam/2.0;

        cout<<"\n\t ===== ";<<endl;

        cout<<"\n\t Radius of a Circle is : "<<rad;

        cout<<"\n\n\t Area of a Circle is : "<<3.1416*rad*rad;

        cout<<"\n\n\t Circumference of Circle is : "<<2.0*3.1416*rad;

        cout<<"\n\n\t =====

"<<endl;

        break;

    case 3:

        //    float area,rad;

        cout<<"\nEnter Area of Circle :t";

        cin>>area;

        rad=pow(area/3.1416,0.5);

        cout<<"\n\t ===== ";<<endl;

        cout<<"\n\t Radius of a Circle is : "<<rad;

        cout<<"\n\n\t Diameter of a Circle is : "<<2.0*rad;

        cout<<"\n\n\t Circumference of Circle is : "<<2.0*3.1416*rad;

        cout<<"\n\n\t =====

"<<endl;

        break;

    case 4:

        //    float cir,rad;
```

```
        cout<<"\tEnter Circumference of Circle : \t";

        cin>>cir;

        rad=cir/(3.1416*2);

        cout<<"\n\t ===== ";<<endl;

        cout<<"\n\t Radius of a Circle is : ";<<rad;

        cout<<"\n\n\t Diameter of a Circle is : ";<<2.0*rad;

        cout<<"\n\n\t Area of a Circle is : ";<<3.1416*rad*rad;

        cout<<"\n\n\t =====

"<<endl;

        break;

    default:

        cout<<"\n\tThank you for using this :) "<<endl;

    }

    //graphics

    int gdriver = DETECT, gmode;

    initgraph(&gdriver, &gmode, "C:\\tc\\bgi");

    circle(200,200,rad);

    getch();

    closegraph();

    return 0;

}
```

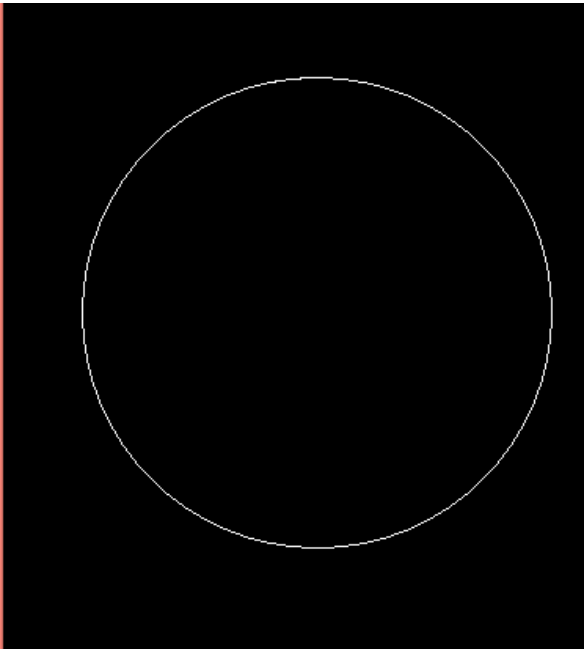
Output:

```
=====
                        CIRCLE
=====

Enter choice for input to find remaining parts
1-Radius of Circle
2-Diameter of a Circle
3-Area of a Circle
4-Circumference of Circle
2
Enter Diameter of Circle :      300

=====

Radius of a Circle is :    150
Area of a Circle is :     70686
Circumference of Circle is :  942.48
=====
```



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