

```

#include<windows.h>

#include <gl/glut.h>

#include <Windows.h>

#include <iostream>

using namespace std;


void circle() {

    glColor3f(1.0, 0.0, 0.0);

    glPointSize(2.0);

    float r = 100;

    float x = 0, y = r;

    float p = 1 - r;

    glBegin(GL_POINTS);

    while (x != y)

    {

        x++;

        if (p < 0) {

            p += 2 * (x + 1) + 1;

        }

        else {

            y--;

            p += 2 * (x + 1) + 1 - 2 * (y - 1);

        }

        glVertex2i(x, y);

        glVertex2i(-x, y);

        glVertex2i(x, -y);

```

```
glVertex2i(-x, -y);
```

```
glVertex2i(y, x);
```

```
glVertex2i(-y, x);
```

```
glVertex2i(y, -x);
```

```
glVertex2i(-y, -x);
```

```
}
```

```
glEnd();
```

```
glFlush();
```

```
}
```

```
int main(int argc, char ** argv) {
```

```
    glutInit(&argc, argv);
```

```
    glutInitDisplayMode(GLUT_SINGLE |  
GLUT_RGB);
```

```
    glutInitWindowSize(500, 500);
```

```
    glutInitWindowPosition(100, 100);
```

```
    glutCreateWindow("Circle");
```

```
    glClearColor(1.0, 1.0, 1.0, 1.0);
```

```
    glClear(GL_COLOR_BUFFER_BIT);
```

```
    gluOrtho2D(-250, 250, -250, 250);
```

```
    glMatrixMode(GL_PROJECTION);
```

```
    glViewport(0, 0, 500, 500);
```

```
    glutDisplayFunc(circle);
```

```
glutMainLoop();  
  
return 0;  
  
}
```

Output:

