

```
#include <ostream.h>
```

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

```
#include <graphics.h>
```

```
void main()
```

```
{
```

```
int gd= DETECT, gm, d, a, b, c, d;
```

```
float x, y, x1, y1, x2, y2, r, a, x3, y3;
```

```
initgraph (&gd, &gm, ".\\BGI");
```

```
cout << "Enter the co-ordinates of Square";
```

```
cin >> x >> y >> x1 >> y1 >> x2 >> y2 >> x3 >> y3;
```

```
setbkcolor (WHITE);
```

```
line (x, y, x1, y1);
```

```
line (x1, y1, x2, y2);
```

```
line (x2, y2, x3, y3);
```

```
line (x3, y3, x, y);
```

```
setbkcolor (BLACK);
```

```
cout << "Enter rotation angle:";
```

```
cin >> a
```

```
setbkcolor (WHITE);
```

```
r = a * (3.14 / 180);
```

```
x = floor (x * cos(r) - (y * sin(r)));
```

```
y = floor (x * sin(r) + (y * cos(r)));
```

```
x1 = floor (x1 * cos(r) - (y1 * sin(r)));
```

```
y1 = floor (x1 * sin(r) + (y1 * cos(r)));
```

```
x2 = floor (x2 * cos(r) - (y2 * sin(r)));
```

```
y2 = floor (x2 * sin(r) + (y2 * cos(r)));
```


$$X_3 = \text{floor}(X_3 * \cos(r)) - (Y_3 * \sin(r));$$

$$Y_3 = \text{floor}(X_3 * \sin(r)) + (Y_3 * \cos(r));$$

SetColor (RED)

line (X, y, X2, Y2)

line (X1, Y1, X2, Y2);

line (X2, Y2, X3, Y3);

line (X3, Y3, X, Y);

getch();

closegraph();

}