

TITLE: Fractal Graphics(Koch Curve)

```
#include<iostream>
#include<math.h>
#include<graphics.h>
using namespace std;
class kochCurve
{
    public:
    void koch(int it,int x1,int y1,int x5,int y5)
    {
        int x2,y2,x3,y3,x4,y4;
        int dx,dy;
        if(it==0)
        {
            line(x1,y1,x5,y5);
        }
        else
        {
            delay(10);
            dx=(x5-x1)/3;
            dy=(y5-y1)/3;
            x2=x1+dx;
            y2=y1+dy;
            x3=(int)(0.5*(x1+x5)+sqrt(3)*(y1-y5)/6);
            y3=(int)(0.5*(y1+y5)+sqrt(3)*(x5-x1)/6);
            x4=2*dx+x1;
            y4=2*dy+y1;
            koch(it-1,x1,y1,x2,y2);
            koch(it-1,x2,y2,x3,y3);
            koch(it-1,x3,y3,x4,y4);
            koch(it-1,x4,y4,x5,y5);
        }
    }
};
```

```

int main()
{
    kochCurve k;
    int it,len;
    cout<<"enter number of iterations";
    cin>>it;

    int gd=DETECT,gm;
    initgraph(&gd,&gm,NULL);
    k.koch(it,20,280,280,280);
    k.koch(it,150,20,20,280);
    k.koch(it,280,280,150,20);

    getch();
    closegraph();
    return 0;
}

```

