

11 Rajan - Prashant

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#include<stdio.h>
#include<conio.h>
#include<math.h>
#include<graphics.h>
double xrmin,yrmin,xrmax,yrmax,sx,sy;
int xemin,yemin,xemax,yemax,n=10;
int xe(double xr)
{
    return xemin+sx*(xr-xrmin);
}
int ye(double yr)
{
    return yemax-sy*(yr-yrmin);
}
void initgr()
{
    int gd,gm;
    gd=DETECT;
    initgraph(&gd,&gm,"\\tc\\bgi ");
    xrmin=-2;
    yrmin=-2;
    xrmax=2;
    yrmax=2;
    xemin=0;
    yemin=0;
    xemax=getmaxy();
    yemax=getmaxy();
    sx=(xemax-xemin)/(xrmax-xrmin);
    sy=(yemax-yemin)/(yrmax-yrmin);
    line(xe(xrmin),ye(0),xe(xrmax),ye(0));
    line(xe(0),ye(yrmin),xe(0),ye(yrmax));
}
double f1(double t,double a)
{
    return sin(n*t)*cos(t);
}
double f2(double t,double a)
{
    return sin(n*t)*sin(t);
}

void main()
{
    double tmin=0,tmax=M_PI*2,past,t,a=2;
    int np=10000;
    initgr();
    past=(tmax-tmin)/np;
    for(t=tmin;t<=tmax;t+=past)
        putpixel(xe(f1(t,1)),ye(f2(t,1)),YELLOW);
    getch();
    closegraph();
}
```