program vetka1;

uses crt,graph;

var k:integer;

procedure ris(x0,y0,xx0,yy0,a1:real;n:integer);

var x1,y1,x2,y2,x3,x4,x5,y5,y3,y4,x6,x7,y6,y7:real;

c,c1,c2,dx,dy:real; cc,l:byte;

begin

if n=0 then line(trunc(x0),trunc(y0),trunc(xx0),trunc(yy0));

if n>0 then

begin

c:=3.14/16; c1:=a1+c;

dx:=sqrt(sqr(xx0-x0)+sqr(yy0-y0));

dy:=dx/sqrt(2\*(1-cos(3.14\*7/8)));

x1:=x0+dy\*cos(c1);y1:=y0+dy\*sin(c1);

c:=3.14/4;c2:=a1-c-3.14/16;

x2:=xx0+dy\*cos(c2);y2:=yy0+dy\*sin(c2);

x3:=x2+dy\*cos(c2+3.14/16);

y3:=y2+dy\*sin(c2+3.14/16);

x4:=xx0+dy\*cos(a1+c/4);y4:=yy0+dy\*sin(a1+c/4);

x5:=x4+dy\*cos(a1-c/4);y5:=y4+dy\*sin(a1-c/4);

x6:=x5+dy\*cos(a1-c/2);y6:=y5+dy\*sin(a1-c/2);

c:=3.14/16; setcolor(10);

ris(x0,y0,x1,y1,c1,n-1); setcolor(2);

ris(x1,y1,xx0,yy0,a1-c,n-1); setcolor(10);

ris(xx0,yy0,x2,y2,c2,n-1); setcolor(2);

ris(x2,y2,x3,y3,c2+c,n-1); setcolor(10);

ris(xx0,yy0,x4,y4,c1,n-1); setcolor(2);

ris(x4,y4,x5,y5,a1-c,n-1);

ris(x5,y5,x6,y6,a1-c\*2,n-1);

end;

end;

var gt,n1,gm:integer;x,y,xx,yy,l,a:real; t:string;

begin

writeln('введите порядок ветки'); readln(n1);

gt:=detect; gm:=detect;

initgraph(gt,gm,'c:\programm\tp\bgi\');

x:=150;y:=450;l:=150;xx:=270;yy:=360;

a:=arctan((yy-y)/(xx-x));

str(a,t);ris(x,y,xx,yy,a,n1);

readln

end.