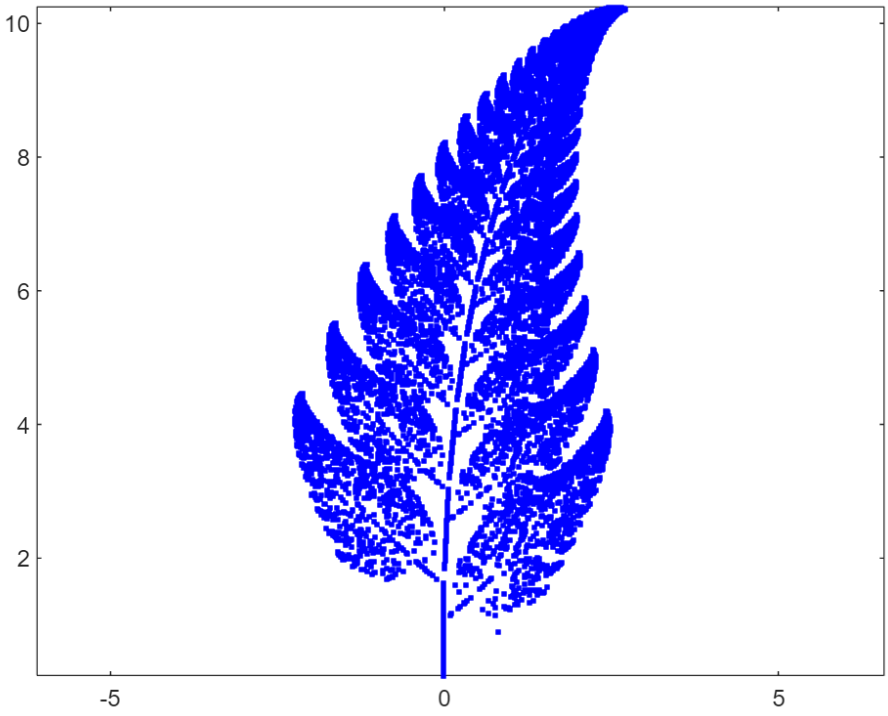
```
 %% Barnsley fern
 clear;
 T1=[0.85,0.04;-0.04,0.85];
 T2=[-0.15,0.28;0.26,0.24];
 T3=[0.2,-0.26;0.23,0.22];
 T4=[0,0;0,0.16];
 Q1=[0;1.64];
 Q2=[-0.028;1.05];
 Q3=[0;1.6];
 Q4=[0,0];
 P1=0.85;
 P2=0.07;
 P3=0.07;
 P4=0.01;
 Num=15000;
 x(:,1)=rand(2,1);
 plot(x(1,:),x(2,:),'b.')
 axis equal;
 hold on;
 for j=1:Num
 r=rand;
 if r<=P1
 x(:,j+1)=T1*x(:,j)+Q1;
 elseif r<=P1+P2
 x(:,j+1)=T2*x(:,j)+Q2;
 elseif r<=P1+P2+P3
 x(:,j+1)=T3*x(:,j)+Q3;
 else
 x(:,j+1)=T4*x(:,j);
end
 end
 plot(x(1,:),x(2,:),'b.');
 hold off;
```


10
8
6
4
2
-5
0
5