Krzysztof Kozubek (MATLAB)  
Zadanie 6 (grafy świąteczne)

Choinka=[  
0,0,0,0,0,0,0,0,0,0,0,0;  
0,0,0,0,0,1,0,0,0,0,0,0;  
0,0,0,0,1,1,1,0,0,0,0,0;  
0,0,0,0,0,1,0,0,0,0,0,0;  
0,0,0,1,1,1,1,1,0,0,0,0;  
0,0,0,0,0,1,0,0,0,0,0,0;  
0,0,1,1,1,1,1,1,1,0,0,0;  
0,0,0,0,0,1,0,0,0,0,0,0;  
0,1,1,1,1,1,1,1,1,1,0,0;  
0,0,0,0,0,1,0,0,0,0,0,0;  
1,1,1,1,1,1,1,1,1,1,1,0;  
0,0,0,0,0,1,0,0,0,0,0,0];  
Mikolaj=[  
1,0,0,0,0,1,0,0,0,0,0,0;  
1,0,0,0,1,1,1,1,0,0,0,0;  
1,0,0,1,1,1,1,1,1,0,0,0;  
1,0,0,1,1,1,1,0,1,1,0,0;  
1,0,0,1,0,0,1,0,0,1,1,0;  
1,0,0,0,1,1,0,0,0,0,1,0;  
1,1,1,1,1,1,1,1,1,0,0,0;  
1,0,0,1,1,1,1,0,0,0,0,0;  
1,0,0,1,1,1,1,0,0,0,0,0;  
1,0,0,0,1,1,0,0,0,0,0,0;  
1,0,0,0,1,1,0,0,0,0,0,0;  
0,0,0,1,1,1,1,0,0,0,0,0];  
Prezent=[  
0,0,0,1,0,0,0,0,1,0,0,0;  
0,0,0,0,1,0,0,1,0,0,0,0;  
0,0,0,0,0,1,1,0,0,0,0,0;  
0,0,1,1,1,1,1,1,1,1,0,0;  
0,0,1,0,0,1,1,0,0,1,0,0;  
0,0,1,0,0,1,1,0,0,1,0,0;  
0,0,1,1,1,1,1,1,1,1,0,0;  
0,0,1,0,0,1,1,0,0,1,0,0;  
0,0,1,0,0,1,1,0,0,1,0,0;  
0,0,1,0,0,1,1,0,0,1,0,0;  
0,0,1,1,1,1,1,1,1,1,0,0;  
0,0,0,0,0,0,0,0,0,0,0,0];  
  
[Chwek,Ch]=eigs(Choinka);  
[Mwek,M]=eigs(Mikolaj);  
[Pwek,P]=eigs(Prezent);  
  
figure(1);  
plot(real(Ch),imag(Ch),'b^',real(M),imag(M),'ko',real(P),imag(P),'rs');  
legend('Choinka','Mikołaj','Prezent',1)  
xlabel('Re');  
ylabel('Imag');