```matlab
% Name (first and last)
% CSC 2262
% cs2262xx
% Sample 6e
m1 = .8;
m2 = .6;
m3 = .5;
k1 = 4.3;
k2 = 5.1;
k3 = 4.6;
k4 = 5.4;
A = [ -(k1+k2)/m1          k2/m1                   0
              k2/m2     -(k2+k3)/m2          k3/m2
                  0          k3/m3    -(k3+k4)/m3  ];
A = -A;
[eigvec  eigval] = eig(A);
t = 0:.001:8;
line1x = [0  8];
line1y = [0  0];
titles(1,:) = 'Sample 6e, Figure 1';
titles(2,:) = 'Sample 6e, Figure 2';
titles(3,:) = 'Sample 6e, Figure 3';
for(k=1:3)
    w = sqrt(eigval(k,k));
    c1 = eigvec(1,k);
    c2 = eigvec(2,k);
    c3 = eigvec(3,k);
    x1 = c1*cos(w*t);
    x2 = c2*cos(w*t);
    x3 = c3*cos(w*t);
    figure(k);
    plot(t,x1,'b',t,x2,'r',t,x3,'g',line1x,line1y,'k');
    axis([0  8  -.8  .8]);
    set(gca,'xtick',0:8);
    set(gca,'ytick',-.8:.2:.8);
    xlabel('t');
    ylabel('x1(blue), x2(red), x3(green)');
    title(titles(k,:));
end
```