

```

% Name (first and last)
% CSC 2262
% cs2262xx
% Sample 5b
t = 0:.001:9;
u0 = [4000 200];
options = odeset('RelTol',1e-7,'AbsTol',1e-7);
[t u] = ode45('sample5bf',t,u0,options);
plot(t,u(:,1),'b',t,u(:,2),'r');
axis([0 9 0 10000]);
set(gca,'xtick',0:9);
set(gca,'ytick',0:1000:10000);
xlabel('t');
ylabel('Hare Population (blue) and Lynx Population (red)');
title('Sample 5b');

```

```

% function sample5bf
function f = sample5bf(t,uf)
K1 = 2;
K2 = 10;
C = .0012;
D = .0019;
S1 = .63;
S2 = .57;
H = uf(1);
L = uf(2);
f = zeros(2,1);
f(1) = K1*H - C*H*L - S1*H;
f(2) = -K2*L + D*H*L - S2*L;

```