

```

function dx = modeltwo(t,x)
global V1 V2 K1 K2 u1 u2 R q

dx = zeros(size(x));

dx(1) = (q*u1)-(q*x(2))-(x(1)*V1)*(x(2)/(x(2)+K1))*(x(3)/(x(3)+K2));
dx(2) = (q*u2)-(q*x(3))-(x(1)*V2)*(x(2)/(x(2)+K1))*(x(3)/(x(3)+K2));
dx(3) = (x(1)*R)*(x(2)/(x(2)+K1))*(x(3)/(x(3)+K2))-(q*x(1));

%y=x(1)
%c1=x(2)
%c2=x(3)

end

```