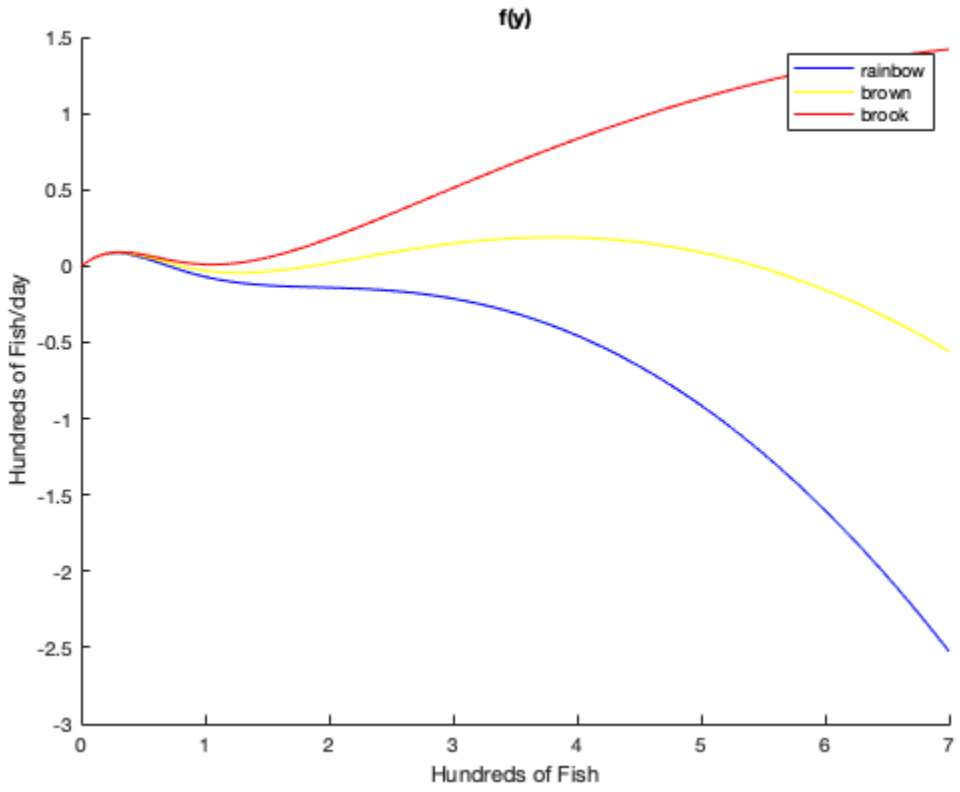
5A

```
clear all;  % clears all previous activity
close all;

func1 = @(y) (.65*(y-((y.^2)./5.4)))-((1.2*(y.^2))./(1+(y.^2)));  %
 defines f(y) as an anonymous function with L=5.4
func2 = @(y) (.65*(y-((y.^2)./8.1)))-((1.2*(y.^2))./(1+(y.^2)));  %
 defines f(y) as an anonymous function with L=8.1
func3 = @(y) (.65*(y-((y.^2)./16.3)))-((1.2*(y.^2))./(1+(y.^2)));  %
 defines f(y) as an anonymous function with L=16.3
y = 0:.1:7;

figure(2);  % sets figure 2
hold on;  % allows all plots to be on the same figure
    plot(y,func1(y),'blue');  % plots f(y) with L=5.4
    plot(y,func2(y),'yellow');  % plots f(y) with L=8.1
    plot(y,func3(y),'red');  % plots f(y) with L=16.3

    % sets axes labels and title/legend
    ylabel('Hundreds of Fish/day');
    xlabel('Hundreds of Fish');
    legend('rainbow','brown','brook');
    title('f(y)');
hold off;  % ends graphical hold


root1 = fzero(func1,.7)  % finds roots of f(y)(equilibrium points)
root2 = fzero(func2,.8)  % finds roots of f(y)(equilibrium points)
root3 = fzero(func2,1.9)  % finds roots of f(y)(equilibrium points)
root4 = fzero(func2,5.4)  % finds roots of f(y)(equilibrium points)
root5 = fzero(func3,14.3)  % finds roots of f(y)(equilibrium points)


root1 =

    0.7050


root2 =

    0.8018


root3 =

    1.8564


root4 =

    5.4418
```

```
root5 =

   14.1898
```



Published with MATLAB® R2020a