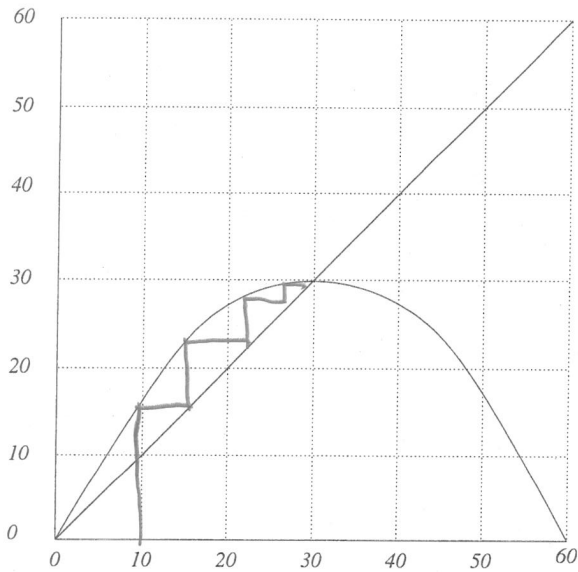


# Mathematics 172

Quiz # 18

Name: Key

*You must show your work to get full credit.*

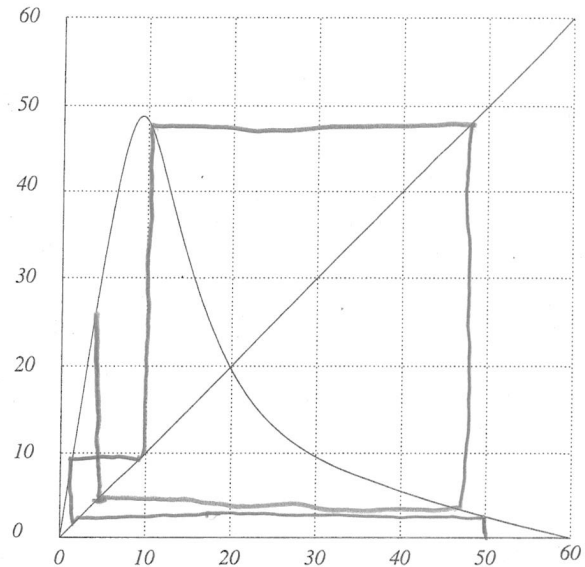


Equilibrium points: 0, 30

Stable points: 30

Unstable points: 0

Draw Cobweb with  $N_0 = 10$

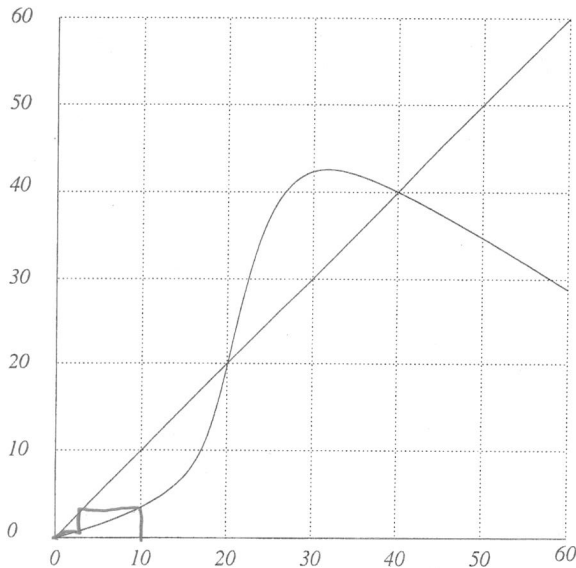


Equilibrium pts: 0, 20

Stable pts: None

Unstable pts: 0, 20

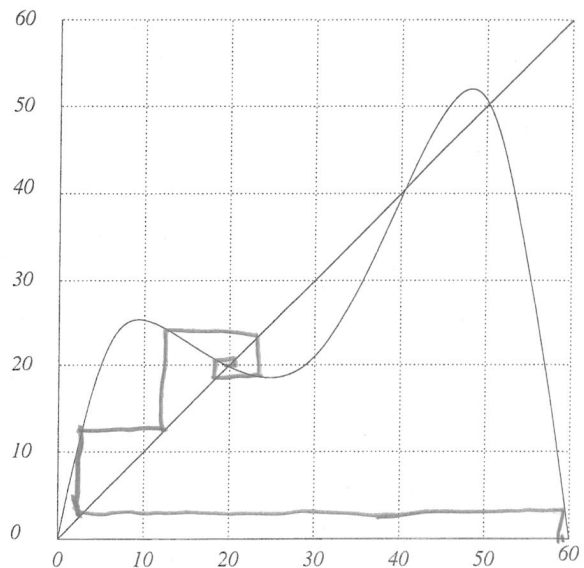
Draw Cobweb with  $N_0 = 50$



Stable points: 0, 40

Unstable points: 20

If  $N_0 = 10$  then  $N_{100} \approx$  0



Stable pts: 20, 50

Unstable pts: 0, 40

If  $N_0 = 59$  then  $N_{100} \approx$  20

For the problems about estimating  $N_{100}$  you should draw a cobweb.