

1. In the Maple package DMB.txt run $\text{ExpGenLotka}(2,50)$; ten times.

In how many cases did all the species survive? In how many cases was there agreement with the positive stable equilibrium points, and between the three initial conditions?

When looking at the equilibrium points from initial conditions, there were cases 3 where all the species survived. The stable equilibrium point agreed with the majority of the initial condition cases 9 times. The equilibrium points agreed with each other 9 times.

2. In the Maple package DMB.txt run $\text{ExpGenLotka}(3,50)$; ten times.

In how many cases did all the species survive? In how many cases was there agreement with the positive stable equilibrium points, and between the three initial conditions?

When looking at the equilibrium points from initial conditions, there were cases 0 where all the species survived. I counted 0 because, although there were technically some animals left from each species in all 10 cases, the numbers were very marginal and approaching 0. One of the stable equilibrium points agreed with the majority of the initial condition cases 8 times. The equilibrium points agreed with each other 8 times.

3. In the Maple package DMB.txt run $\text{ExpGenLotka}(4,50)$; ten times.

In how many cases did all the species survive? In how many cases was there agreement with the positive stable equilibrium points, and between the three initial conditions?

When looking at the equilibrium points from initial conditions, there was 1 case where all the species survived. I counted 1 because, although there were technically some animals left from each species in all 10 cases, the numbers were very marginal and approaching 0. One of the stable equilibrium points agreed with the majority of the initial condition cases 6 times. The equilibrium points agreed with each other 6 times.

4. In the Maple package DMB.txt run $\text{ExpGenLotka}(5,50)$; ten times.

In how many cases did all the species survive? In how many cases was there agreement with the positive stable equilibrium points, and between the three initial conditions?

When looking at the majority of equilibrium points from initial conditions, there was 1 case where all the species survived. I counted 1 because, although there were technically some animals left from each species in all 10 cases, the numbers were very marginal and approaching 0. One of the stable equilibrium points agreed with the majority of the initial condition cases 6 times. The equilibrium points agreed with each other 5 times.

For all of the problems, I counted out of 10 trials. Additionally, for the questions about the initial conditions agreeing with the SSS and the initial conditions agreeing with each other, not all of the cases counted were from the same trial.