

Attendance Quiz for Lecture 14 of Dr. Z.'s Dynamical Models in Biology class

Name: (print!)

Email: (print!)

1.: Use procedurs `SSg`, `SSSg` to find the set of steady-states and stable-steady-states of the system with three species

$$a_1(n+1) = \frac{7 + 2a_1(n) + a_2(n) + 5a_3(n)}{8 + 7a_1(n) + 4a_2(n) + 3a_3(n)}$$

$$a_2(n+1) = \frac{2 + 8a_1(n) + 8a_2(n) + 3a_3(n)}{4 + 9a_1(n) + 2a_2(n) + 2a_3(n)}$$

$$a_3(n+1) = \frac{2 + 3a_1(n) + 2a_2(n) + 9a_3(n)}{9 + a_1(n) + 3a_2(n) + 10a_3(n)}$$

Then use procedure `ORB(F,x,x0,K1,K2)`; with `K1=1000`, `K2=1010`, and four different random `x0` (far away from each other) and see whether they all converge to the stable steady-state that you round.