

Real Quiz 4 of Dr. Z.'s Dynamical Models in Biology class

Name: (print!)

Email: (print!)

1.: Consider the non-linear recurrence

$$a(n+1) = \frac{1}{100}a(n)^4 - \frac{7}{100}a(n)^2 + \frac{53}{50}a(n) \quad .$$

(i) (3 points) Show that $x = -3$, $x = 0$, $x = 1$, $x = 2$ are steady-states. Explain!

(ii) (7 points) Which of these steady-states are stable? Explain!