

Name: _____

Instructions: (a) Round your answers to four decimal places; (b) All questions should be answered in concise and complete mathematical reasoning and terminology; (c) Show all details of your work for every problem; (d) In answering questions you should make reference to all the appropriate theorems that you are using and explain the observed dynamics in clear and concise sentences; (e) Partial credit will be given only if your mathematical approach and technique is correct and only minor errors are made in calculations.

Problem 1. (25 points) Section 7.2, page 287, Exercises 1, 2, and 3 of the text.

Problem 2. (25 points) Section 7.3, page 290, Exercises 2, 4, and 5 of the text.

Problem 3. (25 points) Section 4.3, page 136, Exercise 13 of the text.

Problem 4. (25 points) Section 4.3, page 136, Exercise 14 of the text.