

Name:

Quiz – 28 August 2019

Instructions. You have 15 minutes to complete this quiz. You may use your calculator. You may not use any other materials (e.g., notes, homework, books).

Problem	Weight	Score
1	1	
2	1	
3	1	
4	1	
Total		/ 40

Problem 1. Find the solution to the DS

$$A_{n+1} = 2A_n - 1 \quad n = 0, 1, 2, \dots$$

by finding A_1 , A_2 , and A_3 and using the pattern to guess the formula for A_n .

Problem 2. Find the fixed points of the DS

$$A_{n+1} = A_n^2 - 2A_n + 2 \quad n = 0, 1, 2, \dots$$

Problem 3. Suppose we have a savings account with an annual interest rate of 0.03, compounded monthly. How much should we deposit initially so that we have \$10,000 in 20 years?

Problem 4. Suppose we have a savings account with an annual interest rate of 0.03, compounded continuously. If our initial deposit is \$1,000, how much will we have after 10 years?