

Assignment #7

Due Monday 1 November, 2021 at the start of class.

Submit on paper or by email: `elbueler@alaska.edu`

Exercise 4.2.1. Do parts (a) and (b) only.

Exercise 4.2.2. Do parts (a) and (b) only. (*Hint: Start with an iterate x_1 which is close to, but not equal to, the fixed point, for example $x_1 = r + 0.1$. See Example 4.2.3 for how to estimate σ . Note σ will be close to a quantity you computed in Exercise 4.2.1.*)

Exercise 4.2.5.

Exercise 4.2.6.

Exercise 4.3.1.

Exercise 4.3.2.

Exercise 4.3.5. (*Historical note.* This iteration allowed early CPUs to implement floating-point arithmetic without implementing division in hardware.)

Exercise 4.4.1.

Exercise 4.4.2.

Exercise 4.5.1. (*This asks you to do only one step of Newton's method by hand.*)

Exercise 4.5.5.