

**Part I: Read and Respond (prepare for class Friday, February 14 ♡)**

Read Section 2.4, taking notes for yourself and answering the following questions. Review the syllabus for parts (a)–(c) that should be included in this assignment. Here are the reading questions for part (a):

**Reading Question(s)**

1. What can you say about a constant sequence  $(a, a, a, a, \dots)$  in light of the definitions of *increasing* and *decreasing*?
2. What benefit does the Monotone Convergence Theorem (MCT) afford us that we don't get from just having the definition of convergence?

**Part II: Exercises (prepare for class for Friday, February 14 ♡)**

1. Exercise 2.3.7d (Andrew's volunteered to present this, so just be prepared to discuss it well)
2. Exercise 2.3.10 (we did not get to this one on Wednesday; review what you had to be prepared to present and discuss)
3. The Monotone Convergence Theorem proof in Section 2.4 is just for the increasing case. How would it change if the sequence were decreasing?

**Part III: Problems (due Wednesday, February 19 at the beginning of class)**

1. (I) Exercise 2.3.2(b).
2. (P) Exercise 2.3.8