

Part I: Read and Respond (prepare for class Monday, March 17)

Carefully read Section 3.3, stopping at the heading “Open Covers,” taking notes for yourself and answering the following questions to turn in as your Part I assignment. Review the syllabus for parts (a)–(c) that should be included in this assignment.

Reading Questions

1. Give an interesting example of a set that is
 - (a) closed and unbounded
 - (b) open and bounded
 - (c) open and unbounded
 - (d) closed and bounded
2. List the big ideas used in the (part given in the text of the) proof of the Characterization of Compactness in \mathbb{R} Theorem.

Part II: Exercises (prepare for class for Monday, March 17)

No Part II this time.

Part III: Problems (due Friday, March 21 (no class on Wednesday) at the beginning of class)

See email for survey about due dates.

1. Exercise 3.2.8 (P), but instead of answering the question in the book, explain under what conditions on A and B the given set is open and when it's closed.