

MATH 360 — HOMEWORK 4.

due on Friday, February 19.

Textbook: “*Elementary Classical Analysis*”, second edition
by J. E. Marsden and M. J. Hoffman

Additional Reading: “Foundations of Modern Analysis”
by J. Dieudonné

Topics:

- Introduction: Sets and Functions
- 1 The real Line and Euclidian Space
 - 1.1 Ordered Fields and the Number System
 - 1.2 Completeness and the Real Number System
 - 1.3 Least Upper Bounds
 - 1.4 Cauchy Sequences

Fourth Homework Assignment.

Reading:

- Read Sections 1.3, 1.4 and 1.5, paying attention to all the examples.
- Understand the “Method of Halving the Interval”

Exercises:

Problem 1. Write down the proof of Theorem 1.2.7 (page 39).

Problems:

- Page 48: problems: 1, 3, 4, 5
- Page 51: problems: 1, 2, 3
- Page 56: problems: 3, 4, 5
- Page 97: problems: 15.

The topics and page numbers are from the textbook..