

28 October 2015
Analysis I
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HW 8

Due: 3 Nov 2015

The problems are written in the format ‘chapter.section.problem-number’ from Lang’s book. Practice problems must be handed in and will be checked for honest effort. Portfolio problems will be graded thoroughly and may be revised until your solutions are of professional quality. Please submit each portfolio problem on a detached sheet of paper with your name on it.

Practice problems:

1. Let V be a normed vector space. In class, we showed that the equivalence classes of Cauchy sequences of V form a normed vector space. Show that this vector space (of equivalence classes) is complete.
2. VIII.1.2
3. VIII.1.3
4. VIII.2.3

Portfolio problems:

- P19. Is $C^1([-1, 1])$ complete with respect to the sup norm? Prove your answer.
- P20. VIII.1.4
- P21. VIII.2.5