

30 October 2014  
Analysis I  
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## HW 9

Due: Nov 4 in class. Justify all of your work.

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. Is  $C^1([-1, 1])$  complete with respect to the sup norm? Prove your answer.
3. VIII.1.2
4. VIII.1.3
5. VIII.1.4
6. VIII.2.3
7. VIII.2.5