

Übungen zu Analysis II

Blatt 13

- 1 Prove that any vector space E has a Hamel basis.
- 2 Let E be an infinite dimensional Banach space, then its algebraic dimension is uncountable.
- 3 Let E be a normed space, $A \subset E$ an a.c. complete subset, then A contains an a.c. basis M .
- 4 Prove directly that the l_p -spaces are complete, i.e., without using the fact that all of them are dual spaces.