Chapter 3. Major Banach Space Theorems

3.1. Introduction

Note. Recall that, by Theorem 2.6, the continuity of a linear operator is equivalent to it being bounded. The main ideas in analysis involve limits and continuity (that is why we are always interested in open sets—so that we have a little “wiggle room” and can talk about limits). This chapter is about open sets, closed sets, dense subsets, and bounded linear operators of complete normed linear spaces.

Revised: 5/13/2013