

Math 8051 Homework 2

Due Wednesday, 9/13/17

1. Exercise 1 on page 17.
2. Exercise 3 on page 17.
3. Prove Proposition 2.8 on page 17.
4. Exercise 8 on page 20.
5. Let K_1, \dots, K_n be compact subsets of a metric space X .
 - a) Is $\bigcup K_i$ necessarily compact?
 - b) Is $\bigcap K_i$ necessarily compact?