Homework 6: 21-355–Principles of Real Analysis I

DUE: Friday, December 2, 2016

Name: _____

Instructions: Complete the following problems, clearly labeling the problems. Staple this sheet, with your name filled in, to the top of your work. Failure to attach this sheet will result in a five-point deduction in the grade. The assignment will be graded out of one hundred points.

1. Exercise 4.2.11

2. Exercise 4.3.11

3. Exercise 4.3.13

4. Show that $f : A \mapsto \mathbb{R}$ is continuous if and only if $f^{-1}(F)$ is closed in A for every F that is closed in $\mathbb{R}$.

5. Exercise 4.4.1

6. Exercise 4.4.6

7. Exercise 4.5.8

8. Exercise 5.3.1

9. Exercise 5.3.2

10. Exercise 6.2.2