18.100A PROBLEM SET 3

due March 15th 9:30 am

You can collaborate with other students when working on problems. However, you should write the solutions using your own words and thought.

Problem 1. *Exercise 7.3.4. Page 110.*

(To solve 7.3.4.(b), find a counter example.)

Problem 2. *Exercise 7.3.6. Page 110.*

Problem 3. *Exercise 7.4–7.5.1.(b),(d),(j). Page 110.*

Problem 4. *Exercise 8.1.1.(a),(f). Page 123.*

Problem 5. *Exercise 11.1.1. Page 167.*

Problem 6. *Exercise 11.3.2. Page 167.*

(Use the result in Exercise 11.3.1.)

Problem 7. *Exercise 11.4.1. Page 168.*

Problem 8. *Exercise 11.5.1. Page 168.*

(Use the fact that given any two real numbers $a < b$, there exists a rational number r such that $a < r < b$. Namely, rational numbers are dense in the real numbers.)

Problem 9. *Exercise 11.5.2. Page 168.*

Problem 10. *Problem 11-2. Page 169.*