# Math 109 Fall 2016 Homework 7, due **Monday 11/14/2016** in HW boxes in the basement of AP&M by 3 pm

## 1   Reading and practice

read Chapters

Read Chapters 15-18. Do the end of chapter exercises as you read, and check your work against the answers in the back. These exercises are to test your understanding and they are not to be written up and handed in.

## 2   Exercises to submit on Monday 11/14

### 2.1   Exercises from the text

In the Problems IV which begin on page 225 of the text, do #1, 2, 6(i), 7, 10(only for 6(i)), 11, 14, 15(i), 16.

**Additional problem (write up and hand in)**

1. You find yourself in a strange country where there are only two kinds of coins: a 13 dollar coin and a 7 dollar coin.

(a) If you have to pay a bill of 175 dollars, describe all possible combinations of coins you can use to pay this exact amount with no change needed. Justify your answer.

(b). You have to pay a bill of 50 dollars. Show that you cannot pay this exact amount in coins, but find at least two ways to pay this bill if the cashier gives you change back. Find, with justification, the way to do this for which the amount of change the cashier has to give you back is the smallest possible.