## MAT 544 Problem Set 3

Homework Policy. Write up solutions of the required problems. Read and attempt the extra problems, but do not write up those solutions for grading. Many of these problems are taken from or inspired by problems in the textbook.

Each student is encouraged to work with other students, but submitted problem sets must be in the student's own words and based on the student's own understanding. It is against university policy to copy answers from other students or from any other resource.

## Required Problems.

Problem 1. Exercise 24, p. 34, Atiyah-MacDonald.

Problem 2. Exercise 25, p. 34, Atiyah-MacDonald.

Problem 3. Exercise 26, p. 34, Atiyah-MacDonald.

**Problem 4.** Exercise 1, p. 43, Atiyah-MacDonald.

**Problem 5.** Exercise 5, p. 44, Atiyah-MacDonald.

**Problem 6.** Exercise 9, p. 44, Atiyah-MacDonald.

**Problem 7.** Exercise 16, p. 45, Atiyah-MacDonald.