115b/1 - Homework 3*

Due 24 January 2011

1. Do problem (7.3.5).

2. Do problem (7.3.9).

3. Do problem (5.4.20).

4. Do problem (5.4.23).

5. Do problem (5.4.26).

6. Do problem (5.4.15).

7. Do problem (5.4.18).

8. Show that if the characteristic polynomial of an $n \times n$ matrix A is

$$f(t) = (-1)^n t^n + a_{n-1} t^{n-1} + \cdots + a_0,$$

then a_0 is the determinant of A.

*Numbers in parentheses like (1.2.11) refer to the 11th problem in the second section of the first chapter of Friedberg *et. al.*