HOMEWORK 5 (MATH 115A, WINTER 2010)

Read: **Friedberg**, section 2.4, 2.5, 3.1, 3.2

Solve: problems:

- 5, 6, 14 (Section 2.4)
- 2 b, d, 3 b, d, f, 6 b, d (Section 2.5)
- 3 b, (Section 3.1)
- 2 b, d, f, 4 b, 5 b, d, f, h, 6 b, d, f, 17 (Section 3.2)
- Compute matrices AB, A^{-1} and B^{-1} for matrices given in exercise 2 (Section 3.1, p. 151). Verify that $(AB)(B^{-1}A^{-1}) = I$.
- Compute matrices A^2, A^{-1} and $3A$, of a matrix A given in exercise 7 (Section 3.2, p. 167). Express A^2 and A^{-1} as the products of elementary matrices.

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This Homework is due Wednesday February 17, at 2:02:00 pm. (two min after the class begins, by popular demands, to allow crossing campus, but not a second later). Please read the collaboration policy on the course web page. Make sure you write your name in the beginning and your collaborators' names at the end.

You must **box** all answers. Remember that answers are not enough, you also need to prove the results, i.e. provide an explanation exhibiting your logic.

P.S. Some of these book problems are harder than others. Some are plain hard. Some have hints at the end of the book. All problems out of 10.