

# Linear Algebra and its Applications, Spring 2013

## Homework 1

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**Note 1.** This homework is due *8:30 am, September 17, 2013*. Please submit a hard copy into the homework box outside the TAs' lab.

**Note 2.** "Review exercises" should be found in the textbook (the fourth edition).

**Note 3.** The instructor believes that the problems are ordered in a way that is more reasonable than the original order adopted in the textbook.

1. (5 points) Review exercise 1.1.
2. (10 points) Review exercise 1.2.
3. (10 points) Review exercise 1.10, where "preceding matrices" are the coefficient matrices of the two systems in review exercise 1.2.
4. (5 points) Review exercise 1.3a.
5. (10 points) Review exercise 1.3b with "10 by 10" changed to "3 by 3".
6. (5 points) Review exercise 1.9.
7. (5 points) Review exercise 1.6.
8. (5 points) Review exercise 1.8.
9. (10 points) Review exercise 1.13.
10. (10 points) Review exercise 1.16a.
11. (10 points) Review exercise 1.17.
12. (10 points) Review exercise 1.19. If such  $B$  does not exist, explain why.
13. (5 points) Review exercise 1.25.