

MATH 341
WRITTEN HOMEWORK 1
DUE JANUARY 15, 2020.
INSTRUCTOR: ROBERT LIPSHITZ

Reminder. There is *also* online homework. The first online homework is due on Monday, January 13.

Required textbook problems (hand these in):

- §1.1: 9, 14, 18, 28.

Notes: in 1.1.9, “describe the solution set” means is the solution set empty, has a single element, or has infinitely many elements, and if there are solutions, what they are. For problem 1.1.14, use matrices to solve the system. If you’re having trouble with 1.1.28, solve 1.1.27 first.

- §1.2: 2, 12, 16, 24, 26, 29, 30.

Notes: in 1.1.11 and 1.1.12, first reduce the matrix to RREF. If you have trouble with 1.1.24, try 1.1.23 first (and 1.1.25 after).

- §1.3: 3, 6, 10, 11, 16, 17, 22.
- §1.3: *either* 1.3.27(a,b) or 1.3.29 (your choice).
- §1.4: 1, 2, 3.

Suggested practice (don’t hand these in):

- Please read and make sure you can do the practice problems in sections 1.1, 1.2, and 1.3.
- Please read and use for review problems 1.1.23, 1.1.24, 1.2.21, 1.2.22, 1.3.23, 1.3.24.
- If you had trouble or got help with any of the assigned problems, solve another, similar problem. (The problems mostly come in groups; for example, 1.1.7, 1.1.8, 1.1.9, and 1.1.10 are all similar.)

Bonus points. An extra 5% of the homework score will be awarded for correctly following the tutorial on using Sage for linear algebra computation, at <https://blogs.uoregon.edu/math341wi20lipshitz/>. For this week, just follow the steps in the post “Getting started”, print out the worksheet you create, and hand it in for full credit. (This should take 15–30 minutes. If it’s taking longer, perhaps another classmate or I can help.)

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