

## HOMWORK 1 - DUE SEPTEMBER 17

**Homework instructions:** Complete the assigned problems on your own paper. Once you are finished, scan or photograph your work and upload it to Gradescope. When prompted, tell Gradescope where to find each problem.

You are allowed (and in fact encouraged) to work with other students on homework assignments. If you do that, please indicate on each problem who you worked with. If you use sources other than your notes, the textbook, and any resources on Canvas for your homework, you must indicate the source on each problem. You are not permitted to view, request, or look for solutions to any of the homework problems from solutions manuals, homework help websites, online forums, other students, or any other sources.

### **Textbook Problems:**

- §3.1: 11, 15, 17
- §3.2: 7, 9, 15
- §3.3: 8, 11

### **Additional Problems:**

1. Draw pictures to illustrate the three possibilities for the solution set of a linear system of two equations in two variables.
2. Give an example of a  $3 \times 3$  matrix in echelon form with exactly 2 nonzero entries.
3. Give an example of a  $3 \times 3$  matrix in reduced echelon form with exactly 4 nonzero entries.