Week 1 Problem 1. (In Which Steve Tries To Be Neat With Their MATLAB Homework.)

Table of Contents

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I have adhered to the Honor Code on this assignment.

*Hello again, scientist! I'll write in italics, and problems for you will always be in **bold**. As a general rule, I expect you to do at least as much writing as I do. Code should be part of your solution, but I expect variables to be clear and explanation to involve complete sentences. Cite your sources; if you work with someone in the class on a problem, that's an extremely important source.*

Problem 1.1.

Publish this .m file to a pdf and upload it to Gradescope properly.

Problem 1.1a.

I don't understand the rref command. Give me an example that I can copy for my MATLAB homework.

```
% doc rref
```

Run that (without the %) from the command window and scroll down to "Examples." Alternately, Google "matlab rref." That's what I always do.

```
A=[1 2 0; -1 -2 0]
B=rref(A)
```

```
A =

     1     2     0
    -1    -2     0


B =
```

```
     1     2     0
     0     0     0
```

Based on this computation, we can see that the first column of A is a pivot column; the second and third are not. If A is an augmented matrix, this means that the associated system has *infinitely many* solutions.

Acknowledgments: I worked alone on this problem, but I did use the following webpage for help: MATLAB rref. (No, you don't have to be this formal with everything you do. I just want you to know how to cite your sources. When you work with a group or use a website in a serious way, it's a matter of academic honesty for you to tell me.)

Problem 1.1b.

Why are semicolons important?

```
[T,Y]=meshgrid(-20:1:20, 0:1:40);
```

Remove the semicolon and publish it. That's why. I reserve the right not to read your MATLAB homework if you give me ten pages of matrix entries.

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