MATH 311 Advanced Linear Algebra

Homework 1

Basic Information

This assignment is due in the correct folder in Google Drive by **4 PM on Friday, January 31**. Any part of the assignment you LaTeX can be turned in by 10 PM without penalty.

Make sure you understand MHC honor code and have carefully read and understood the additional information on the class syllabus and the grading rubric. I am happy to discuss any questions or concerns you have!

Problems

1. **P.A.3** For this question, you can plot all the points on one graph. Also, show your computational work but you don't need to explain your work in complete sentences.
2. Matrix multiplication does not behave in the same way multiplication of integers or real numbers (or even complex numbers) works. The following exercises give two examples where matrix multiplication behaves differently.
    1. **P.C.7**
    2. **P.C.8(a)**
3. **P.C.9** This question is an "if and only if" question. To prove those kinds of statements you need to assume one side is true and then and prove the other side, and then assume the other side is true and prove the first side.
4. Read the JupyterHub and Python Info Sheet Basic, log into the Course JupyterHub, create a Notebook, and use it to find the determinants of the 3 matrices in **P.C.13**. Save the Notebook as "HW1" in your directory, but also please take a screenshot (or screenshots if more than one page) of your work and submit that with this homework.