

Term 151

Math 280

MATLAB Assignment 1

- Write a MATLAB m-file that solves the following. Your answer to the questions asked should be typed within the file.
- Upload your work through BlackBoard.

1) Consider the following systems

a)

$$\begin{aligned}x_1 - x_2 + 2x_3 &= 4 \\2x_1 + 3x_2 - x_3 &= 1 \\7x_1 + 3x_2 + 4x_3 &= 7\end{aligned}$$

b)

$$\begin{aligned}x_1 + x_2 + x_3 + x_4 &= 0 \\2x_1 + 3x_2 - x_3 - x_4 &= 2 \\3x_1 + 2x_2 + x_3 + x_4 &= 5 \\3x_1 + 6x_2 - x_3 - x_4 &= 4\end{aligned}$$

c)

$$\begin{aligned}x_1 - 2x_2 &= 3 \\2x_1 + x_2 &= 1 \\-5x_1 + 8x_2 &= 4\end{aligned}$$

i) Find the reduced echelon form of each augmented matrix of the above systems.

ii) Write the solutions, if any.

- 2) Do Exercise 1 page 78.
- 3) Do Exercise 2 page 78.
- 4) Do Exercise 4 page 78.
- 5) Do Exercise 9 page 80.