



LINEAR ALGEBRA
SPRING 2024

ASSIGNMENT 1
DUE JANUARY 17

Use augmented matrices and row operations to solve the following systems of linear equations.

Exercise 1.

$$\begin{aligned}x_1 - 3x_2 + 4x_3 &= -4 \\3x_1 - 7x_2 + 7x_3 &= -8 \\-4x_1 + 5x_2 - x_3 &= 7\end{aligned}$$

Exercise 2.

$$\begin{aligned}x_2 + 4x_3 &= -5 \\x_1 + 3x_2 + 5x_3 &= -2 \\3x_1 + 7x_2 + 7x_3 &= 6\end{aligned}$$

Exercise 3.

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