Worksheet - Lecture 7

Gauss-Jordan Elimination

1. Using Gauss-Jordan Elimination on the augmented matrices, reduce each system of equations from the previous worksheet (listed again below) to reduced row-echelon form and give the solution as a vector.

   a.

$$\begin{cases} x_1 + 2x_2 = 3 \\ -x_1 + x_2 = 0 \end{cases}$$

   b.

$$\begin{cases} x_1 + x_2 + 2x_3 = 7 \\ x_1 + x_3 = 4 \\ -2x_1 - 2x_2 = -6 \end{cases}$$

   c.

$$\begin{cases} 2x_1 - x_2 + x_3 = 1 \\ -x_1 + 2x_2 + 3x_3 = 6 \\ x_2 + 4x_3 = 6 \end{cases}$$