

TOR YMA JOSHUA

18/ENGG01025

CHEMICAL ENGINEERING

ASSIGNMENT 4

$$1 \quad x_1 - 2x_2 - x_3 + 3x_4 = 10$$

$$2x_1 + 3x_2 + x_4 = 8$$

$$x_1 - 4x_3 - 2x_4 = 3$$

$$-x_2 + 3x_3 + x_4 = -7$$

$$M = \begin{bmatrix} 1 & -2 & -1 & 3 \\ 2 & 3 & 0 & 1 \\ 1 & 0 & -4 & -2 \\ 0 & -1 & 3 & 1 \end{bmatrix}$$

$$B = \begin{bmatrix} 10 \\ 8 \\ 3 \\ -7 \end{bmatrix}$$

$$X = M^{-1} \cdot B$$

$$X = \begin{bmatrix} -1 \\ 2 \\ -3 \\ 4 \end{bmatrix}$$

$$x_1 = -1, x_2 = 2, x_3 = -3, x_4 = 4$$