

CPE 310 Quiz 01: Solving System of Linear Equations

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Given the following matrices:

$$A = \begin{bmatrix} 1 & 2 & 3 \\ 1 & 3 & 4 \\ 2 & 4 & 8 \end{bmatrix}, b = \begin{bmatrix} 4 \\ 5 \\ 10 \end{bmatrix}, B = \begin{bmatrix} 1 & 2 & 3 & 4 \\ 0 & 0 & 0 & 3 \\ 0 & 1 & 0 & 1 \\ 0 & 0 & 3 & 4 \end{bmatrix}, C = \begin{bmatrix} 1 & 2 & 3 \\ 1 & 0 & 1 \\ 2 & 3 & 4 \end{bmatrix}$$

1. Find the solution for the system $Ax = b$, using Gaussian elimination method.
2. Find $\det(B)$.
3. Find C^{-1} , using Gauss-Jordan elimination.