King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics

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Math 302
Quiz 2

Name: .....

ID: .....

Exercise 1. Consider the following two matrices:

$$A = \begin{pmatrix} 1 & -2 & -3 & 2 \\ -3 & 7 & -1 & 1 \\ 2 & -5 & 4 & -3 \\ -3 & 6 & 9 & -6 \end{pmatrix} \text{ and } B = \begin{pmatrix} -4 \\ -3 \\ 7 \\ -1 \end{pmatrix}.$$

(a) Find the reduced row-echelon form of the augmented matrix $[A \mid B]$.

(b) Is the system $AX = B$ consistent (has a solution)?

Exercise 2. Let

$$A = \begin{pmatrix} 1 & 2 & 3 \\ 2 & 5 & 3 \\ 1 & 0 & 8 \end{pmatrix}.$$

(i) Use Gauss-Jordan Method to find the inverse of A.

(ii) Solve the system

$$\begin{cases} x + 2y + 3z = 1 \\ 2x + 5y + 3z = 4 \\ x + 8z = 1 \end{cases}$$