QUIZ 3 Math 304-06 Print your name _____
Sept. 18, 2023

No consultation!—that includes no electronics.

(1) Does $A = \begin{bmatrix} 2 & 0 & 2 \\ 3 & 3 & 6 \\ 1 & 1 & 7 \end{bmatrix}$ have an inverse A^{-1}? If it does, find A^{-1}.

(2) Use A^{-1} from problem 1 to solve the equation $A\mathbf{x} = \begin{bmatrix} 3 \\ 4 \\ 1 \end{bmatrix}$.

TURN OVER FOR QUESTION 3

(3) Which of these properties characterizes invertible matrices A? Circle Yes or No for each question. Read carefully.

(a) Yes No A is square.

(b) Yes No A is $n \times n$ and has n pivot columns.

(c) Yes No The columns of A are linearly independent.

(d) Yes No A is square and its columns are linearly independent.

(e) Yes No There is a matrix B such that $AB = I$, an identity matrix.