MATH 304-08 QUIZ 1 1/25/2023 YOUR NAME _____

(1) (10 points) Here is a linear system:

$$\begin{aligned} 2x_1 + x_3 &= 0 \\ x_1 + x_3 &= 1 \\ x_2 + x_3 &= 0 \end{aligned}$$

(a) How many variables are there in the system? _____

(b) Write the augmented matrix of this system.

(c) Solve the system using elementary row operations. Use the space below.

(d) How many solutions does this linear system have? Circle the right answer. Explain why your answer is correct.

Zero One Two Many (i.e., more than two)

TURN OVER FOR ANOTHER QUESTION

(2) (10 points) Here is a linear system:

$$2x_1 + x_4 = 0$$
$$x_1 + x_3 = 0$$

(a) How many variables are there in the system? _____

(b) Write the augmented matrix of this system.

(c) Solve the system using elementary row operations. Use the space below.

(d) How many solutions does this linear system have? Circle the right answer. Explain why your answer is correct.

Zero One Two Many (i.e., more than two)