Math 1500: Section 2.1

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Perform the indicated elementary row operation.

1) 1) _____

$$\left[\begin{array}{ccc|c} 1 & 0 & 7 & 8 \\ 0 & 1 & -3 & 4 \\ 1 & 2 & 1 & 3 \end{array}\right] \xrightarrow{3\,[2]}$$

2) Find the result of performing the elementary row operation [3] + (5) [2] on the system 2) _____

$$\left[\begin{array}{ccc|c} 1 & 0 & 3 & 9 \\ 0 & 1 & -3 & 2 \\ 0 & -5 & 4 & 1 \end{array}\right].$$

State and perform the next elementary row operation that should be performed to put the matrix in diagonal form.

3) 3) _____

$$\left[\begin{array}{ccc|c} 1 & 0 & 0 & -3 \\ 0 & 1 & -2 & -2 \\ 0 & 0 & 1 & 1 \end{array}\right]$$

Solve the linear system by using the Gauss-Jordan elimination method.

4) 4) _____

$$\begin{cases} x - 5y = -4 \\ 6x + 8y = 33 \end{cases}$$

5) 5) _____

$$\begin{cases} 3x + \frac{1}{2}y = 2 \\ 5x + 2y = 1 \end{cases}$$

6) 6) _____

$$\begin{cases} x + z = 1 \\ 2x + y = 1 \\ y - z = -2 \end{cases}$$

7) Is x = 2, y = -1, z = 4 a solution of the system of equations shown below? Explain your answer. 7) _____

$$\begin{cases} x - y + z = 7 \\ 2x - z = 0 \\ 2y + 3z = 10 \end{cases}$$