

Name _____ Score _____/10

Please Print Clearly

1. Perform the elementary row operation indicated. Write the entire resultant matrix but do not continue on in an attempt to find an inverse.

$$\begin{bmatrix} 1 & 3 & -2 & 1 & 0 & 0 \\ -3 & 2 & 1 & 0 & 1 & 0 \\ 1 & 2 & 3 & 0 & 0 & 1 \end{bmatrix} \xrightarrow{3R_1 + R_2 \rightarrow R_2} \begin{bmatrix} 1 & 2 & 3 & 0 & 0 & 1 \end{bmatrix} \text{ STOP}$$

2. Are $\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$ and $\begin{bmatrix} -1 & 3 \\ -2 & 4 \end{bmatrix}$ inverses? Your work must justify your conclusion.

3. Write the system of equations $\begin{cases} 2x - 4y = 7 \\ x + 5y = -3 \end{cases}$ as an equivalent matrix equation.

4. What is the 3×3 identity matrix.