Name: _____

Section: _____

1. Compute the inverse of the following matrix by row reduction (it is indeed invertible):

$$\begin{bmatrix} 1 & -1 & 0 \\ 2 & 0 & 3 \\ 2 & 1 & 4 \end{bmatrix}$$

2. Is the linear transformation that gives rise to the following transformation one-to-one? Onto? Do not use row reduction.

$$\begin{bmatrix} 1 & 2 & 1 \\ -1 & -2 & 3 \\ 0 & 0 & 1 \end{bmatrix}$$

3. Provide an example or explain why none exists of a 2×3 matrix A and a 3×2 matrix C such that $AC = I_2$. If an example exists, try to give the simplest possible example you can find.