Math 2418 Linear Algebra Quiz #1
Aug 29-30, 2001

1.) Find the following matrices for the system of linear equations given below (DO NOT SOLVE):

$$\begin{aligned} 2x_1 + 2x_2 - 5x_3 &= 1 \\ 4x_1 + 4x_2 - 9x_3 &= -1 \\ -2x_1 - 2x_2 + 4x_3 &= 2 \end{aligned}$$

[3] 1a.) Augmented Matrix Form:_____

[5] 1b.) Reduced Echelon Form: _____

2.) Solve each of the following systems of linear equations for the variables $x_1, ..., x_n$.

[4] 2a.) $\begin{bmatrix} 1 & 0 & 0 & 5 \\ 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 0 \end{bmatrix}$ Answer 2a.)_____

[4] 2b.) $\begin{bmatrix} 0 & 1 & 0 & 4 & 0 \\ 0 & 0 & 1 & -1 & 0 \\ 0 & 0 & 0 & 0 & 1 \end{bmatrix}$ Answer 2b.)_____

[4] 2c.) $\begin{bmatrix} 0 & 1 & 0 & 4 & 5 \\ 0 & 0 & 1 & -1 & 2 \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$ Answer 2c.)_____