Linear Algebra Quiz 1

1. Find the reduced row echelon form of the following matrix. Make sure to specify the row operations that you use. (4 pts)

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

2. Find all solutions to each of the following linear systems. Write your answer as a vector. (2 pts each)

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

(b) $\left[\begin{array}{ccc|c} 1 & 0 & 0 & 6 \\ 0 & 1 & 0 & 2 \\ 0 & 0 & 1 & 1 \\ 0 & 0 & 0 & 1 \end{array}\right]$

(c) $\left[\begin{array}{cccc|c} 1 & 4 & 0 & -2 & 1 \\ 0 & 0 & 1 & 0 & 3 \\ 0 & 0 & 0 & 0 & 0 \end{array}\right]$