Math 3160 - Quiz 0

Name:_____

To receive credit you must show your work.

1. Solve the following systems of linear equations. Write as augmented matrix and reduce to RREF. Write out your solution set as in class.

$$
\begin{array}{rrrl}
2x_1 & -x_2 & +4x_3 & = 2 \\
 & & x_3 & = 0 \\
x_1 & -x_2 & +2x_3 & = 6
\end{array}
$$

$$
\begin{array}{rrrl}
x_1 & +4x_2 & +7x_3 & = 2 \\
2x_1 & +5x_2 & +8x_3 & = 0 \\
3x_1 & +6x_2 & +9x_3 & = 0
\end{array}
$$

$$
\begin{array}{rrrrrl}
2x_1 & -2x_2 & +4x_3 & & -6x_5 & = 2 \\
 & & x_3 & +6x_4 & & = 0 \\
x_1 & -x_2 & +2x_3 & +x_4 & +x_5 & = 0
\end{array}
$$

2. Solve the following system of linear equations using the matix inverse and setting up the equation

$$A\mathbf{b} = \mathbf{x}.$$

$$
\begin{array}{rrrl}
x_1 & -2x_2 & +4x_3 & = 8 \\
 & 2x_2 & -x_3 & = 0 \\
 & x_2 & +3x_3 & = 7
\end{array}
$$