Name: _____ Date: _____ Period: _____ Score: _____

Sec 1H Unit 7 Day 3 - Row Reduction Part 2 Assignment

1. Solve the following problem by writing a system of equations (be sure to identify your variables) and solving the system of equations using matrix row-reduction.

   A theater wants to take in $2000 for a certain matinee. Children's tickets cost $5.00 each and adult tickets cost $10.00 each. The theater has a maximum of 350 seats. What number of children's tickets and adult tickets can the theater sell?

The systems of equations in problems #2 - 5 have already been written as an augmented matrix. Solve these systems. Show all of your work including a description what you did on each step.

2. $\left[\begin{array}{cc|c} 3 & 2 & -6 \\ 1 & 2 & 2 \end{array}\right]$

3. $\left[\begin{array}{cc|c} -3 & 1 & -12 \\ 2 & 3 & -14 \end{array}\right]$

Success is not final. Failure is not fatal.
It is the courage to continue that counts.

4. $\begin{bmatrix} 7 & 2 & 24 \\ 8 & 2 & 30 \end{bmatrix}$

5. $\begin{bmatrix} 5 & 1 & 9 \\ 10 & -7 & -18 \end{bmatrix}$

Solve the following systems of equations with a method of your choice.

6. $\begin{cases} x - y = 11 \\ 2x + y = 19 \end{cases}$

7. $\begin{cases} -4x + 9y = 9 \\ x = 3y - 6 \end{cases}$