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

Sec 1H Unit 7 Day 2 - Solving Systems using Row Reduction Assignment

1. Write an augmented matrix for this system of linear equations: $\begin{cases} 4x + 9y = 7 \\ 2x - 3y = 5 \end{cases}$

2. What matrix would you use to solve this system of equations? $\begin{cases} y = 13x + 79 \\ y = -8x + 36 \end{cases}$

3. Write the system of equations that generated this matrix: $\begin{bmatrix} -1 & 5 & 20 \\ 2 & 0 & 14 \end{bmatrix}$

4. Given the following matrix, finish solving the system using row reduction. Make sure to show each step and give the solution to the system.

$$\begin{bmatrix} 1 & 0 & -6 \\ -4 & 2 & 32 \end{bmatrix}$$

5. Find and justify a sequence of matrices to solve the following scenario:

On Monday Carlos purchased 3 bags of cat food and 5 bags of dog food for $22.75 to use in his pet-sitting business. He had to return to the store on Thursday to buy 2 more bags of cat food and 3 more bags of dog food, which cost him $14.25. Find the price of the cat food and dog food.

If it doesn't challenge me, it won't change me.