

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

*Sec 1H Unit 7 Day 3 - Row Reduction, Part 2 Classwork*

*The systems of equations given below 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.*

1. 
$$\left[ \begin{array}{cc|c} 2 & 4 & 0 \\ 3 & 5 & -2 \end{array} \right]$$

2. 
$$\left[ \begin{array}{cc|c} 4 & -2 & 2 \\ 1 & 3 & 11 \end{array} \right]$$

3. 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.

*Two of Carlos' and Clarita's friends are purchasing school supplies at the bookstore. Stan buys three packages of pencils and two markers for \$4.75. Jan buys six packages of pencils and five markers for \$10.00.*

4. The following matrix represents a system of dependent functions (both equations in the system represent the same line). What happens when you try to row-reduce the  $2 \times 3$  matrix that represents a dependent system?

$$\left[ \begin{array}{cc|c} 3 & 4 & 3 \\ 6 & 8 & 6 \end{array} \right]$$

5. The following matrix represents a system of inconsistent functions (both equations in the system represent parallel lines). What happens when you try to row-reduce the  $2 \times 3$  matrix that represents an inconsistent system?

$$\left[ \begin{array}{cc|c} 2 & -4 & -15 \\ 1 & -2 & -14 \end{array} \right]$$

Solve

6.  $\left[ \begin{array}{ccc|c} 4 & -2 & 1 & 3 \\ 2 & 1 & -1 & 1 \\ 3 & -1 & 2 & 7 \end{array} \right]$       Goal  $\left[ \begin{array}{ccc|c} 1 & 0 & 0 & x \\ 0 & 1 & 0 & y \\ 0 & 0 & 1 & z \end{array} \right]$