Name: Date: Period:

Put the given equations in standard form. **(Show your work)**

    1) $3x - 4 = 13y$ 3) $5e + 6f = 21 - 3g$

    2) $4a = 6b$ 4) $8x - 3 = 4y - 23z$

Create an augmented matrix for the given equations

    5) $\begin{cases} 3x + 4y + 2z = 11 \\ 2x + 3y - z = 4 \\ 5x + 5y - 3z = -1 \end{cases}$ 6) $2x - 1 = 3y$ and $2 + 3y = -x$

Solve the following system with or without technology be sure to show all of your work.

    7) $7x - 3y = -1$
       $x + 2y = 12$

Solve the following two system of equations with or without technology. **Explain your answer.**

    8) $-x - 5y - 5z = 2$

        $4x - 5y + 4z = 19$

        $x + 5y - z = -20$

9) Create a system of equations for the following problem. Don't forget to identify the variables first.

    Chase and Sara went to the candy store. Chase bought 5 pieces of fudge and 3 pieces of bubble gum for a total of $5.70. Sara bought 2 pieces of fudge and 10 pieces of bubble gum for a total of $3.60. Which system of equations could be used to determine the cost of 1 piece of fudge, and 1 piece of bubble gum?

10) Using your system of equations for the problem in #9 create an augmented matrix that could be used to solve for the variables

11) Solve the above system **and** make some conclusions about the result.

Review

Name: Date: Period:

12) Given the following set of ordered pairs plot the figure on the graph below and create a matrix to define the figure. (0,-2),(-1,6),(1,4),(4,2),(1,1)

13) Perform a dilation of the figure make sure you show your matrix multiplication.

14) Perform a reflection of the matrix using one of the given reflection matrices. **(Show your Work)**

$$1) \ y = axis \begin{pmatrix} -1 & 0 \\ 0 & 1 \end{pmatrix} \quad 2) \ x = axis \begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix} \quad 3) \ y = x \begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix} \quad 4) \ y = -x \begin{pmatrix} 0 & -1 \\ -1 & 0 \end{pmatrix}$$

15) Plot the final transformed figure with the original figure. Use the given x – y chart to show your final transformed points.

X   Y

Review