

Name \_\_\_\_\_

Advanced Algebra

Unit 6 Assignment #14

Solve the Matrix equations. You need to show how to find the inverse of the 2 by 2. You then know that when you multiply  $[A]^{-1} * [A]$  you just get  $\begin{bmatrix} x \\ y \end{bmatrix}$ . You know what you do to one side you need to do to the other. So you must multiply  $[A]^{-1}$  on the LEFT side of the answer matrix  $[B]$ .

$$1) \begin{bmatrix} 2 & 4 \\ 7 & -3 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 14 \\ 15 \end{bmatrix}$$

$$2) \begin{bmatrix} 2 & -3 \\ 1 & 1 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} -14 \\ 13 \end{bmatrix}$$

$$3) \begin{bmatrix} 1 & 2 \\ 1 & -3 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 8 \\ -17 \end{bmatrix}$$

$$4) \begin{bmatrix} 6 & 4 \\ 1 & -1 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 44 \\ 4 \end{bmatrix}$$