Transition to College Math

Guided Practice Unit 2 Lesson 4 Inverse Matrices

Name _____ Date _____ Period _____

Find the inverse of each of the following matrices. If it is not possible, explain why.

1. $\begin{bmatrix} 1 & -3 \\ 1 & -2 \end{bmatrix}$

2. $\begin{bmatrix} -6 & 3 \\ -2 & 1 \end{bmatrix}$

3. $\begin{bmatrix} 4 & 3 \\ -2 & -4 \end{bmatrix}$

4. $\begin{bmatrix} 1 & 0 & 0 \\ 0 & 2 & 3 \\ 0 & 4 & 5 \end{bmatrix}$

Use matrix algebra to solve the following systems of equations.

5. $3x - 2y = -12$

   $4x + y = 5$

6. $6x - y = 15$

   $2x + 3y = 55$

7. $3y - x = 17$

   $2x - 6y = 1$

8. Johnny has 16 coins, some dimes and the rest quarters. If he has a total of $2.50 in coins, how many quarters does he have? Set up a matrix equation and solve it.