Algebra 2   **Name** _____
3.5 – 3.8 In-Class Review

1. Simplify: $\begin{bmatrix} 1 & 4 \\ 5 & 6 \end{bmatrix} - 2\begin{bmatrix} 8 & -5 \\ -3 & -7 \end{bmatrix}$	2. Simplify: $\begin{bmatrix} 2 & -1 & 7 \\ 5 & 8 & 2 \end{bmatrix} - \begin{bmatrix} 2 & 9 & 3 \\ -5 & 2 & -2 \end{bmatrix}$
3. Find the inverse of A. $A^{-1} = \begin{bmatrix} 2 & 4 \\ 1 & 3 \end{bmatrix}$	4. Solve the matrix equation. $\begin{bmatrix} 3 & 2 \\ 1 & 1 \end{bmatrix} X = \begin{bmatrix} 1 & 0 & 2 \\ -3 & 1 & 4 \end{bmatrix}$
5. Write the system as a matrix equation and solve. Write you solution as an ordered triple. $x - y - 2z = -6$ $3x + 2y = -25$ $-4x + y - z = 12$	6. Evaluate. $\begin{vmatrix} -3 & -1 \\ -7 & -2 \end{vmatrix} + \begin{vmatrix} 4 & -1 \\ 2 & 3 \end{vmatrix}$
7. Find the area of the triangle with the given vertices: A (8, 6) ; B (0, 0) ; C (-5, 4)	8. Multiply. $\begin{bmatrix} -3 & 2 & -5 \\ 4 & -6 & 3 \end{bmatrix}\begin{bmatrix} 4 \\ 1 \\ 0 \end{bmatrix}$
9. Simplify: $5\begin{bmatrix} 6x & 8 \\ 3 & 4y \end{bmatrix} + 3\begin{bmatrix} -4x & 10 \\ 3 & 2y \end{bmatrix}$	10. Write the system as a matrix equation and solve. Write you solution as an ordered pair. $7x + 2y = -19$ $-x + 2y = 21$

11. Castel and Gabriella are selling pies for a school fundraiser. Customers can buy apple pies and lemon meringue pies. Castel sold 6 apple pies and 4 lemon meringue pies for a total of $80. Gabriella sold 6 apple pies and 5 lemon meringue pies for a total of $94. What is the cost each of one apple pie and one lemon meringue pie?

12. A plane traveled 580 miles to Ankara and back. The trip there was with the wind. It took 5 hours. The trip back was into the wind. The trip back took 10 hours. Find the speed of the plane in still air and the speed of the wind.

13. A breakfast consisting of a glass of milk, a serving of shredded wheat, and an egg supplies 17 grams of protein. Three eggs and a glass of milk supply 29 grams of protein. A serving of shredded wheat and two glasses of milk supply 18 grams of protein. How much protein is supplied by one glass of milk, one egg, and one serving of shredded wheat if each is consumed by itself?

14. There was a clothing sale at the local mall. My mom bought 3 shirts, 4 pairs of pants, and 2 sweaters, for a total of $88.50. My brother bought 5 shirts, 3 pairs of pants, and 1 sweater for a total of $76.00. My sister told me that the price of a sweater was twice as much as that of a shirt. What was the price of each item?