Algebra 3   Name_____
Linear and Matrices Quiz Review

Graph each linear equation using the indicated method.

1. slope and y-intercept: $5y = -3x - 25$

2. table of values: $3y = 4x - 5$

3. x-intercept and y-intercept: $3x - 4y = 12$

Solve each system of equations using the indicated method.

4. Graphing: $\begin{array}{l} 4x + 3y = 7 \\ 4x + y = 5 \end{array}$

5. Substitution: $\begin{array}{l} 2x + 4y = -8 \\ 5x - y = -9 \end{array}$

6. Elimination: $\begin{array}{l} -4x + y = -2 \\ 2x - 3y = -9 \end{array}$

State the dimensions of each matrix.

7. $\begin{bmatrix} 2 \\ -5 \\ 7 \\ 1 \end{bmatrix}$

8. $\begin{bmatrix} 4 & -3 \\ 0 & 7 \\ 11 & 8 \end{bmatrix}$

9. $\begin{bmatrix} 17 & 14 & 21 & 13 & 18 \\ 12 & 19 & 16 & 15 & 11 \end{bmatrix}$

Perform the indicated operations.

10. $3\begin{bmatrix} 2 & 5 \\ -1 & 4 \end{bmatrix} + \frac{1}{5}\begin{bmatrix} 10 & -15 \\ -5 & 0 \end{bmatrix}$

11. $\begin{bmatrix} -3 & 4 \\ -5 & 8 \\ 2 & -1 \end{bmatrix} \cdot \begin{bmatrix} 4 & -5 & 6 \\ 0 & -1 & 3 \end{bmatrix}$

12. $\begin{bmatrix} 4 & 2 \\ 5 & 1 \end{bmatrix} \cdot \begin{bmatrix} 3 \\ 5 \\ 7 \end{bmatrix}$

Find the value of the determinant for each.

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

14. $\begin{bmatrix} 1 & 3 & 2 \\ 1 & -1 & 3 \\ 3 & -4 & 2 \end{bmatrix}$