

Algebra 2A

Practice Quiz on 12-3 & 12-4

Name: _____

Date: _____ Hr: _____

OW ALL WORK

For #1-2, find a.) AB and, b.) BA. c.) Determine whether the matrices are multiplicative inverses.

1. $A = \begin{bmatrix} -3 & 7 \\ -2 & 5 \end{bmatrix}$, $B = \begin{bmatrix} -5 & 7 \\ -2 & 3 \end{bmatrix}$

1. a.) _____

b.) _____

c.) _____

2. $A = \begin{bmatrix} 1 & 2 & -1 \\ -1.5 & -3 & 1.75 \\ 0 & -1 & 0.5 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 0 & 9 \\ 3 & 2 & -1 \\ 6 & 4 & 0 \end{bmatrix}$

2. a.) _____

b.) _____

c.) _____

For #3-5, evaluate the determinant of each matrix.

3. $\begin{bmatrix} 7 & 2 \\ 0 & -3 \end{bmatrix}$

3. _____

4. $\begin{bmatrix} 4 & -1 \\ -8 & 2 \end{bmatrix}$

4. _____

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

5. _____

For #6-8, find the inverse matrix if it exists.

6. $\begin{bmatrix} 2 & -1 \\ 1 & 0 \end{bmatrix}$

6. _____

7. $\begin{bmatrix} 6 & -8 \\ -3 & 4 \end{bmatrix}$

7. _____

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

8. _____

For # 9-10, solve each matrix equation if possible.

9. $\begin{bmatrix} 0 & -4 \\ 0 & -1 \end{bmatrix} X = \begin{bmatrix} 0 \\ 4 \end{bmatrix}$

9. _____

10. $\begin{bmatrix} 6 & 10 & 13 \\ 4 & -2 & 7 \\ 0 & 9 & -8 \end{bmatrix} X = \begin{bmatrix} 84 \\ 18 \\ 56 \end{bmatrix}$

10. _____

For # 11-13, write each system as a matrix equation.

1.
$$\begin{cases} y = 3x - 7 \\ x = 2 \end{cases}$$

11. _____

12.
$$\begin{cases} x + 3y - z = 2 \\ x + 2z = 8 \\ 2y - z = 1 \end{cases}$$

12. _____

13.
$$\begin{cases} x + 2y = 11 \\ 2x + 3y = 18 \end{cases}$$

13. _____

For # 14-15, solve each system using a matrix equation.

14.
$$\begin{cases} x + 2y = 10 \\ 3x + 5y = 26 \end{cases}$$

14. _____

15.
$$\begin{cases} x = 5 - y \\ 3y = z \\ x + z = 7 \end{cases}$$

15. _____

16. Perry and Alberto are selling wrapping paper for a school fundraiser. Customers can buy rolls of plain wrapping paper and rolls of holiday wrapping paper. Perry sold 14 rolls of plain wrapping paper and 11 rolls of holiday wrapping paper for a total of \$333. Alberto sold 1 roll of plain wrapping paper and 11 rolls of holiday wrapping paper for a total of \$177.

a. Write a matrix equation to represent this situation.

b. What is the cost of each type of wrapping paper?

16.

a. _____

b. _____