

Name _____

Date _____

Pre-Calculus
Miss Kajfasz

Review - Matrices

SHOW ALL WORK!!!

1. What are the dimensions of $-2 \begin{bmatrix} 1 & 0 & 5 \\ 7 & 9 & 2 \end{bmatrix}$?

2. If matrix A has the dimensions of 4x5 and matrix B has dimensions of 5x6, what would the dimensions of the product matrix be?

3. Use the following matrices to find a and b.

$$A = \begin{bmatrix} 2 & 6 & 9 \\ -1 & 6 & 11 \\ -3 & 6 & 15 \end{bmatrix} \quad B = \begin{bmatrix} 1 & 3 & 5 \\ 7 & 9 & 2 \\ 4 & 6 & 12 \end{bmatrix}$$

a. Find $A + B$

b. Find $B - A$

4. Use the following matrices to find a, b, and c.

$$A = \begin{bmatrix} 7 & 6 \\ 2 & 4 \\ 0 & 3 \end{bmatrix} \quad B = \begin{bmatrix} 5 & 9 \\ 1 & 2 \end{bmatrix} \quad C = \begin{bmatrix} 3 & 8 \\ 6 & 9 \end{bmatrix}$$

a. Find AB .

b. Find $B - 3C$.

c. Calculate $2B$.

5. Use the following matrix to find a and b.

$$C = \begin{bmatrix} 0 & 2 & 6 & 9 \\ -3 & 5 & -7 & 10 \\ 12 & 1 & 3 & 5 \\ -1 & 0 & -11 & 13 \end{bmatrix}$$

- Calculate the determinant of C.
 - Find the inverse of C.
6. Solve the following system of equations. Must show ALL work!!!

$$3x - 5y = 14$$

$$-4x + y = -11$$

7. What is the solution to the following system of equations? (Write the system of equations as matrices and state the solution.

$$-11x + 7y + z = 5$$

$$9x - 19y - 2z = 13$$

$$3x - 2y = -7$$

8. Define the following vocabulary words.
- Matrix
 - Element
 - Matrix Addition
 - Scalar Multiplication
 - Matrix Multiplication
 - Additive Identity Matrix
 - Multiplicative Identity Matrix
 - Matrix Subtraction
 - Inverse Matrix
 - Determinant of a Matrix