

IA2 Review

4.1-4.2

Name _____

Period _____ Date _____

Use matrices A, B and C to answer the following questions.

$$A = \begin{bmatrix} 4 & 9 \\ -2 & 1 \\ 5 & 0 \end{bmatrix}$$

$$B = [18 \quad -13 \quad 1]$$

$$C = \begin{bmatrix} 8 & -1 \\ 7 & 3 \\ 11 & -2 \end{bmatrix}$$

1) What is the dimension for A _____

2) What is the dimension for B _____

3) What is the entry for a_{12} _____4) What is the entry at b_{11} _____

If possible, find the indicated Matrix.

5) $2B$ 6) $A - C$ 7) $C + B$ 8) $C + A$ 9) $-3B$ 10) $\frac{1}{2}C$

Show your work for the next two problems for full credit!

11) $2C + A$ 12) $4(C - A)$

Multiply, **BY HAND**, the following matrices. Show all of your work!!! If it is not possible, write *Does Not Exist and explain*.

$$13) \begin{bmatrix} 4 & -2 \\ 0 & 3 \end{bmatrix} \cdot \begin{bmatrix} 6 \\ -1 \end{bmatrix}$$

$$14) \begin{bmatrix} 0 & 5 & -9 \\ 6 & -1 & 1 \end{bmatrix} \cdot \begin{bmatrix} 4 & 3 \\ 2 & -2 \\ -4 & 7 \end{bmatrix}$$

Using a calculator, multiply the following matrices.

$$15) \begin{bmatrix} -2 & 4 & 8 \\ 12 & -3 & 6 \\ 4 & -1 & 0 \end{bmatrix} \cdot \begin{bmatrix} -9 & 2 \\ 4 & 1 \\ -7 & 3 \end{bmatrix}$$

$$16) \begin{bmatrix} 5 & -3 & 5 \\ 2 & 9 & -4 \end{bmatrix} \cdot \begin{bmatrix} 0 & 1 \\ 7 & 8 \end{bmatrix}$$

Solve for the missing variables. Show your work for full credit.

$$17) \begin{bmatrix} 2x + 4 & 6 \\ 15 & -4 \\ 16 & 5z + 8 \end{bmatrix} = \begin{bmatrix} 6x - 12 & 6 \\ 3y + 6 & -4 \\ 16 & z \end{bmatrix}$$

$$x = \underline{\hspace{2cm}} \quad y = \underline{\hspace{2cm}} \quad z = \underline{\hspace{2cm}}$$

$$18) \begin{bmatrix} 12 & \frac{a}{4} - 1 \\ 19 & 3b - 8 \end{bmatrix} = \begin{bmatrix} 12 & 5 \\ 19 & 7 \end{bmatrix}$$

$$a = \underline{\hspace{2cm}} \quad b = \underline{\hspace{2cm}}$$