Name: _____ Period: _____ Date: _____

Adding and Subtracting Matrices Assignment

Select the letter that best completes the statements below.

1. $\begin{bmatrix} 4 \\ -7 \end{bmatrix} + \begin{bmatrix} 3 \\ 8 \end{bmatrix} =$ _____.

   a. $\begin{bmatrix} 7 \\ -1 \end{bmatrix}$

   b. $\begin{bmatrix} 1 \\ 7 \end{bmatrix}$

   c. $\begin{bmatrix} 43 \\ -78 \end{bmatrix}$

   d. $\begin{bmatrix} 7 \\ 1 \end{bmatrix}$

2. $\begin{bmatrix} 5 \\ 4 \end{bmatrix} - \begin{bmatrix} 4 \\ -4 \end{bmatrix} =$_____.

   a. $\begin{bmatrix} 9 \\ 8 \end{bmatrix}$

   b. $\begin{bmatrix} 1 \\ 0 \end{bmatrix}$

   c. $\begin{bmatrix} 1 \\ 8 \end{bmatrix}$

   d. $\begin{bmatrix} 0 \\ 1 \end{bmatrix}$

3. Addition of matrices is_____.
   a. Commutative
   b. Associative
   c. Distributive
   d. All of the above

4. The additive identity of $\begin{bmatrix} -3 & 4 \\ 2 & 1 \end{bmatrix}$ is_____.

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

   b. $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$

   c. $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$

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

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Adding and Subtracting Matrices Assignment

5. The additive inverse of $\begin{bmatrix} -2 & -4 \\ 6 & 3 \end{bmatrix}$ is _____.

a. $\begin{bmatrix} 2 & 4 \\ -6 & -3 \end{bmatrix}$

b. $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$

c. $\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$

d. $\begin{bmatrix} -2 & -4 \\ 6 & 3 \end{bmatrix}$

6. If the order of A is 3×2 and the order of B is 2×2, then the order of A+B will be _____.

a. 3×2
b. 2×2
c. 3×3
d. Doesn't exist

7. If $\begin{bmatrix} 4 \\ 3 \end{bmatrix} + \begin{bmatrix} k \\ 2 \end{bmatrix} = \begin{bmatrix} 10 \\ 5 \end{bmatrix}$, then k=_____.

a. 4
b. 6
c. 8
d. 10

8. If $\begin{bmatrix} m \\ 5 \end{bmatrix} - \begin{bmatrix} 2 \\ 3 \end{bmatrix} = \begin{bmatrix} 4 \\ 2 \end{bmatrix}$, then m=_____.

a. 2
b. 4
c. 6
d. 8

9. If $X + \begin{bmatrix} 2 \\ 1 \end{bmatrix} = \begin{bmatrix} 4 \\ 8 \end{bmatrix}$, then X=_____.

a. $\begin{bmatrix} 6 \\ 9 \end{bmatrix}$

b. $\begin{bmatrix} 2 \\ 7 \end{bmatrix}$

c. $\begin{bmatrix} -2 \\ -7 \end{bmatrix}$

d. $\begin{bmatrix} 7 \\ 2 \end{bmatrix}$

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Adding and Subtracting Matrices Assignment

10. $Y-\begin{bmatrix}1 & 2\\ -3 & 5\end{bmatrix}=\begin{bmatrix}4 & 3\\ 3 & 5\end{bmatrix}$, then Y=_____.

a. $\begin{bmatrix}5 & 5\\ 0 & 10\end{bmatrix}$

b. $\begin{bmatrix}2 & 4\\ 0 & 10\end{bmatrix}$

c. $\begin{bmatrix}5 & 5\\ 7 & 10\end{bmatrix}$

d. $\begin{bmatrix}3 & 1\\ 6 & 5\end{bmatrix}$

11. State whether the following statement is true or false.

a. $A + B = A - B$ T/F

b. $A + I = I + A = A$ T/F

c. $A + 0 = 0 + A = A$ T/F

d. $A + B = B + A$ T/F

e. $A + (B + C) = (A + B) + C$ T/F

f. $A - 0 = 0 - A$ T/F

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Adding and Subtracting Matrices Assignment

ANSWERS:

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   b. $\begin{bmatrix} 1 \\ 7 \end{bmatrix}$

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c. $\begin{bmatrix}5 & 5\\ 7 & 10\end{bmatrix}$

d. $\begin{bmatrix}3 & 1\\ 6 & 5\end{bmatrix}$

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e. $A + (B + C) = (A + B) + C$ T/F

f. $A - 0 = 0 - A$ T/F