

Addition and Subtraction of Matrices

(1) If $A = \begin{bmatrix} 8 & 1 \\ 9 & 1 \end{bmatrix}$ and $B = \begin{bmatrix} 3 & -7 \\ 2 & 9 \end{bmatrix}$

$$3B = \begin{bmatrix} \quad & \quad \end{bmatrix}$$

$$A' = \begin{bmatrix} \quad & \quad \end{bmatrix}$$

$$3B - A' = \begin{bmatrix} \quad & \quad \end{bmatrix}$$

(2) If $A = \begin{bmatrix} x & y \\ 2 & -1 \end{bmatrix}$, $C = \begin{bmatrix} 5 & -2 \\ 3 & -1 \end{bmatrix}$, $D = \begin{bmatrix} 1 & 2 \\ 7 & -3 \end{bmatrix}$ and $2A + C = D$, find

the values of x and y.

$$2A = \begin{bmatrix} \quad & \quad \end{bmatrix}$$

$$2A + C = \begin{bmatrix} \quad & \quad \end{bmatrix}$$

$$\text{Value of } x = \boxed{\quad}$$

$$\text{Value of } y = \boxed{\quad}$$

(3) If $A = \begin{bmatrix} 5 & 0 \\ 2 & 7 \end{bmatrix}$, $B = \begin{bmatrix} p & 0 \\ -2 & 4 \end{bmatrix}$, and $AB = BA$, then find the value of p.

$$AB = \begin{bmatrix} \quad & \quad \end{bmatrix}$$

$$BA = \begin{bmatrix} \quad & \quad \end{bmatrix}$$

$$\text{Value of } p = \boxed{\quad}$$