

Name : _____

Score : _____

Teacher : _____

Date : _____

Mixed Matrix Operations

Simplify. Write undefined if the expression isn't defined.

$$1) \quad 6 \begin{bmatrix} -5 \\ -3 \\ -3 \\ 2 \end{bmatrix} + 5 \begin{bmatrix} 2 \\ 6 \\ 5 \\ -6 \end{bmatrix}$$

$$2) \quad 6 \left\{ \begin{bmatrix} 3 & 0 & 0 \end{bmatrix} + \begin{bmatrix} 6 & 1 & -3 \end{bmatrix} \right\}$$

$$3) \quad \begin{bmatrix} -6 \\ 6 \\ 3 \end{bmatrix} \cdot \begin{bmatrix} -2 & 2 \end{bmatrix}$$



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Simplify. Write undefined if the expression isn't defined.

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

$$5) \begin{bmatrix} -6 & 3 \\ -1 & 2 \\ 5 & -4 \end{bmatrix} + \begin{bmatrix} 0 & 0 \\ -2 & 0 \\ -3 & 2 \end{bmatrix} + \begin{bmatrix} -4 & 1 \\ -6 & 4 \\ -3 & 3 \end{bmatrix}$$

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



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$$1) \quad 6 \begin{bmatrix} -5 \\ -3 \\ -3 \\ 2 \end{bmatrix} + 5 \begin{bmatrix} 2 \\ 6 \\ 5 \\ -6 \end{bmatrix}$$
$$\begin{bmatrix} -20 \\ 12 \\ 7 \\ -18 \end{bmatrix}$$

$$2) \quad 6 \left\{ \begin{bmatrix} 3 & 0 & 0 \end{bmatrix} + \begin{bmatrix} 6 & 1 & -3 \end{bmatrix} \right\}$$

$$\begin{bmatrix} 54 & 6 & -18 \end{bmatrix}$$

$$3) \quad \begin{bmatrix} -6 \\ 6 \\ 3 \end{bmatrix} \cdot \begin{bmatrix} -2 & 2 \end{bmatrix}$$

$$\begin{bmatrix} 12 & -12 \\ -12 & 12 \\ -6 & 6 \end{bmatrix}$$



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Simplify. Write undefined if the expression isn't defined.

$$4) \begin{bmatrix} -5 & -1 & 3 \\ -5 & 3 & -4 \\ 1 & 0 & 1 \\ -3 & -4 & 3 \end{bmatrix} \cdot \begin{bmatrix} -3 & 3 \\ -6 & 1 \\ -6 & -1 \end{bmatrix}$$
$$\begin{bmatrix} 3 & -19 \\ 21 & -8 \\ -9 & 2 \\ 15 & -16 \end{bmatrix}$$

$$5) \begin{bmatrix} -6 & 3 \\ -1 & 2 \\ 5 & -4 \end{bmatrix} + \begin{bmatrix} 0 & 0 \\ -2 & 0 \\ -3 & 2 \end{bmatrix} + \begin{bmatrix} -4 & 1 \\ -6 & 4 \\ -3 & 3 \end{bmatrix}$$
$$\begin{bmatrix} -10 & 4 \\ -9 & 6 \\ -1 & 1 \end{bmatrix}$$

$$6) \begin{bmatrix} -1 & 4 & 2 \\ 0 & 4 & 2 \end{bmatrix} \cdot \begin{bmatrix} -6 & -2 \\ -3 & -6 \\ 2 & -1 \end{bmatrix}$$
$$\begin{bmatrix} -2 & -24 \\ -8 & -26 \end{bmatrix}$$

