

Name: _____

Date: _____

Adding and Subtracting Matrices**Simplify.**

$$1) \begin{vmatrix} -6r + t \\ -r \\ 6s \end{vmatrix} + \begin{vmatrix} 6r \\ -4t \\ -3r + 2 \end{vmatrix}$$

$$2) |2 - 5 - 3| + |1 - 2 - 3|$$

$$3) \begin{vmatrix} 1 & -7 & 15 \\ 31 & 3 & 18 \\ 22 & 6 & 4 \end{vmatrix} + \begin{vmatrix} 13 & 17 & 5 \\ 3 & 8 & -1 \\ -9 & 2 & 12 \end{vmatrix}$$

$$4) |-13 \ 18 \ 12| + |34 \ -3 \ 9|$$

$$5) \begin{vmatrix} 2 & -5 & 9 \\ 4 & -7 & 11 \\ -6 & 3 & -17 \end{vmatrix} + \begin{vmatrix} 3 & 4 & -5 \\ 13 & 2 & 5 \\ 4 & -8 & 1 \end{vmatrix}$$

$$6) \begin{vmatrix} z - 5 \\ -6 \\ -1 - 6s \\ 3y \end{vmatrix} + \begin{vmatrix} -3y \\ 3z \\ 5 + z \\ 4z \end{vmatrix}$$

$$7) \begin{vmatrix} 3 & 6 \\ -1 & -3 \\ -5 & -1 \end{vmatrix} + \begin{vmatrix} 0 & -1 \\ 6 & 0 \\ 12 & 3 \end{vmatrix}$$

$$8) \begin{vmatrix} -4n & n + m \\ -2n & -4m \end{vmatrix} + \begin{vmatrix} 4 & -5 \\ 3m & 0 \end{vmatrix}$$

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

$$10) \begin{vmatrix} 8 & 7 \\ -6 & 5 \end{vmatrix} + \begin{vmatrix} 4 & -3 \\ 1 & 13 \end{vmatrix}$$



$$1) \begin{vmatrix} -6r + t \\ -r \\ 6s \end{vmatrix} + \begin{vmatrix} 6r \\ -4t \\ -3r + 2 \end{vmatrix}$$

$$\begin{vmatrix} t \\ -r - 4t \\ 6s - 3r + 2 \end{vmatrix}$$

$$2) |2 - 5 - 3| + |1 - 2 - 3|$$

$$|3 - 7 - 6|$$

$$3) \begin{vmatrix} 1 & -7 & 15 \\ 31 & 3 & 18 \\ 22 & 6 & 4 \end{vmatrix} + \begin{vmatrix} 13 & 17 & 5 \\ 3 & 8 & -1 \\ -9 & 2 & 12 \end{vmatrix}$$

$$\begin{vmatrix} 14 & 10 & 20 \\ 34 & 11 & 17 \\ 13 & 8 & 16 \end{vmatrix}$$

$$4) |-13 \ 18 \ 12| + |34 \ -3 \ 9|$$

$$|21 \ 15 \ 21|$$

$$5) \begin{vmatrix} 2 & -5 & 9 \\ 4 & -7 & 11 \\ -6 & 3 & -17 \end{vmatrix} + \begin{vmatrix} 3 & 4 & -5 \\ 13 & 2 & 5 \\ 4 & -8 & 1 \end{vmatrix}$$

$$\begin{vmatrix} -1 & -9 & 14 \\ -9 & -9 & 6 \\ -6 & 11 & -18 \end{vmatrix}$$

$$6) \begin{vmatrix} z - 5 \\ -6 \\ -1 - 6s \\ 3y \end{vmatrix} + \begin{vmatrix} -3y \\ 3z \\ 5 + z \\ 4z \end{vmatrix}$$

$$\begin{vmatrix} z - 5 - 3y \\ -6 + 3z \\ -4 - 5z \\ 3y + 4z \end{vmatrix}$$

$$7) \begin{vmatrix} 3 & 6 \\ -1 & -3 \\ -5 & -1 \end{vmatrix} + \begin{vmatrix} 0 & -1 \\ 6 & 0 \\ 2 & 3 \end{vmatrix}$$

$$\begin{vmatrix} 3 & 5 \\ 5 & -3 \\ -3 & 2 \end{vmatrix}$$

$$8) \begin{vmatrix} -4n & n + m \\ -2n & -4m \end{vmatrix} + \begin{vmatrix} 4 & -5 \\ 3m & 0 \end{vmatrix}$$

$$\begin{vmatrix} -4n + 4 & n + m - 5 \\ -2n + 3m & -4m \end{vmatrix}$$

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

$$\begin{vmatrix} -11 & 7 & 4 \\ 3 & -5 & 3 \end{vmatrix}$$

$$10) \begin{vmatrix} 8 & 7 \\ -6 & 5 \end{vmatrix} + \begin{vmatrix} 4 & -3 \\ 1 & 13 \end{vmatrix}$$

$$\begin{vmatrix} 12 & 4 \\ -5 & 18 \end{vmatrix}$$