Pre-Calculus Name_____

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Matrix Addition/Subtraction

Date_____ Period____

Simplify. Write "undefined" for expressions that are undefined.

1) $\begin{bmatrix} -4x & -2y^2 & 4y & 3+3y \end{bmatrix} + \begin{bmatrix} xy & -4y & x+4 & 2 \end{bmatrix} + \begin{bmatrix} 1+y & 0 & 1+y & 5 \end{bmatrix}$

2) $\begin{bmatrix} 5 \\ 2 \end{bmatrix} + \begin{bmatrix} 3 \\ y^2 \end{bmatrix} + \begin{bmatrix} x+y \\ 3+x \end{bmatrix}$

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

4) $\begin{bmatrix} 4 & 6y^2 & 4y & 4 \end{bmatrix} - \begin{bmatrix} 0 & x & x+5 & -y+x \end{bmatrix}$

5) $\begin{bmatrix} -3c & -6a & -3a \end{bmatrix} - \left(\begin{bmatrix} 4b & c^2 & -5a \end{bmatrix} + \begin{bmatrix} -c & a & -c \end{bmatrix} \right)$

6) $\begin{bmatrix} 4x \\ x+2 \end{bmatrix} + \begin{bmatrix} 2y \\ -3y \end{bmatrix} - \begin{bmatrix} 5 \\ y-3x \end{bmatrix}$

7) $\begin{bmatrix} 2 & -5 \end{bmatrix} + \begin{bmatrix} 1 & -6 \end{bmatrix}$

8) $\begin{bmatrix} 4a+3 \\ -3 \end{bmatrix} - \begin{bmatrix} 1 \\ 6a \end{bmatrix}$

9) $\begin{bmatrix} -4+j \\ h^2 \\ 0 \end{bmatrix} - \left(\begin{bmatrix} -jk+3 & kj & h-1 \\ -6k & 2 & h-2 \end{bmatrix} - \begin{bmatrix} hk & -3+j & h^2 \\ -2k & -5 & h \end{bmatrix} \right)$

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

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Answers to Matrix Addition/Subtraction

1) $\begin{bmatrix} -4x + xy + 1 + y & -2y^2 - 4y & 5y + x + 5 & 10 + 3y \end{bmatrix}$

2) $\begin{bmatrix} 8 + x + y \\ 5 + y^2 + x \end{bmatrix}$

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

4) $\begin{bmatrix} 4 & 6y^2 - x & 4y - x - 5 & 4 + y - x \end{bmatrix}$

5) $\begin{bmatrix} -2c - 4b & -7a - c^2 & 2a + c \end{bmatrix}$

6) $\begin{bmatrix} 4x + 2y - 5 \\ 4x + 2 - 4y \end{bmatrix}$

7) $\begin{bmatrix} 3 & -11 \end{bmatrix}$

8) $\begin{bmatrix} 4a + 2 \\ -3 - 6a \end{bmatrix}$

9) Undefined

10) $\begin{bmatrix} 5 & -6 & -5 \\ 5 & 5 & -5 \end{bmatrix}$

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