

Use these matrices for problems 1 and 2.

$$A = \begin{bmatrix} 2 & 1 & -3 \\ 1 & 0 & 4 \end{bmatrix}, B = \begin{bmatrix} 3 & 0 & 5 \\ 6 & 9 & -1 \end{bmatrix}, C = \begin{bmatrix} 5 & -1 & 0 \\ 7 & 8 & -1 \end{bmatrix}$$

1. Find $2A - B + C$
2. Find $7A - 2(B - C)$

Use these matrices for problems 3 and 4.

$$A = [1 \quad 2 \quad 3 \quad 4], B = \begin{bmatrix} 1 \\ 2 \\ 3 \\ 4 \end{bmatrix}$$

3. Find $A \cdot B$ if possible
4. Find $B \cdot A$ if possible

Use these matrices for problems 5 through 10.

$$A = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}, B = \begin{bmatrix} 1 & 0 & -1 \\ -1 & 0 & 1 \\ -2 & 0 & 1 \end{bmatrix}$$

5. Find $(A \cdot B)^T$
6. Find $B^T \cdot A^T$
7. Find $A \cdot (B - B^T)$
8. Find $A \cdot B - A \cdot B^T$
9. Find A^{-1} if possible
10. Find B^{-1} if possible