

3.6 Day 2 Practice & Extend

Example: Find AB if $A = \begin{bmatrix} -4 & 3 \\ 2 & -2 \\ 1 & 7 \end{bmatrix}$ and $B = \begin{bmatrix} 5 & -2 \\ -1 & 3 \end{bmatrix}$

Exercises

Use the given matrices to find each product, if possible.

$$A = \begin{bmatrix} 0 & 7 & 3 \\ -2 & 3 & 0 \end{bmatrix} \quad B = \begin{bmatrix} 4 & 2 \\ 1 & -3 \end{bmatrix} \quad C = \begin{bmatrix} -3 & 1 \\ 5 & -2 \\ 0 & 1 \end{bmatrix} \quad D = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$$

1. BA

2. AC

3. CA

Use $A = \begin{bmatrix} 2 & 1 \\ 2 & 1 \end{bmatrix}$, $B = \begin{bmatrix} -3 & 2 \\ 5 & 1 \end{bmatrix}$, $C = \begin{bmatrix} 3 & -1 \\ 1 & 0 \end{bmatrix}$, and $c = 2$ to determine whether the following equations are true for the given matrices.

4. $c(AC) = (AC)c$

5. $B(A + C) = BA + BC$

6. $c(A+B) = cA + cB$