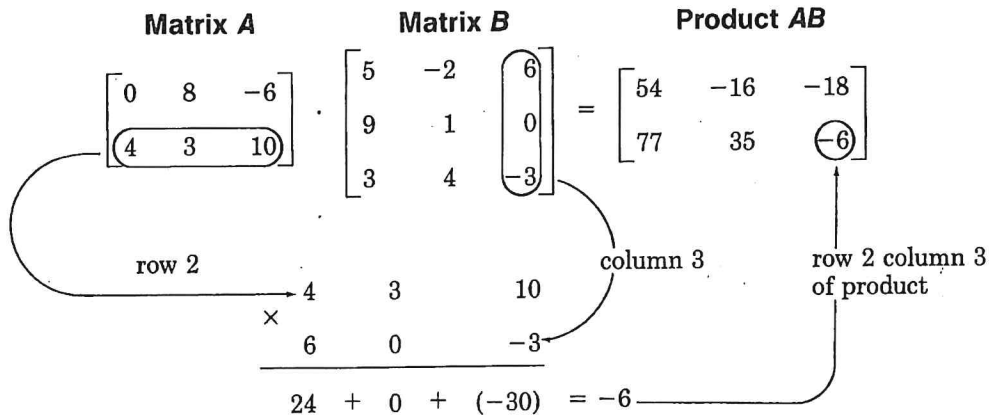


Reteaching Worksheet

Multiplication of Matrices

The product AB of two matrices is defined if and only if the number of columns in A equals the number of rows in B . For the product AB , the element in row i column j is found as follows: Use the i th row of A and the j th row of B . Multiply the corresponding elements and add the products.

Example:



Find each product.

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

2. $\begin{bmatrix} -1 & 0 \\ 3 & 7 \end{bmatrix} \cdot \begin{bmatrix} 3 & -1 \\ 2 & 4 \end{bmatrix}$

3. $\begin{bmatrix} 3 & -1 \\ 2 & 4 \end{bmatrix} \cdot \begin{bmatrix} 3 & -1 \\ 2 & 4 \end{bmatrix}$

Use matrices A , B , C , and D to evaluate each expression. Write "not defined" if the product does not exist.

$$A = \begin{bmatrix} 3 & 4 \\ 5 & 6 \end{bmatrix}$$

$$B = \begin{bmatrix} -3 & -4 & -5 \\ -1 & -2 & -3 \end{bmatrix}$$

$$C = \begin{bmatrix} 6 & 8 & 10 \\ 10 & 4 & 2 \\ -3 & 0 & -5 \end{bmatrix}$$

$$D = \begin{bmatrix} 3 & 6 \\ 9 & 12 \end{bmatrix}$$

4. AD

5. DB

6. BD

7. DA

8. BC

9. AB