Algebra 2

1-05 Multiply Matrices (12.2)

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Matrix Multiplication

- Matrix multiplication can only happen if the number of _____ of the _____ matrix is the same as the number of _____ on the _____ matrix.
- You can multiply a 3×5 with a 5×2.
- 3×**5** · **5**×2 → _____ will be the dimensions of the answer
- Because of this _____!

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

$$\begin{bmatrix} 1 & 0 & 4 \\ -2 & 3 & 2 \end{bmatrix} \cdot \begin{bmatrix} -1 \\ 3 \\ 5 \end{bmatrix}$$

Use the given matrices to evaluate $2(AC) + B$

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

The members of two bowling leagues submit meal choices for an upcoming banquet as shown. Each pizza meal costs $16, each spaghetti meal costs $22, and each Sam's chicken meal costs $18. Use matrix multiplication to find the total cost of the meals for each league.

	Pizza	Spaghetti	Sam's Chicken
League A	18	35	7
League B	6	40	9

658 #1, 5, 7, 9, 11, 13, 15, 17, 21, 23, 25, 29, 35, 39, 41, and Mixed Review = 20