

Name: _____ Period: _____

Score:

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HW 9-3 HONORS: Intro to Multiplying Matrices

Determine whether each matrix product is defined. Is so, state the dimensions of the product.

1.

$$A_{3 \times 5} \cdot B_{5 \times 2}$$

2.

$$C_{2 \times 3} \cdot D_{2 \times 3}$$

3.

$$X_{1 \times 3} \cdot Y_{3 \times 1}$$

Find each product.

4.

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

5.

$$\begin{bmatrix} 5 \\ 8 \end{bmatrix} \cdot \begin{bmatrix} 3 & -1 & 4 \end{bmatrix}$$

6.

$$\begin{bmatrix} 5 & -2 & -1 \\ 8 & 0 & 3 \end{bmatrix} \cdot \begin{bmatrix} -4 & 2 \\ 1 & 0 \end{bmatrix}$$

7.

$$\begin{bmatrix} 4 & -1 \\ 3 & 5 \end{bmatrix} \cdot \begin{bmatrix} 7 \\ 4 \end{bmatrix}$$

$$8. \begin{bmatrix} 2 & 3 \\ -8 & -6 \end{bmatrix} \cdot \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$$

$$9. \begin{bmatrix} 1 & -1 & 4 \\ 2 & -2 & 5 \end{bmatrix} \begin{bmatrix} 2 & 1 \\ -5 & 6 \\ 0 & -3 \end{bmatrix}$$

$$10. \begin{bmatrix} -2 \\ 3 \end{bmatrix} \cdot \begin{bmatrix} 2 & -1 & 9 \\ 8 & 7 & 5 \end{bmatrix}$$

$$11. \begin{bmatrix} 3 & 2 & -1 \\ 8 & 9 & 6 \\ 5 & -4 & 2 \end{bmatrix} \begin{bmatrix} -5 \\ 6 \\ 2 \end{bmatrix}$$

Team Members		
Age	Baseball	Softball
7-8	350	280
9-10	320	165
11-14	180	120

The Westfall Youth Baseball and Softball League charges the following registration fees:

Ages 7-8: \$45, Ages 9-10: \$55, Ages 11-14: \$65.

12. Write a matrix for the registration fees and a matrix for the number of players.

13. Multiply the two Matrices to find the total amount of money the League received from baseball and softball registrations.