# **Date:**

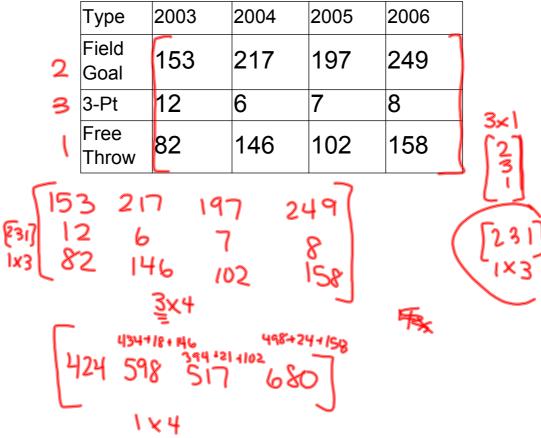
**Chapter:** Chapter 4:3 --> Multiplying Matrices

**Objectives:** Multiply matrices

Algebra II

### **Notes:**

The table shows the scoring summary for Lisa Leslie, the WNBA's all-time scoring leader, during her highest scoring seasons. Her total points can be summarized in the scoring matrix S. The point values for each type of basket made can be organized in the point value matrix P. For Ex. 2, write both matrices then find her total points scored during each season.



\*Can only multiply matrices when....# columns in A = # rows in B!

\*After multiplication....dimensions of product matrix are row of A and column of B.

$$A_{mxt} \cdot B_{txr} = AB_{mxr}$$

## **Multiplying Matrices**

$$\begin{bmatrix} a & b \\ c & d \end{bmatrix} \cdot \begin{bmatrix} e & f \\ g & h \end{bmatrix} = \begin{bmatrix} ae+bg & af+bh \\ ec+dg & cf+dh \end{bmatrix}$$

Algebra II

#### Examples:

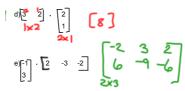
**Ex. 1** - Determine if the matrices can be multiplied.

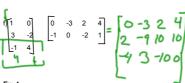
b) A<sub>6x3</sub> **YS** - 5×3

c) A<sub>3x2</sub> · B<sub>4x3</sub> No! B<sub>4x3</sub> · A<sub>3x2</sub> yrs!

Ex. 2 - Activity at the beginning....





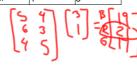


#### Ex.

Three teams competed in the final round of the chess club's championship. For each win, a team was awarded 3 points and for each draw, 1 point. Which team won the

tournament?

Team		Wins		Dra	WS	
Blue		5		4		
Red		6		3		
Green		4		5		
	رخ	47	1	3	B	H

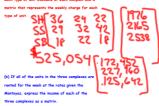


#### Ex. 5

For their 1-week vacation, the Montoyas can rent a 2-bedroom condo for \$1796, a 3-bedroom condo for \$2165, or a 4-bedroom condo for \$2538. The table shows the number of units in each of the 3 complexes.

	Complex	2-Bed	3-Bed	4-Bed
	Sun Haven	36	24	22
	Surfside	29	32	42
	Sea Breeze	18	22	18

(a) Write a matrix that represents the number of each type of unit available at each complex and  $\alpha$ 



(c) What is the total income of all three complex

## **Homework:**

Average (+15) --> p. 205 (#15-29)

Advanced (+19) --> p. 205 (#16-28 Evens, 29, 30-24 Evens, 35, 36-42 Evens, 46, 53, 54)

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