

The Secret of Multiplying Matrices

Lesson 138 | Algebra II | Matrix multiplication

<https://www.youtube.com/watch?v=tvCjjVFxmpw>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

Multiply $A=[3,4;9,4]$ and $B=[4,4;3,4]$. Find both AB and BA .

02

Multiply $A=[5,9;11,2]$ and $B=[2,7;5,9]$. Find both AB and BA .

03

Multiply $A=[3,12;8,3]$ and $B=[3,7;3,12]$. Find both AB and BA .

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04

Multiply $A = \begin{bmatrix} 4 & 5 & 9 & 7 \end{bmatrix}$ and $B = \begin{bmatrix} 7 & 8 & 4 & 5 \end{bmatrix}$. Find both AB and BA .

05

Multiply $A = \begin{bmatrix} 7 & 10 & 8 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} 4 & 3 & 7 & 10 \end{bmatrix}$. Find both AB and BA .

06

Multiply $A = \begin{bmatrix} 4 & 11 & 6 & 6 \end{bmatrix}$ and $B = \begin{bmatrix} 6 & -4 & 4 & 11 \end{bmatrix}$. Find both AB and BA .

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01

Multiply $A=[3,4;9,4]$ and $B=[4,4;3,4]$. Find both AB and BA .

Use row-column dot products. $AB=[[24, 28], [48, 52]]$; $BA=[[48, 32], [45, 28]]$. Matrix multiplication generally depends on order.

02

Multiply $A=[5,9;11,2]$ and $B=[2,7;5,9]$. Find both AB and BA .

Use row-column dot products. $AB=[[55, 116], [32, 95]]$; $BA=[[87, 32], [124, 63]]$. Matrix multiplication generally depends on order.

03

Multiply $A=[3,12;8,3]$ and $B=[3,7;3,12]$. Find both AB and BA .

Use row-column dot products. $AB=[[45, 165], [33, 92]]$; $BA=[[65, 57], [105, 72]]$. Matrix multiplication generally depends on order.

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04

Multiply $A=[4,5;9,7]$ and $B=[7,8;4,5]$. Find both AB and BA .

Use row-column dot products. $AB=[[48, 57], [91, 107]]$; $BA=[[100, 91], [61, 55]]$. Matrix multiplication generally depends on order.

05

Multiply $A=[7,10;8,4]$ and $B=[4,3;7,10]$. Find both AB and BA .

Use row-column dot products. $AB=[[98, 121], [60, 64]]$; $BA=[[52, 52], [129, 110]]$. Matrix multiplication generally depends on order.

06

Multiply $A=[4,11;6,6]$ and $B=[6,-4;4,11]$. Find both AB and BA .

Use row-column dot products. $AB=[[68, 105], [60, 42]]$; $BA=[[0, 42], [82, 110]]$. Matrix multiplication generally depends on order.