

Watch. Practice. Understand. | Lesson 148

Adding and Subtracting Matrices

Watch the matching video: <https://www.youtube.com/watch?v=5k-TXi6Hu2U>

Practice focus: Matrix operations

Original extra practice matched to the listed lesson topic.

Name: _____ Date: _____ Show your reasoning and check units.

01 Let $A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & 0 \\ -1 & 5 \end{bmatrix}$. Find $A + B$.

02 For the same A and B , find $A - B$.

03 For the same A and B , compute AB .

04 If A is 2 by 3 and B is 3 by 4, what are the dimensions of AB ? Is BA defined?

Worked answers | Lesson 148

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Practice focus: Matrix operations

Original extra practice matched to the listed lesson topic.

01 Let $A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & 0 \\ -1 & 5 \end{bmatrix}$. Find $A + B$.

Add corresponding entries: $\begin{bmatrix} 3 & 2 \\ 2 & 9 \end{bmatrix}$.

02 For the same A and B , find $A - B$.

Subtract corresponding entries: $\begin{bmatrix} -1 & 2 \\ 4 & -1 \end{bmatrix}$.

03 For the same A and B , compute AB .

Row-column products give $\begin{bmatrix} 0 & 10 \\ 2 & 20 \end{bmatrix}$.

04 If A is 2 by 3 and B is 3 by 4, what are the dimensions of AB ? Is BA defined?

AB is 2 by 4. BA is not defined because its inner dimensions 4 and 2 differ.