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12. Summary

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Summarize

Big Picture

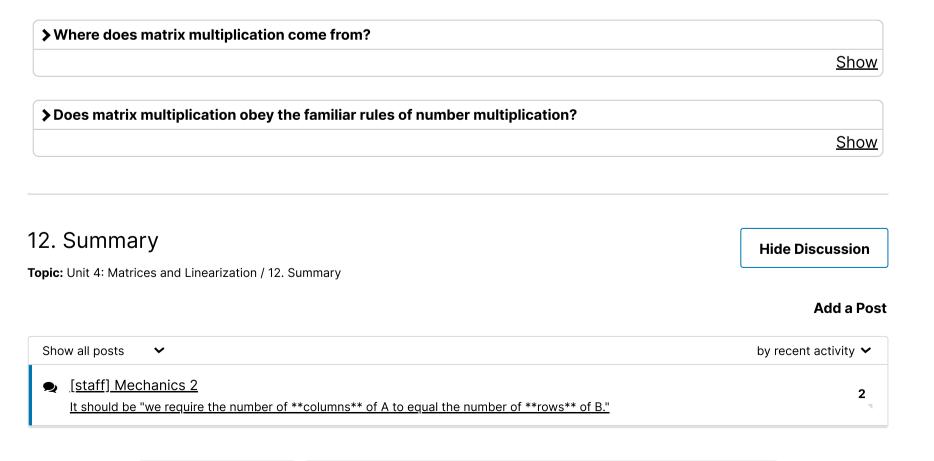
1. We come across expressions of the form "a number times x plus a number times y" frequently in science and engineering.

- 2. These expressions can be converted into the language of matrices, which makes the toolkit of matrix algebra available to help solve the problem.
- 3. Some familiar examples include rotating a vector, and change of coordinates.

Mechanics

- 1. We say the **product of two matrices** A,B is the matrix AB whose entry in row $m{i}$ and column $m{j}$ is the **dot** product of the ith row of A with the jth column of B.
- 2. For the dot product to make sense, we require the number of columns of $m{A}$ to equal the number of rows of $m{B}$.
- 3. Viewing an n-dimensional vector as a matrix with n rows and 1 column, this description also applies to a matrix*vector product.

Ask Yourself



Next Up: Recitation 13: Matrices 1 min + 3 activities

⊞ Calculator

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