

Verify a given vector is a solution ↕

Here we answer the question: *How do we verify a given vector is a solution?*

If we are given a vector $X = \begin{pmatrix} x \\ y \end{pmatrix}$, we can verify whether it is a solution to a differential equation $X' = \begin{pmatrix} a & b \\ c & d \end{pmatrix} X + F$ by simply plugging it in! However, this does mean we have to work out the details of matrix-vector multiplication, adding vectors and scalar multiplication.

Discussion, comments, and examples:



Math45-Module-17-Video-03

WeBWork module 17 exercises:

- Problem 6

References:

- See, for example, Section 10.2 in the [textbook](https://digitalcommons.trinity.edu/mono/8/) ↗
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