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13. Determinant

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Homework0 due Feb 8, 2023 08:59 -03 Completed

Given a matrix, \mathbf{A} , we denote its transpose as \mathbf{A}^T . The transpose of a matrix is equivalent to its rows as columns, or its columns as rows. Then, $\mathbf{A}^T_{i,j} = \mathbf{A}_{j,i}$.

Recall that the **determinant** $\det(\mathbf{A})$ of a square matrix \mathbf{A} indicates whether it is invertible. For invertible matrices, it has the formula

$$\det \begin{pmatrix} a & b \\ c & d \end{pmatrix} = ad - bc.$$

For larger matrices, the formula is a bit more complicated.



Compute the Determinant

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2/2 points (graded)

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Let $\mathbf{A} = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 1 & 2 & 1 \end{bmatrix}$

1. Compute $\det(\mathbf{A}^T)$.

$\det(\mathbf{A}^T) =$

6



Legal

2. Compute $\det(\mathbf{A})$.

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7. STANDARD NOTATION

13. Determinant

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