



Matrix Transformations and Determinants

Today's Standard

HSN.VM.C12 - (+) Work with 2×2 matrices as a transformations of the plane, and interpret the absolute value of the determinant in terms of area.

Cues	Notes
What is a 2x2 matrix?	A 2x2 matrix is a square array of numbers with 2 rows and 2 columns.
How do matrices transform the plane?	Matrices can represent transformations such as rotations, reflections, and scalings.
What is the determinant?	The determinant is a scalar value that can be calculated from a square matrix.
How does the determinant relate to area?	The absolute value of the determinant indicates the scaling factor of the area after transformation.
Examples of matrix transformations	Examples include rotations by specific angles and scaling by certain factors.

Summary

2×2 matrices can transform the plane in various ways, and the determinant helps us understand the effect of these transformations on area.