

Determinant Formulas

Your Name

February 13, 2026

1 2x2 Determinant

For a 2×2 matrix:

$$A = \begin{pmatrix} a & b \\ c & d \end{pmatrix}$$

The determinant is:

$$\det(A) = ad - bc$$

2 Recursive Definition

For an $N \times N$ matrix A :

$$\det(A) = \sum_{j=0}^{N-1} (-1)^j a_{0j} \det(M_{0j})$$

where M_{0j} is the minor formed by removing row 0 and column j .