

Matrix operations reference

Property	Rule
$\det(AB)$	$\det(A) \det(B)$
$\det(A^T)$	$\det(A)$
$\det(kA)$, 4×4	$k^4 \det(A)$
$\det(A^{-1})$	$1 / \det(A)$
$(AB)^{-1}$	$B^{-1} A^{-1}$
$(A^T)^{-1}$	$(A^{-1})^T$
Swap two rows	Determinant changes sign
Add a multiple of one row to another	Determinant unchanged
Trace	Sum of eigenvalues
Determinant	Product of eigenvalues

Notes