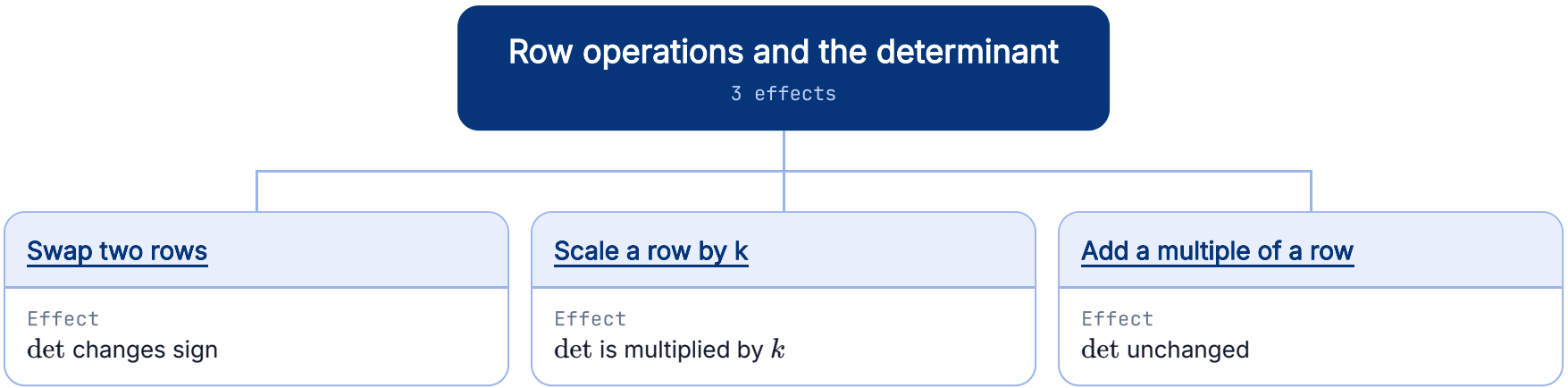
BEFORE YOU READ

Row operations change the determinant predictably

Each of the three row operations has a fixed effect on $\det(A)$. That is what makes reduction to triangular form a fast way to compute it.



TAKEAWAY

Track the swaps and the scalings

Reduce to triangular form with row additions, which leave the determinant alone, and account for every swap and scaling along the way. The cost is about n^3.