

(Q3)

Proof. The "column j " expansion of $\det A$ can be rewritten as:

$$\sum_{j=1}^n (-1)^{j+i} A_{ji} \det(\tilde{A}_{ji})$$

We then use the fact that $\det A = \det A^t$.

The cofactor (row i) expansion of $\det A^t$ is given as:

$$\sum_{j=1}^n (-1)^{i+j} A_{ij}^t \det(\tilde{A}_{ij}^t) = \sum_{j=1}^n (-1)^{i+j} A_{ji} \det(\tilde{A}_{ji})$$

by the definition of A^t . ■