

② Polaire, i.e. $\det(A) = 0$

$$A^T = -A$$

$$\det(A^T) = \det(A) = \det(-A) =$$

$$= (-1)^n \det(A) = -\det(A)$$

\Downarrow

$$2 \det(A) = 0 \Rightarrow \det(A) = 0$$