Osservazione

$A \in \mathcal{M}_n(K)$, $\det(A) = \det({}^tA)$

$$\det(A) \overset{\text{def.}}{=} \sum_{\sigma \in P_n} \operatorname{sign}(\sigma)\, a^1_{\sigma_1} a^2_{\sigma_2} \cdots \cdots a^n_{\sigma(n)}$$

$$P_n = \{ \sigma : \mathbb{N}_n \to \mathbb{N}_n \mid \sigma \text{ biettiva} \} =$$

$$= \{ \sigma^{-1} : \mathbb{N}_n \to \mathbb{N}_n \mid \sigma \in P_n \}$$