- $\mathbb{R}$
- $\mathbb{C}$
-

$\sigma\tau[\![1, n]\!]\varepsilon(\sigma\tau) = \varepsilon(\sigma)\varepsilon(\tau)\varepsilon\mathcal{S}_n(\{-1, 1\}, \times)$

$A = (a_{i,j})_{1\leq i,j\leq n}\det A$

$$\det A = \begin{vmatrix} a_{1,1} & \cdots & a_{1,j} & \cdots & a_{1,n} \\ & & & & \\ a_{i,1} & \cdots & a_{i,j} & \cdots & a_{i,n} \\ & & & & \\ a_{n,1} & \cdots & a_{n,j} & \cdots & a_{n,n} \end{vmatrix}.$$