Teorema di Binet

Siano $A, B \in \mathcal{M}_n(K)$ $\quad \det(AB) = \det(A) \cdot \det(B)$

Esempio: (1) $A = \begin{pmatrix} 3 & 7 \\ -1 & 2 \end{pmatrix}$ $\quad B = \begin{pmatrix} -2 & 1 \\ 3 & 4 \end{pmatrix}$

$\det(A) = 3 \cdot 2 + (-1)\,7 \cdot (-1) = 6 + 7 = 13$

$\det(B) = -8 - 3 = -11$

$\det(A) \cdot \det(B) = \boxed{-143}$

$A \cdot B = \begin{pmatrix} 15 & 31 \\ 8 & 7 \end{pmatrix}$ $\quad \det(AB) = 15 \cdot 7 + (-1)\,31 \cdot 8 =$

$= 105 - 248 = -143$