



## Matrix Determinant of Product

### 1 Why

TODO

### 2 Result

**Proposition 1.** *The determinant of a product of two real matrices is the product of the determinant of each matrix.*

*Proof.* Let  $A \in \mathbf{R}^{n \times p}$  and  $B \in \mathbf{R}^{p \times n}$ . We want to show that

$$\det(AB) = \det(A) \det(B).$$

TODO

□