

$$(A_1 A_2 \dots A_k)^{-1} = A_k^{-1} A_{k-1}^{-1} \dots A_2^{-1} A_1^{-1}$$

$$(A_1 A_2 \dots A_k)^T = A_k^T A_{k-1}^T \dots A_2^T A_1^T$$

A, B are square invertable

$$(A^{-1})^T = (A^T)^{-1}$$

$$[AB^{-1}]^T = (AB^T)^{-1}$$

$$[B^{-1}A^{-1}]^T = [B^T A^T]^{-1}$$

$$[A^{-1}]^T [B^{-1}]^T = (A^T)^{-1} (B^T)^{-1}$$