$\underline{x}$

$\underline{0}$ $\underline{1}$ $\underline{x'1}$

$A^{-1}A = AA^{-1} = I$

$AB \neq BA$

$\therefore A'A^{-1\prime} = A^{-1}A' = I$

$(A_1 \ldots A_N)^{-1}$ $(A^{-1})^{-1} = A$ $(A \pm B)^{-1}$

$\therefore A^{-1\prime} = A'^{-1}$

$(A_1 \ldots A_N)'$ $(A')' = A$ $(A \pm B)'$

$M'M$ SYMMETRIC - TRIANGULAR (DIAGONAL)

RANK, FULL RANK M OF FULL RANK $\Leftrightarrow$ $M'M$ NONSINGULAR

$AB = 0$ $A \neq 0$ $B \neq 0$ POSSIBLE

PROJECTIONS