

$$A = \begin{bmatrix} 1 & 2 \\ 2 & 3 \end{bmatrix} \quad B = \begin{bmatrix} 4 & 5 \\ 5 & 6 \\ 6 & 8 \end{bmatrix}$$

$$C = \begin{bmatrix} A \\ B \end{bmatrix} \quad C = [A; B]$$

$$B' \quad C = [A \quad B']$$

$$A = \begin{bmatrix} 1 & 0 & \emptyset \\ 0 & 1 & \emptyset \\ \emptyset & \emptyset & \emptyset \\ \emptyset & \emptyset & \emptyset \end{bmatrix}$$

$$A = \begin{bmatrix} \text{eye}(3) & \text{zeros}(3,4) \\ \text{zeros}(4,3) & \text{ones}(4) \end{bmatrix}$$

$$A_{4,6} \quad \begin{bmatrix} \downarrow \downarrow \downarrow \downarrow \downarrow \downarrow \\ \downarrow \downarrow \downarrow \downarrow \downarrow \downarrow \\ \downarrow \downarrow \downarrow \downarrow \downarrow \downarrow \\ \downarrow \downarrow \downarrow \downarrow \downarrow \downarrow \end{bmatrix}_{4 \times 6}$$

$$B = \begin{bmatrix} \leftarrow \leftarrow \leftarrow \leftarrow \leftarrow \leftarrow \end{bmatrix}$$

$$B = A(:, 6:-1:1)$$

$$\underline{A} \underline{x} = \underline{b} \quad A_{n \times n}$$

$$\underline{x} = A^{-1} \underline{b} \quad x = A \setminus b$$

$$\text{Σύστημα } \underline{x}' A = \underline{b}'$$

$$\underline{x}' = \underline{b}' A^{-1} \quad x = b' / A$$

ΕΝΤΟΛΗ diag

① $A_{n \times n}$ $\text{diag}(A) = \text{κύρια διαγώνιος του } A$

② $V \in \mathbb{R}^n$ $\text{diag}(V) = \begin{bmatrix} v_1 & & \emptyset \\ & v_2 & \\ \emptyset & & \ddots \\ & & & v_n \end{bmatrix}$

$$V \in \mathbb{R}^n, \quad \text{diag}(\text{diag}(V)) = V$$

$$A \in \mathbb{R}^{n \times n} \quad \text{diag}(\text{diag}(A)) = \begin{bmatrix} a_{11} & & \emptyset \\ & a_{22} & \\ \emptyset & & \ddots \\ & & & a_{nn} \end{bmatrix}$$

$$A_{4 \times 6} \quad \begin{bmatrix} & & 3 & 4 & 5 & 6 \\ & & & & & \\ & & & & & \\ & & & & & \end{bmatrix}_{4 \times 6}$$

$$A([1,2,3], [3,4,5,6]) = A(1:3, 3:6)$$

$$A(:, 1) \stackrel{!}{=} \sigma(n \times n)$$

$$A(2, :)$$

$$\begin{bmatrix} a_{14} & a_{12} \\ \vdots & \vdots \\ a_{44} & a_{42} \end{bmatrix} = A(:, [4,2])$$

$$= A(:, 4:-2:2)$$

$$= [A(:,4), A(:,2)]$$