

Practice problems**Due Thursday, June 28 as HOMEWORK**

In Problem 1 to 2, find the rank of a matrix A using the fundamental (row) operations (referring to "Fundamental Operations/Elementary Operations" in Webclass).

$$\text{Problem 1. } A = \begin{pmatrix} 1 & -1 & 1 & -1 \\ -1 & 1 & -1 & 1 \\ 1 & -1 & 1 & -1 \\ -1 & 1 & -1 & 1 \end{pmatrix}$$

$$\text{Problem 2. } A = \begin{pmatrix} 1 & -1 & 1 & -1 \\ -1 & 1 & -1 & 1 \\ 1 & 1 & -1 & -1 \\ -1 & -1 & 2 & 1 \end{pmatrix}$$

In Problem 3 to 4, find the inverse of a matrix A using the fundamental (row) operations (referring to "Fundamental Operations/Elementary Operations" in Webclass).

$$\text{Problem 3. } A = \begin{pmatrix} 2 & 0 & -1 \\ 0 & 1 & 0 \\ -5 & 0 & 3 \end{pmatrix}$$

$$\text{Problem 4. } A = \begin{pmatrix} 3 & 0 & 1 & 0 \\ 0 & 5 & 0 & 3 \\ 5 & 0 & 2 & 0 \\ 0 & 3 & 0 & 2 \end{pmatrix}$$