

Notations

You are supposed to be familiar with the following conventional notations throughout this course:

- $\mathbb{Z}$: the set of integers
- $\mathbb{N}$: the set of positive integers
- $\mathbb{Q}$: the set of rational numbers
- $\mathbb{R}$: the set of real numbers
- $\mathbb{C}$: the set of complex numbers
- $\mathbb{Z}^+ = \{0, 1, 2, \dots\}$
- $\mathbb{Q}^+ = \{r \in \mathbb{Q} : r > 0\}$
- $\mathbb{R}^+ = \{r \in \mathbb{R} : r > 0\}$
- $\mathbb{Z}^* = \mathbb{Z} \setminus \{0\}$
- $\mathbb{Q}^* = \mathbb{Q} \setminus \{0\}$
- $\mathbb{R}^* = \mathbb{R} \setminus \{0\}$
- $\mathbb{C}^* = \mathbb{C} \setminus \{0\}$
- $M_{m \times n}(F)$: the set of all $m \times n$ matrices with entries in a field F

