

Throughout the course, you may encounter the sets defined below. You are welcome to use these as appropriate.

\mathbb{N} = the set of natural numbers $\{1, 2, 3, \dots\}$

\mathbb{Z} = the set of integers $\{\dots, -3, -2, -1, 0, 1, 2, 3, \dots\}$

\mathbb{Z}^+ = the set of positive integers $\{1, 2, 3, \dots\}$ (note: $\mathbb{Z}^+ = \mathbb{N}$)

\mathbb{Z}^- = the set of negative integers $\{\dots, -3, -2, -1\}$

$\mathbb{Z}_{\geq n}$ = the set of integers greater than or equal to n : $\{n, n+1, n+2, \dots\}$

\mathbb{E} = the set of even integers $\{\dots, -4, -2, 0, 2, 4, \dots\}$

\mathbb{O} = the set of odd integers $\{\dots, -3, -1, 1, 3, \dots\}$

\mathbb{Q} = the set of rational numbers $= \left\{ \frac{a}{b} \mid a, b \in \mathbb{Z}, b \neq 0 \right\}$

\mathbb{Q}^+ = the set of positive rational numbers

\mathbb{Q}^- = the set of negative rational numbers

\mathbb{I} = the set of irrational numbers

\mathbb{R} = the set of real numbers

\mathbb{R}^+ = the set of positive real numbers

\mathbb{R}^- = the set of negative real numbers (note that this is not defined in the text but we define it here to

\mathbb{R}^* = the set of nonzero real numbers (this is defined on p. 93 and not used often in the course)

\mathbb{C} = the set of complex numbers