## AN INCOMPLETE LIST OF USEFUL SYMBOLS AND NOTATION

| SYMBOL | WHAT IT MEANS |
| :--- | :--- |
| $\mathbb{N}$ | $\{1,2,3, \cdots\}$, the natural numbers. |
| $\mathbb{Z}$ | $\{0, \pm 1, \pm 2, \pm 3, \cdots\}$, the integers. |
| $\mathbb{Q}$ | The rational numbers. |
| $\mathbb{R}$ | The real numbers. |
| $\mathbb{C}$ | The complex numbers. |
| $\forall$ | For all. |
| $\exists$ | There exists. |
| $P \Longrightarrow Q$ | $P$ implies $Q$. |
| $P \Longleftrightarrow Q$ | $P$ if and only if $Q$. |
| $P$ iff $Q$ | $P$ if and only if $Q$. |
| $\in(\notin)$ | Is (not) an element of. |
| $A \subseteq B(A \subsetneq B)$ | $A$ is a (proper) subset of $B$. |
| s.t. | Such that. |
| TFAE | The following are equivalent. |
| WLOG | Without loss of generality. |
| $\bigcup$ | Union. |
| $\cap$ | Intersection. |
| $!$ | Unique (or factorial, depending on the context). |
| $\sim$ | Not. |
| $\bigwedge$ | And. |
| $\bigvee$ | Or. |
| $\therefore$ | Therefore. |

