Table 1.2: Summary of Symbols and Notation

Symbol	Meaning
$+$	Addition
$-$	Subtraction
$*$ or $\times$ or $\cdot$	Multiplication
$/$ or $\div$	Division
$\pm$	Plus or minus
x^n	Exponentiation ("to the nth power")
$\sqrt[n]{x}$	Radical or nth root
$!$	Factorial
∞	Infinity
$\sum_{i=k}^{l} x_i$	Sum of x_i from index $i = k$ to $i = l$
$\prod_{i=k}^{l} x_i$	Product of x_i from index $i = k$ to $i = l$
$\ldots$	Continued progression
$\frac{d}{dx}$	Total derivative with respect to x
$\frac{\partial}{\partial x}$	Partial derivative with respect to x
$\int dx$	Integral over x
$\cup$	Set union
$\cap$	Set intersection
$\times$	Cartesian product of sets
$\setminus$	Set difference
A^c	Complement of set A
$\emptyset$	Empty (or null) set
$\in$	Set membership
$\notin$	Not member of set
$\mid$ or $:$ or $\ni$	Such that
$\subset$	Proper subset
$\subseteq$	Subset
$<$	Less than
$\leq$	Less than or equal to
$=$	Equal to
$>$	Greater than
$\geq$	Greater than or equal to
$\neq$	Not equal to
$\equiv$	Equivalent to or Defined as
$f()$ or $f(\cdot)$	Function
$\{\ \}$	Delimiter for discrete set
$(\ )$	Delimiter for open set
$[\ ]$	Delimiter for closed set
$\forall$	For all (or for every or for each)
$\exists$	There exists
$\Rightarrow$	Implies
$\Leftrightarrow$	If and only if
$\neg C$ or $\sim C$	Negation (not C)