Frequently Used Symbols – Math 2A – Winter 2012

Symbol	Meaning
$\exists$	*There exists*
$\forall$	*For all*
$\text{L} :\Leftrightarrow \text{R}$	*L is defined through R*
s.t.	*Such that*
$\text{L} \Rightarrow \text{R}$	*L implies R or R follows from L*
$\text{L} \Leftrightarrow \text{R}$	*$L \Rightarrow R$ and $R \Rightarrow L$ or L is equivalent to R*
$x \in X$	*x is an element of the set X*
$x \notin X$	*x is not an element of the set X*
$Y \subset X$	*The set Y is contained in the set X*
$\mathbb{N}$	*Set of natural numbers*
$\mathbb{R}$	*Set of real numbers*
ε	*Epsilon*
δ	*Delta*
$[a, b]$, $a, b \in \mathbb{R}$	$\{x \in \mathbb{R} \,\vert\, a \leq x \leq b\}$
$(a, b]$, $a, b \in \mathbb{R}$	$\{x \in \mathbb{R} \,\vert\, a < x \leq b\}$
$[a, b)$, $a, b \in \mathbb{R}$	$\{x \in \mathbb{R} \,\vert\, a \leq x < b\}$
(a, b), $a, b \in \mathbb{R}$	$\{x \in \mathbb{R} \,\vert\, a < x < b\}$
$X \setminus Y$	$\{x \in X \,\vert\, x \notin Y\}$