

FREQUENTLY USED NOTATION IN DR. MCLOUGHLIN'S CLASSES

\wedge	and	
\vee	or	
\Rightarrow	implies (therefore)	
\nRightarrow	does not imply	
\forall	for all	
\exists	there exists	
\ni	such that	
Q. E. D.	<i>Quod Erat Demonstratum</i>	thus, it has been shown.
E. E. F.	<i>Exemplum Est Factum</i>	the example is fact
\therefore	therefore	
iff	if and only if	
\Leftrightarrow	if and only if	
$\Rightarrow\Leftarrow$	contradiction	
#!	contradiction	
n !	n factorial	
\in	is an element of the set	
\notin	is not an element of the set	
\emptyset	null or void (set with no elements)	
\subseteq	is a subset	
\subset	is a proper subset	
\cap	intersection of sets (and)	
\cup	union of sets (or)	
A^c	complement of the set A	

\mathbb{N}	the natural numbers $\{1, 2, 3, 4, \dots\}$ ¹
\mathbb{N}^*	the non-negative integers $\{0, 1, 2, 3, 4, \dots\}$ ²
\mathbb{Z}	the integers $\{0, 1, -1, 2, -2, 3, \dots\}$
\mathbb{Q}	the rational numbers $\{x \mid x = \frac{m}{n}, m \in \mathbb{Z}, n \in \mathbb{Z}, \wedge n \neq 0\}$
\mathbb{I}	the irrational numbers
\mathbb{R}	the real numbers
\mathbb{C}	the complex numbers
\mathbb{R}^2	the plane
i	$\sqrt{-1}$
\mathbb{N}_p	the natural numbers less than or equal to p $\{1, 2, 3, 4, \dots, p\}$
\mathbb{N}_p^*	the non-negative integers less than or equal to p $\{0, 1, 2, 3, 4, \dots, p\}$

**NOT-SO-FREQUENTLY USED NOTATION IN
DR. MCLOUGHLIN'S CLASSES (BUT USED ON OCCASION)**

$ E $	the cardinality of the set E .
\aleph_0	aleph-null (the cardinality of \mathbb{N})
\aleph_1	aleph-sub-one (the cardinality of \mathbb{R})
c	c , the cardinality of the continuum (the cardinality of \mathbb{R})
$\mathcal{P}(E)$	the power set of the set E .

¹ The Ordinal naturals

² The Cardinal naturals