

## Math Symbols

$a \leq b$  a is less than or equal to b

$a \geq b$  a is greater than or equal to b

$a < b$  a is less than b

$a > b$  a is greater than b

$a \approx b$  a is approximately equal to b

$a \approx b$  a is approximately equal to b

$a \neq b$  a is not equal to b

$a \propto b$  a is proportional to b

$x = \pm 3$  x is equal to +3 or -3

$A \Rightarrow B$  The statement A implies the statement B

If A is true then B is also true

$A \Leftrightarrow B$  A is true if and only if B is true

iff if and only if

$\therefore$  Therefore

$\exists$  There exists

$\exists!$  There exists a unique

$\forall$  For all

s.t. such that

$|$  such that

$\square$  such that

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

$W =$  The set of whole numbers =  $\{0, 1, 2, \dots\}$

$W = N \cup \{0\}$

$J$  or  $Z =$  The set of integers =  $\{\dots, -1, 0, 1, \dots\}$

$Q =$  The set of rational numbers =  $\{p/q \mid p, q \in J \text{ and } q \neq 0\}$

$I =$  The set of irrational numbers, numbers whose decimal is nonrepeating and nonterminating. They cannot be expressed as a fraction.

or  $R =$  The set of real numbers =  $Q \cup I$

$\square$  or  $I =$  The set of imaginary numbers

$C =$  the set of complex numbers =  $R \cup \square$

$3 \in \mathbb{N}$  3 is in the set of natural numbers

$0 \notin \mathbb{N}$  0 is not in the set of natural numbers

$\{0\} \cup \mathbb{N} = \mathbb{W}$  the union of zero and the set of natural numbers is the set of whole numbers

$\mathbb{N} \cap \mathbb{W} = \mathbb{N}$  the intersection of the set of natural numbers and the set of whole numbers is the set of natural numbers

$\mathbb{N} \subset \mathbb{W}$  the set of natural numbers is contained in the set of whole numbers

$\mathbb{W} \not\subset \mathbb{N}$  the set of whole numbers is not contained in the set of natural numbers

$\emptyset =$  the empty set

$\alpha =$  alpha

$\iota =$  iota

$\beta =$  beta

$\kappa =$  kappa

$\chi =$  chi

$\lambda =$  lambda

$\delta =$  delta

$\mu =$  mu

$\epsilon =$  epsilon

$\nu =$  nu

$\phi =$  phi

$\omicron =$  omicron

$\gamma =$  gamma

$\pi =$  pi

$\eta =$  eta

$\theta =$  theta

$\rho =$  rho

$\sigma =$  sigma

$\zeta =$  zeta

$\tau =$  tau

$\omega =$  omega

$\xi =$  xi

$\psi =$  psi