Natural Number -  $\mathbb{N}$  {1, 2, 3, 4, 5, ...}

Whole Numbers {0, 1, 2, 3, 4, 5, ...}

Integers Numbers -  $\mathbb{Z}$  {...,-3,-2,-1,0,1,2,3,

Rational Numbers -  $\mathbb{Q} \setminus \{\frac{p}{q}, p \text{ and } q \text{ are in } \mathbb{Z} \}$ 

Irrational Numbers -  $\{\pi, \sqrt{2}\}$ 

Real Numbers -  $\mathbb{R}$ 

Complex Numbers -  $\mathbb{C}$   $\{a+ib \ a \ and \ b \ are \ in \ \mathbb{R}\}$ 

## **Symbols**

=: Equal

≠: Not equal

≈: Approximate

**∼**: Similarity

 $\in$ : is an element of

∉: is not an element of

is a subset

□: Proper subset symbol

<: is less than

>: is greater than

 $\leq$ : is less than or equal

≥: is greater than or equal

Ø: Null symbol

|.|: Absolute value

∃: Existential quantifier (For some ... There exists

∄: Doesn't exist

 $\forall$ : Universal quantifier (For all ..., For every...)

 $\bigcap$ : Intersection = {  $x \mid x \in A \text{ and } x \in B$ }

 $\bigcup$ : Union = { $x | x \in A \text{ or } x \in B$ }

( ): Open Interval

[ ]: Close Interval

⊥: Perpendicular

//: Parallel