

Review of Terminology for the exam 1 Set Theory

Need to know

N = Natural numbers = 1,2,3,4,5,...

W = Whole Numbers = 0,1,2,3,4,5,...

I = Integers ...-3,-2,-1,0,1,2,3,...

Prime numbers: divisors are 1 and itself...number has to be larger than 1

Note: 1 IS NOT PRIME!...1 IS ODD

Even: divisible by 2

Odd: Even +1

Know these symbols

\cup , \subset , \cap , \emptyset , \notin , $A \setminus B$,

Union (Or), subset, intersection (And), empty set, not a subset of, A only or A - B.

$B \setminus A$ = B only

\in = element of

$n(A)$ = the number in set A

Be able to shade (or know on a Venn Diagram) where the following are:

U

A

B

$A \setminus B$, $A \cap B$, $A \cap B \cap C$, $A \cup B$, A' , B' , $(A \cup B)'$, $(A \cap B)'$

The principle of inclusion and exclusion:

$$1) \quad n(A \cup B) = n(A) + n(B) - n(A \cap B)$$

$$2) \quad n(A \cup B \cup C) = n(A) + n(B) + n(C) - n(A \cap B) - n(A \cap C) - n(B \cap C) + n(A \cap B \cap C)$$