

Sets	
$\in$	"Is an element of..."
$\cup$	Union
$\cap$	Intersection
$\not\subset$	"Is NOT a subset of..."
$\subset$	"Is proper subset of..." (some or all)
$\subseteq$	"Is a subset of..." (some)
$\emptyset$	Empty Set
$\bar{A}$	Complement
Set Builder Not.	{formula for elements  restrictions}

Logic	
$\wedge$	Conjunction (AND)
$\vee$	Disjunction (OR)
$\sim$	Negation (NOT)
$\rightarrow$	"If x, THEN y"
$\leftrightarrow$	True with same value

Probability/Statistics	
Permutations	$P(n,r) = n! / ((n-r)!)$
Combinations	$C(n,r) = n! / ((n-r)!r!)$
Sample Space	Set of all possible outcomes
$\mu$ (Mean)	Sum of set divided by length of set
$\sigma^2$ (Variance)	Calculate the mean For each number, subtract the mean and square the result Calculate the average of the squared differences, or sum up the squared differences and divide by N, the number of values.
$\sigma$ (Standard Deviation)	Square Root of Variance ( $\sigma^2$ )

Boolean Algebra	
$+$	$= \vee$
$\cdot$	$= \wedge$
T	$= 1$
F	$= 0$
$(A+B)$	Parallel Circuit
$(A \cdot B)$	Series Circuit

Probability/Statistics	
b= Binomial Probability	$b(x; n, P) = nC_x P^x (1 - P)^{(n - x)}$
n=	number of trials
x=	number of successes
P=	probability of success
Binomial Distribution	$\mu = n \cdot P$
(cont'd)	$\sigma^2 = n \cdot P \cdot (1-P)$