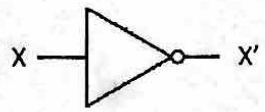
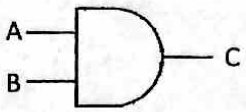
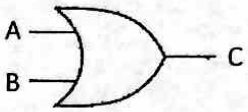
Boolean Algebra Operators and Logic Gate Circuit Symbols

NOT	AND	OR
	 C = A·B = AB	 C = A + B

Solving Boolean Algebra Equations

Similar to normal algebra (except when it's not). Refer table below.

- Solve inside of parenthesis first
- Order of operations: NOT -> AND -> OR

Laws of Boolean Algebra

Idempotent		A+A = A	A·A = A
Associative		(A+B)+ C =A+(B+C)	(A·B)· C = A·(B·C)
Commutative		A+B = B+A	A·B = B·A
Distributive		A+(B·C) = (A+B)·(A+C)	A·(B+C) = (A·B)+(A·C)
Identity		A + 0 = A	A · 1 = A
		A+1 =1	A · 0 = 0
Complement		A+A' =1	A·A' = 0
		(A')' = A	1'=0
DeMorgan's		(A+B)' = A'·B'	(A·B)' = A'+B'
Duality		Interchange AND and OR operators, as well as all "0s" and "1s": the resulting equation is a valid expression (compare left and right columns above). **Note:** the equations will not compute same value!	
Simplification Theorems (Note: 1&2, 3&4, 5&6 are duals)	1	AB+AB' = A	
	2	(A+B)(A+B')=A	
	3	A+AB = A	
	4	A(A+B) = A	
	5	(A+B')B = AB	
	6	AB'+B=A+B	