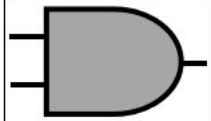
Key information:

Card: 2.1

Key vocabulary	
Logic Gate	A logic gate is an building block of a digital circuit. Most logic gates have two inputs and one output. At any given moment, every terminal is in one of the two binary conditions 0 or 1.
And	A logic gate which returns a 1 when both inputs are 1's. Else a 0 is returned.
Or	A logic gate which returns 1 when either or both of the inputs are 1.
Not	A logic gate which inverts its input.
Truth table	A table which shows outputs from a logic gate or circuit given certain inputs.

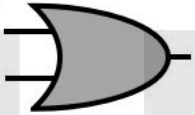
Binary Logic Gate Diagrams

AND



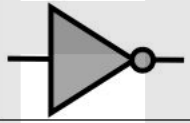
Input A	Input B	Output Q
0	0	0
0	1	0
1	0	0
1	1	1

OR



Input A	Input B	Output Q
0	0	0
0	1	1
1	0	1
1	1	1

NOT



Input A	Output Q
0	1
1	0

XOR Gate

XOR gate

A logic gate that returns a 1 when either input is true. All other variations produce a 0

A	B	OUT
0	0	0
0	1	1
1	0	1
1	1	0

Key information:

Card: 2.2

Boolean logic	Simplify Boolean expressions using Boolean identities and rules.	Use the following Boolean identities and rules:		
			AND Form	**OR Form**
		Commutative Law	A. B = B . A	A + B = B + A
		Associate Law	(A. B) . C = A . (B . C)	(A + B) + C = A + (B + C)
		Distributive Law	(A+B)+ C = (A+C).(B+C)	(A + B) . C = (A . C) + (B . C)
		Identity Law	A . 1 = A	A + 0 = A
		Zero and One Law	A . 0 = 0	A + 1 = 1
		Inverse Law	A . A' = 0	A + A' = 1
		Idempotent Law	A . A = A	A + A = A
		Absorption Law	A(A+B) = A	A + A. B = A A + A'B = A+B
		Double Complement Law	$\overline{\overline{x}} = x$	