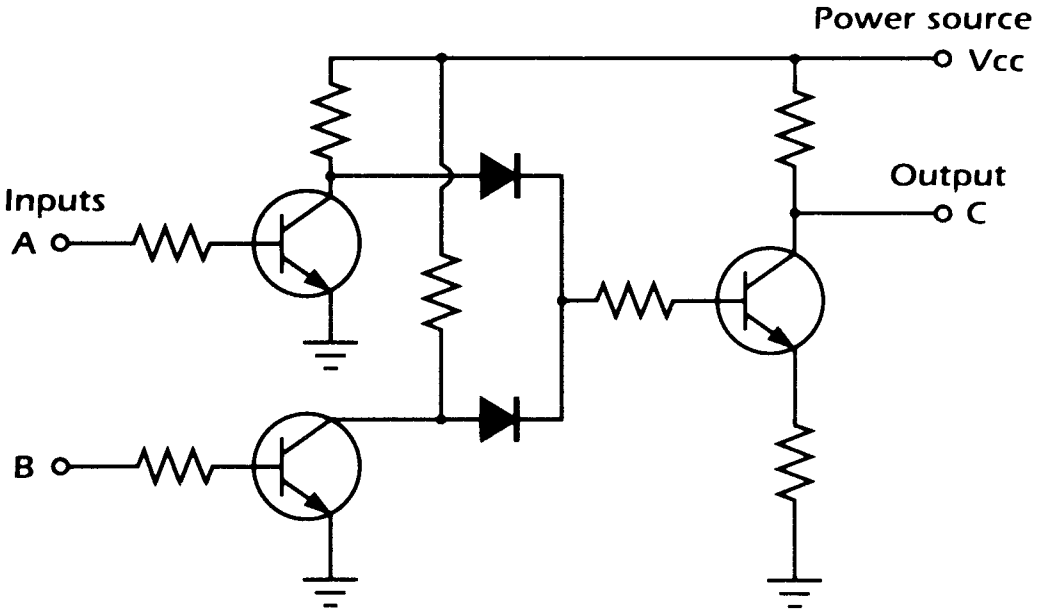
Overhead Transparencies - Color Masters

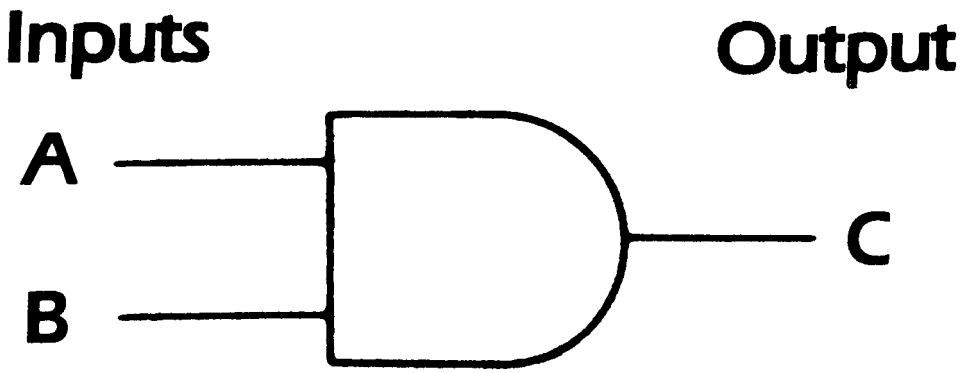
UNDERSTANDING LOGIC GATES

For use with black & white or color printers
to make black & white or color transpariencies

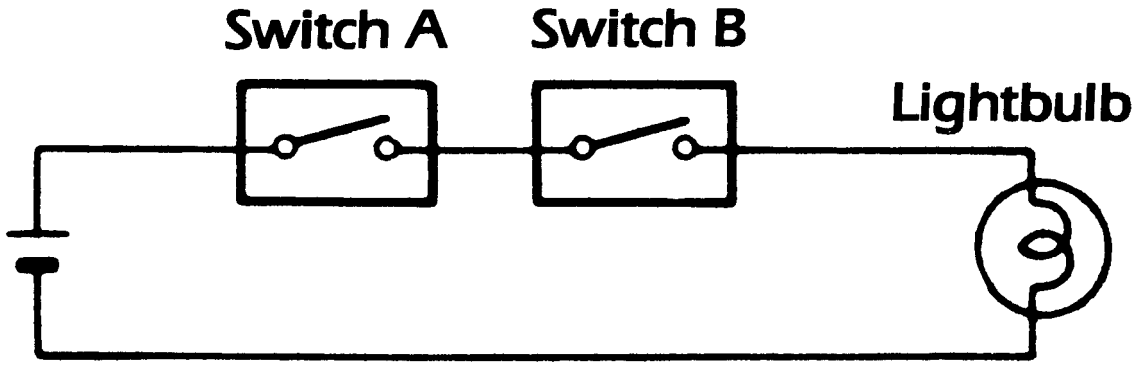
ACTUAL SEMICONDUCTOR "AND" CIRCUIT



THE “AND” GATE

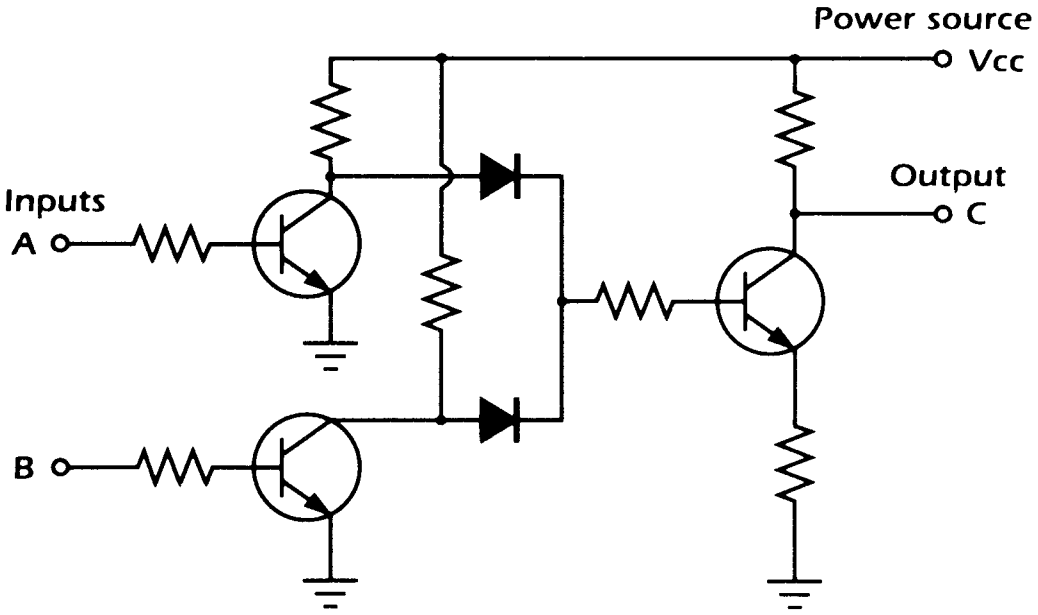


EQUIVALENT MECHANICAL CIRCUIT



THE "AND" GATE

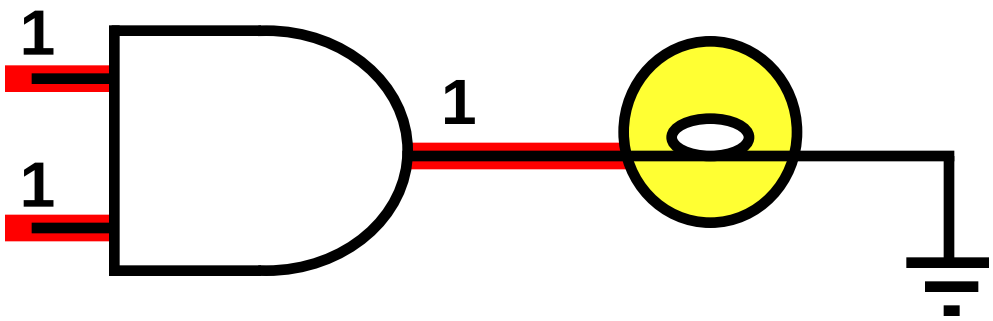
ACTUAL SEMICONDUCTOR "AND" CIRCUIT

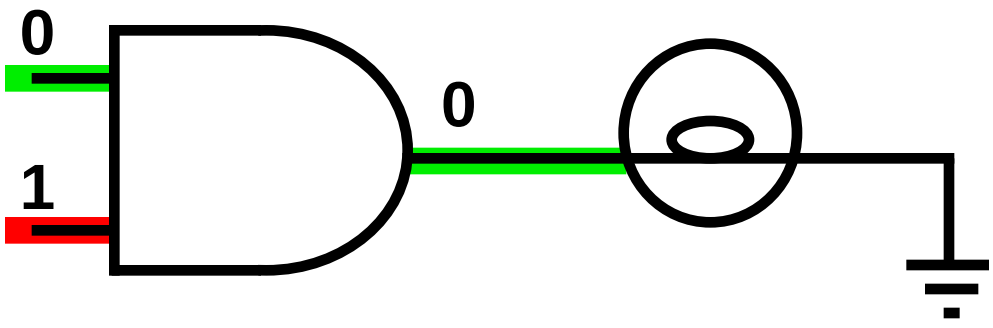


TRUTH TABLE FOR "AND" GATE

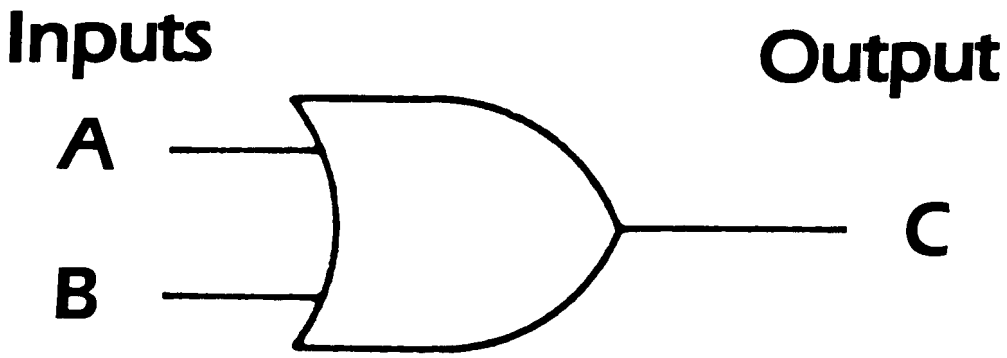
Input A	Input B	Output C
0	0	0
0	1	0
1	0	0
1	1	1

“AND” GATE OPERATION

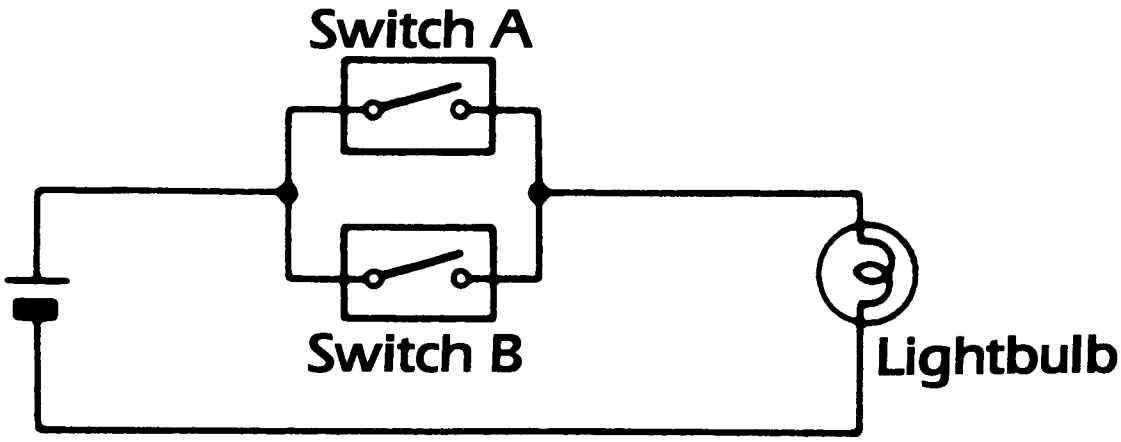




THE "OR" GATE

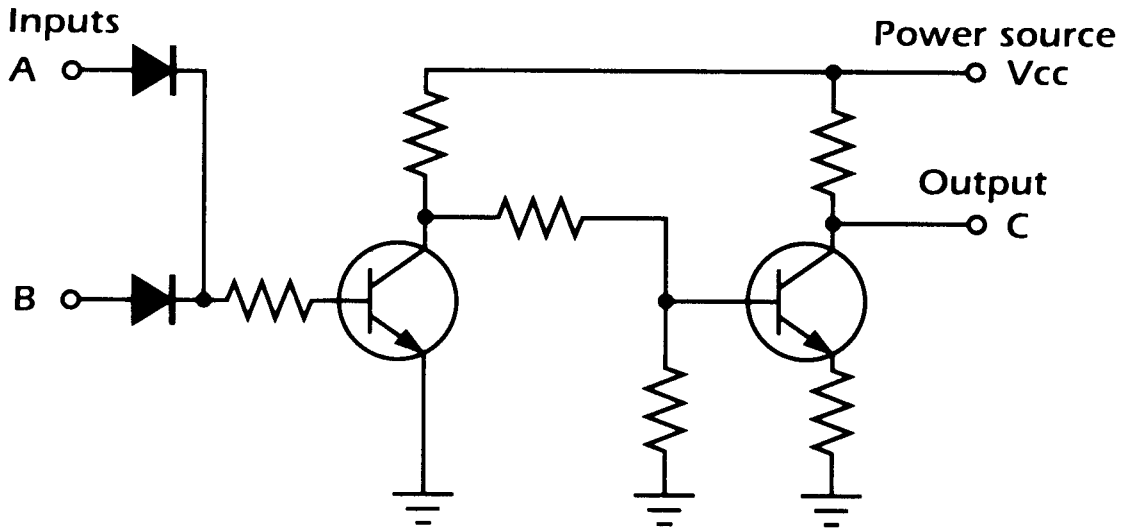


EQUIVALENT MECHANICAL CIRCUIT



THE "OR" GATE

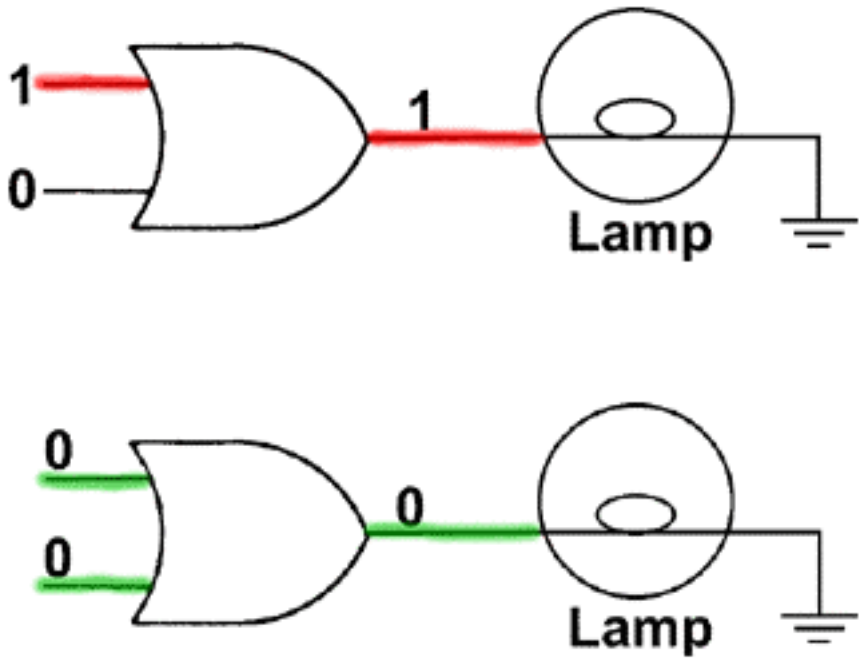
ACTUAL SEMICONDUCTOR "OR" CIRCUIT



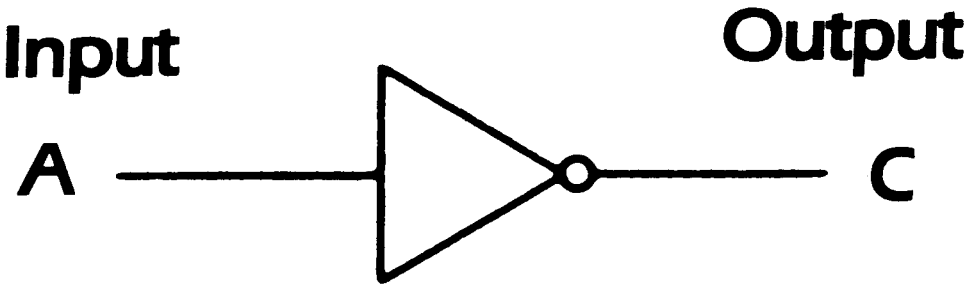
TRUTH TABLE FOR "OR" GATE

INPUTS A	INPUTS B	OUTPUT C
0	0	0
0	1	1
1	0	1
1	1	1

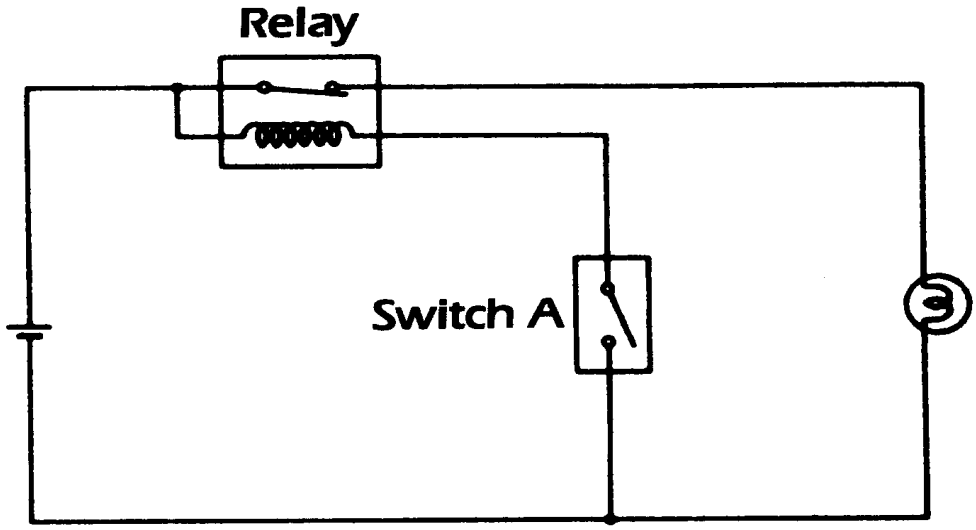
“OR” GATE OPERATION



THE "NOT" GATE

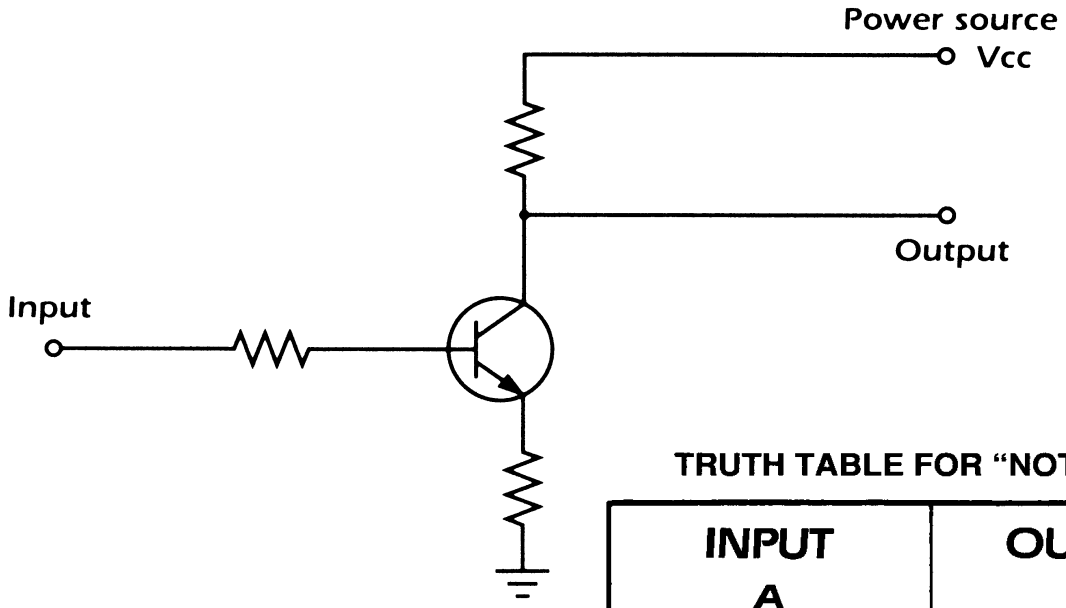


EQUIVALENT MECHANICAL CIRCUIT



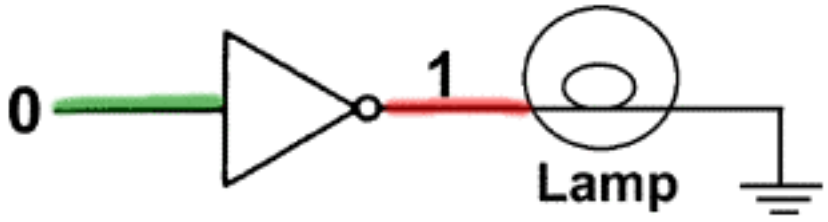
"NOT" GATE OPERATION

ACTUAL SEMICONDUCTOR "NOT" CIRCUIT



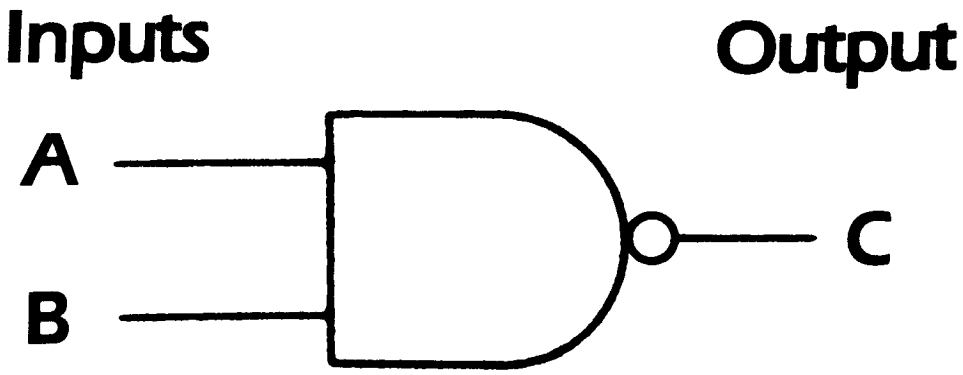
TRUTH TABLE FOR "NOT" GATE

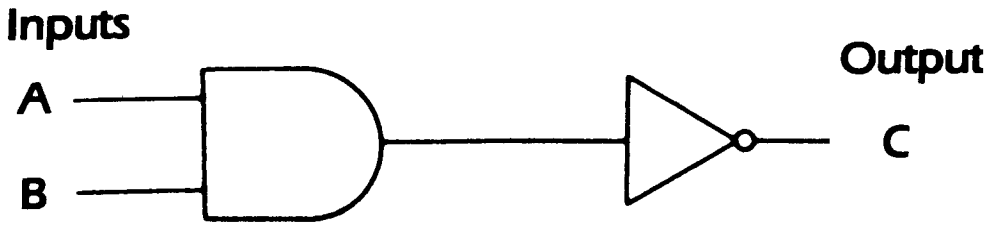
INPUT A	OUTPUT C
1	0
0	1



THE "NAND" GATE

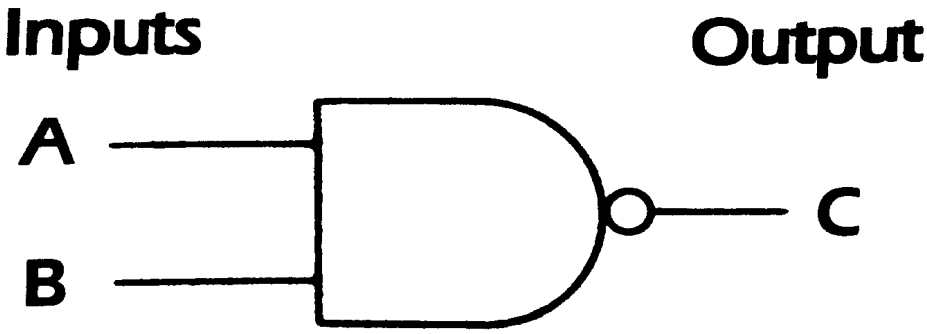
LOGIC SYMBOL FOR "NAND" GATE





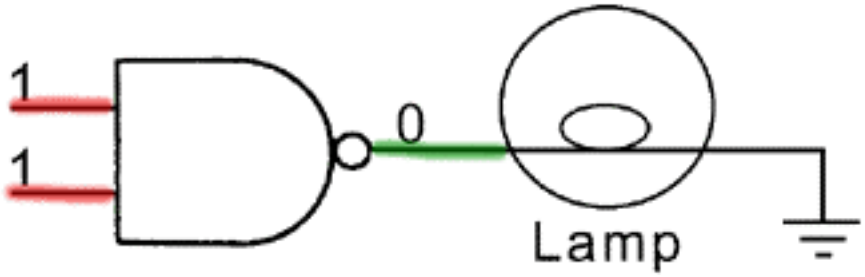
THE "NAND" GATE

TRUTH TABLE FOR "NAND" GATE

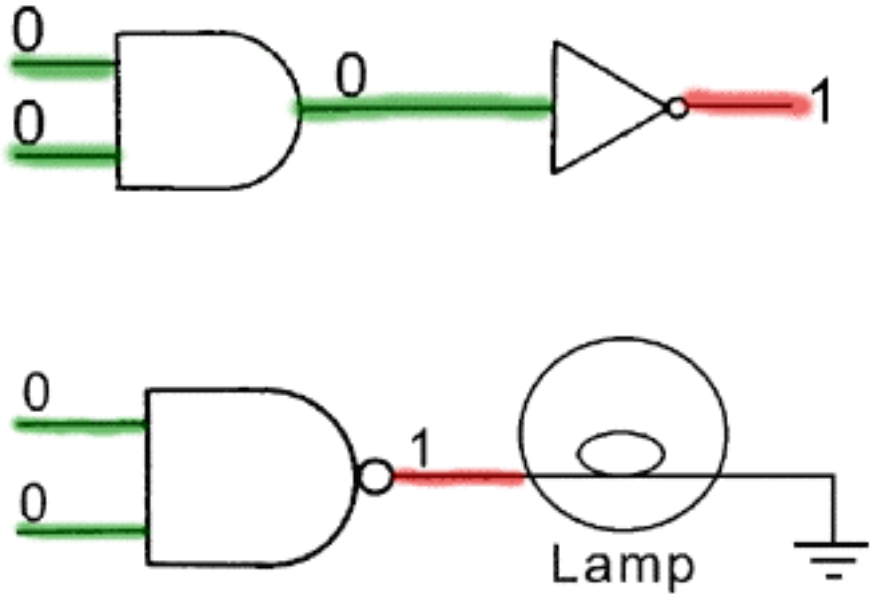


Inputs		Output
A	B	C
0	0	1
0	1	1
1	0	1
1	1	0

“NAND” GATE OPERATION EXAMPLE #1

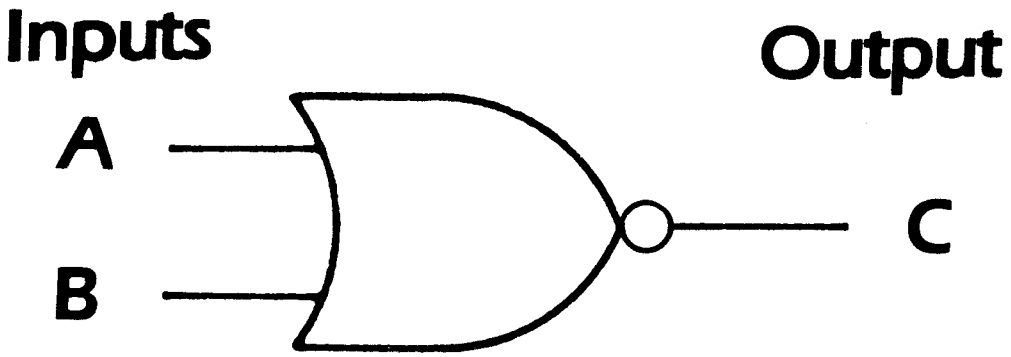


“NAND” GATE OPERATION EXAMPLE #2

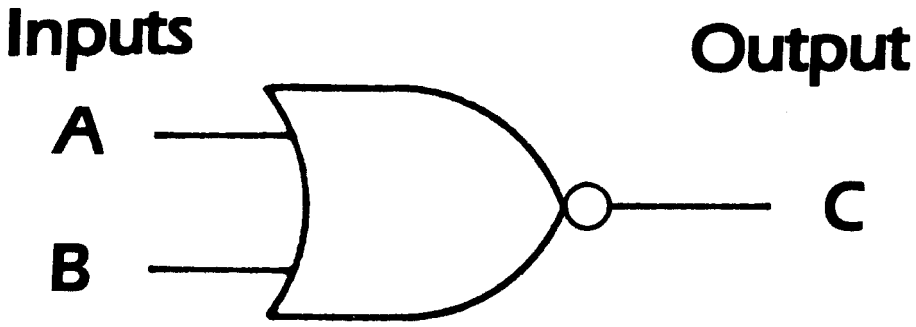


THE "NOR" GATE

LOGIC SYMBOL FOR "NOR" GATE



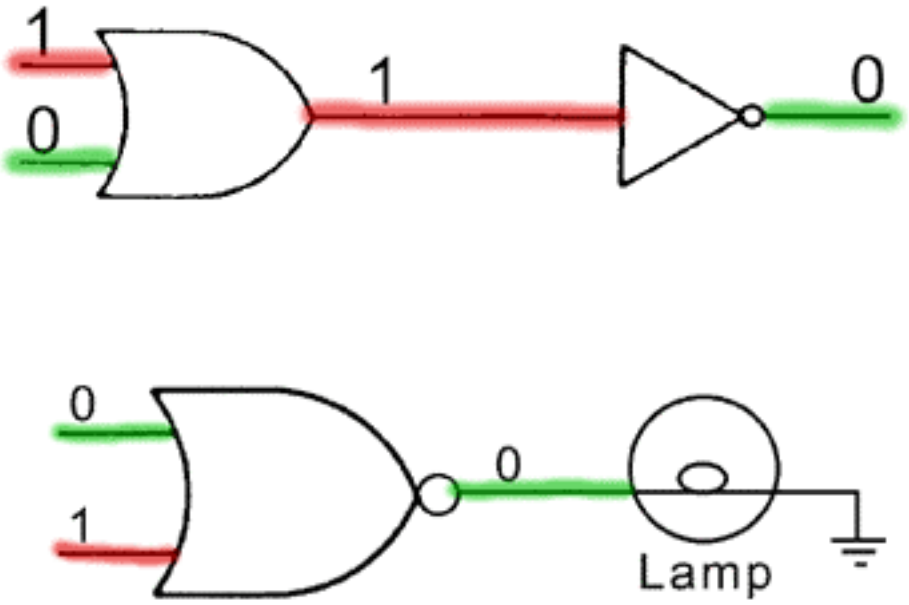
THE "NOR" GATE



TRUTH TABLE FOR "NOR" GATE

Inputs		Output
A	B	C
0	0	1
0	1	0
1	0	0
1	1	0

“NOR” GATE OPERATION EXAMPLE #1



“NOR” GATE OPERATION EXAMPLE #2