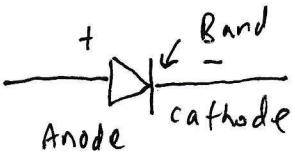
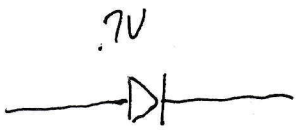
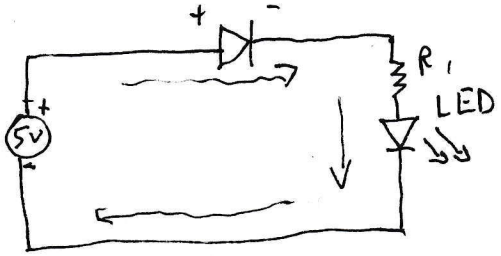
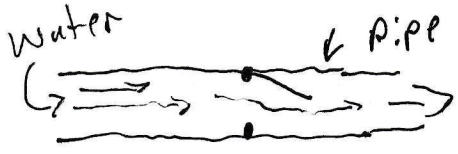
Diodes and Diode Logic



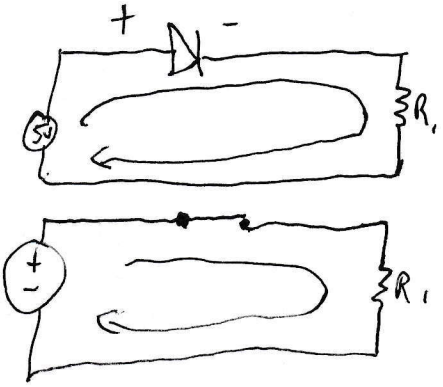


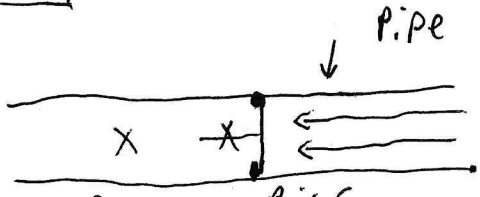
.7V forward bias Voltage



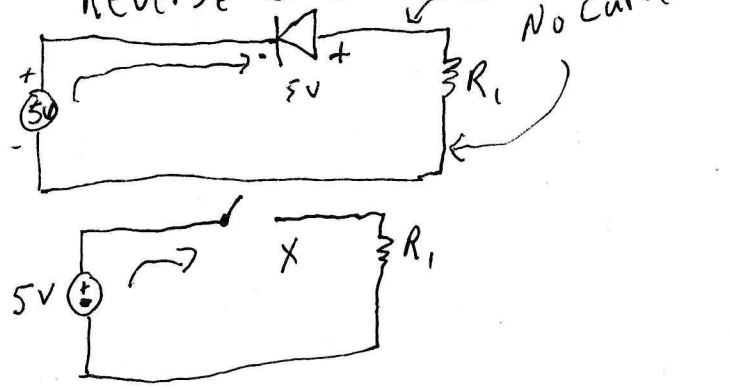


Forward Bias





Reverse Bias



Diode = ON = 1
Diode = OFF = 0
} Binary

Diode = 5V
Diode = 0V

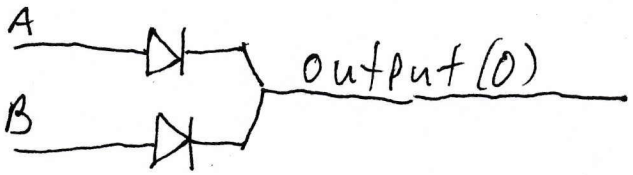
Diodes and Diode Logic

Diodes as Logic Gates:

OR Gate:

Truth Table

Input A	Input B	Output O	
0V	0V	0V	= Low
0V	5V	5V	= Hi
5V	0V	5V	= Hi
5V	5V	5V	= Hi

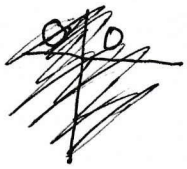


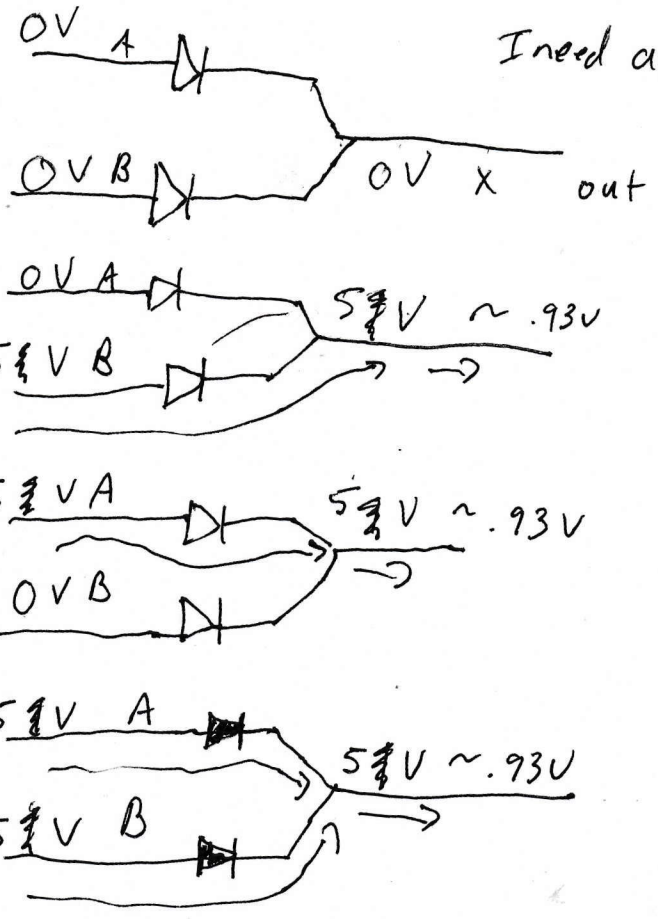
5V = ON
0V = OFF

OR Gate

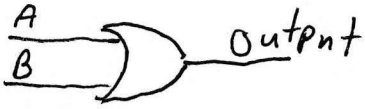
Binary

2^3	2^2	2^1	2^0	Binary
8	4	2	1	Dec





OR Gate



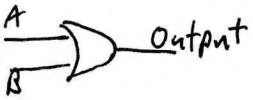
OR Gates
AND Gates
NOR Gates
NAND Gates

Diodes and Diode Logic

Truth Tables

OR

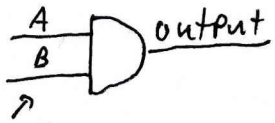
A	B	output
0	0	0
0	1	1
1	0	1
1	1	1



Input

AND

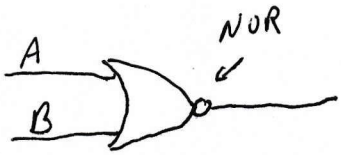
A	B	output
0	0	0
0	1	0
1	0	0
1	1	1



Input

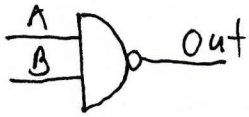
NOR

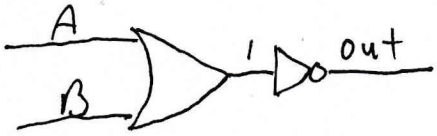
A	B	output
0	0	1
0	1	0
1	0	0
1	1	0



NAND

A	B	output
0	0	1
0	1	1
1	0	1
1	1	0





Inverter