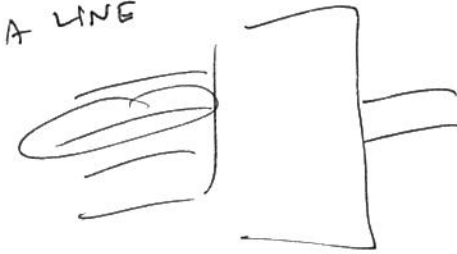


THE ENCODER

"SELECT A LINE"



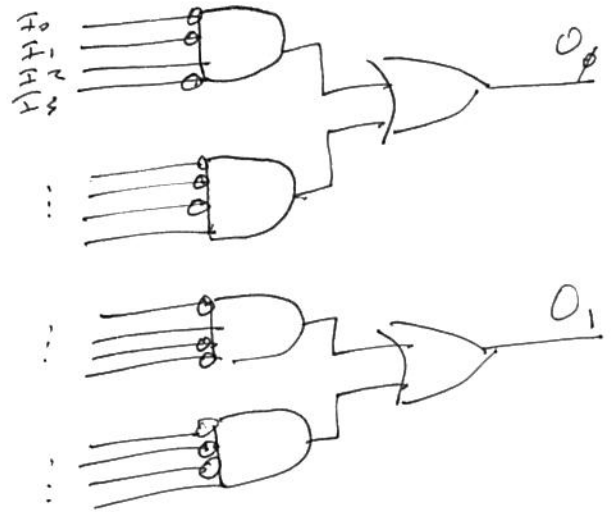
2^n INPUTS

n OUTPUTS

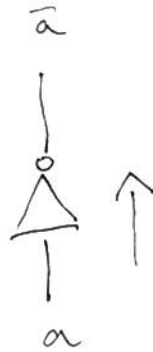
"GIVE ME ITS ADDRESS AS A BINARY #"

How? 4-2 ENCODER

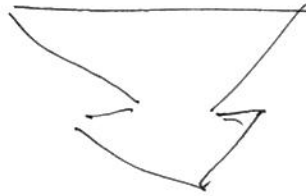
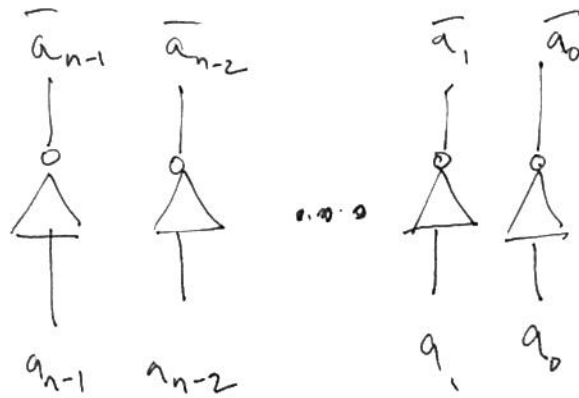
I_0	I_1	I_2	I_3	O_0	O_1
1	0	0	0	0	0
0	1	0	0	0	1
→ 0	0	1	0	1	0
→ 0	0	0	1	1	1
↓	↓	↓	↓		
A	B	C	D		



FLIPPING BITS



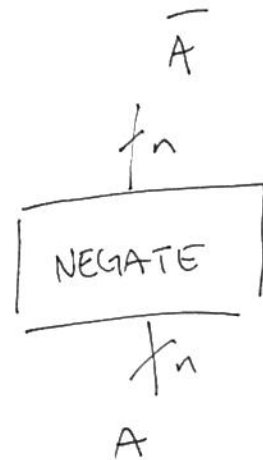
$$A = \{a_{n-1}, a_{n-2}, \dots, a_1, a_0\}$$



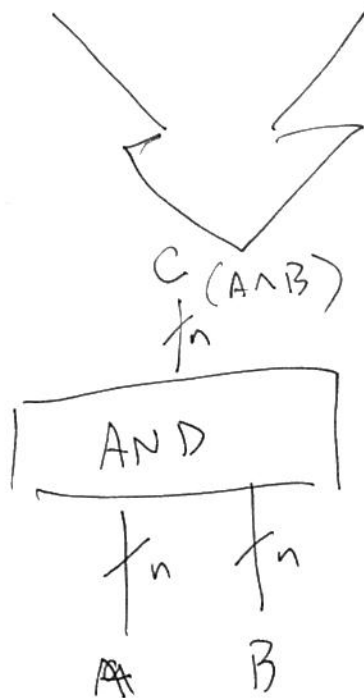
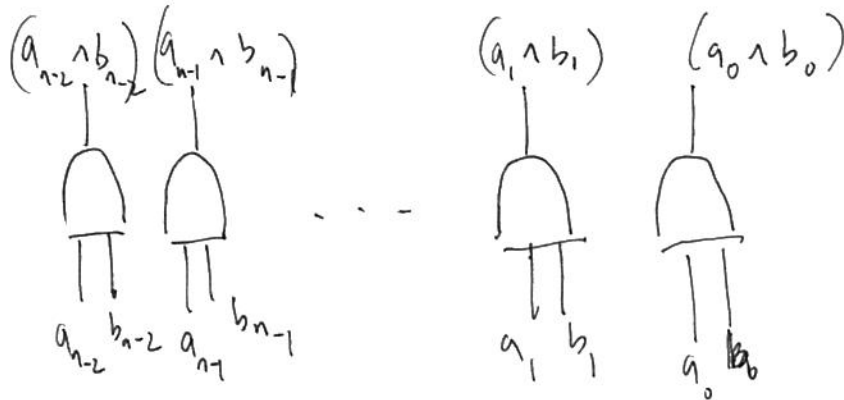
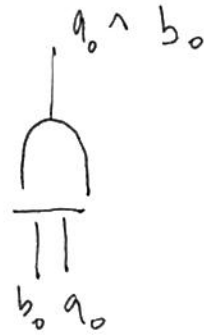
OR



OR



BITWISE OPS



SAME FOR

- OR
- XOR
- NAND
- NOR
- VARIABLE