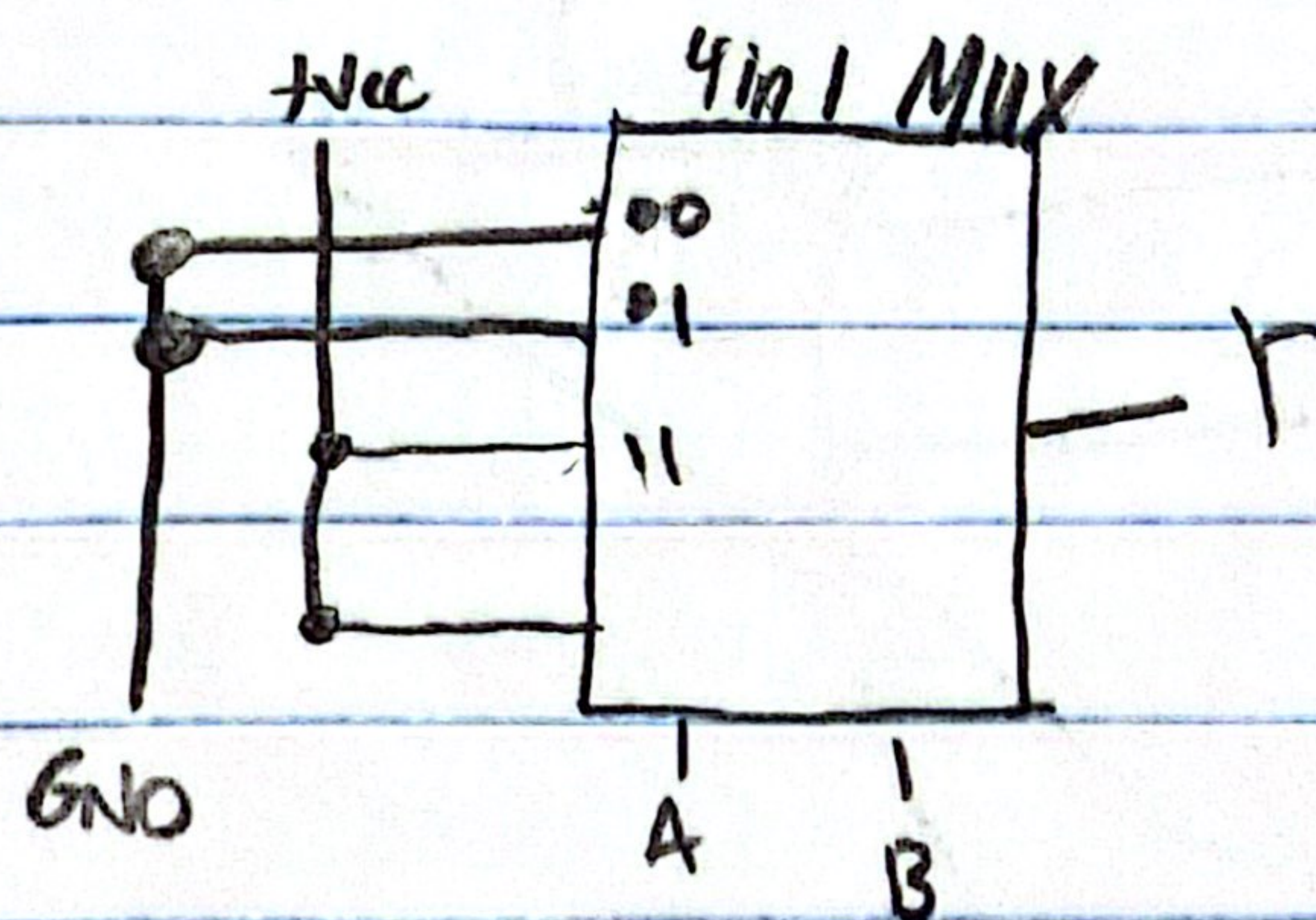
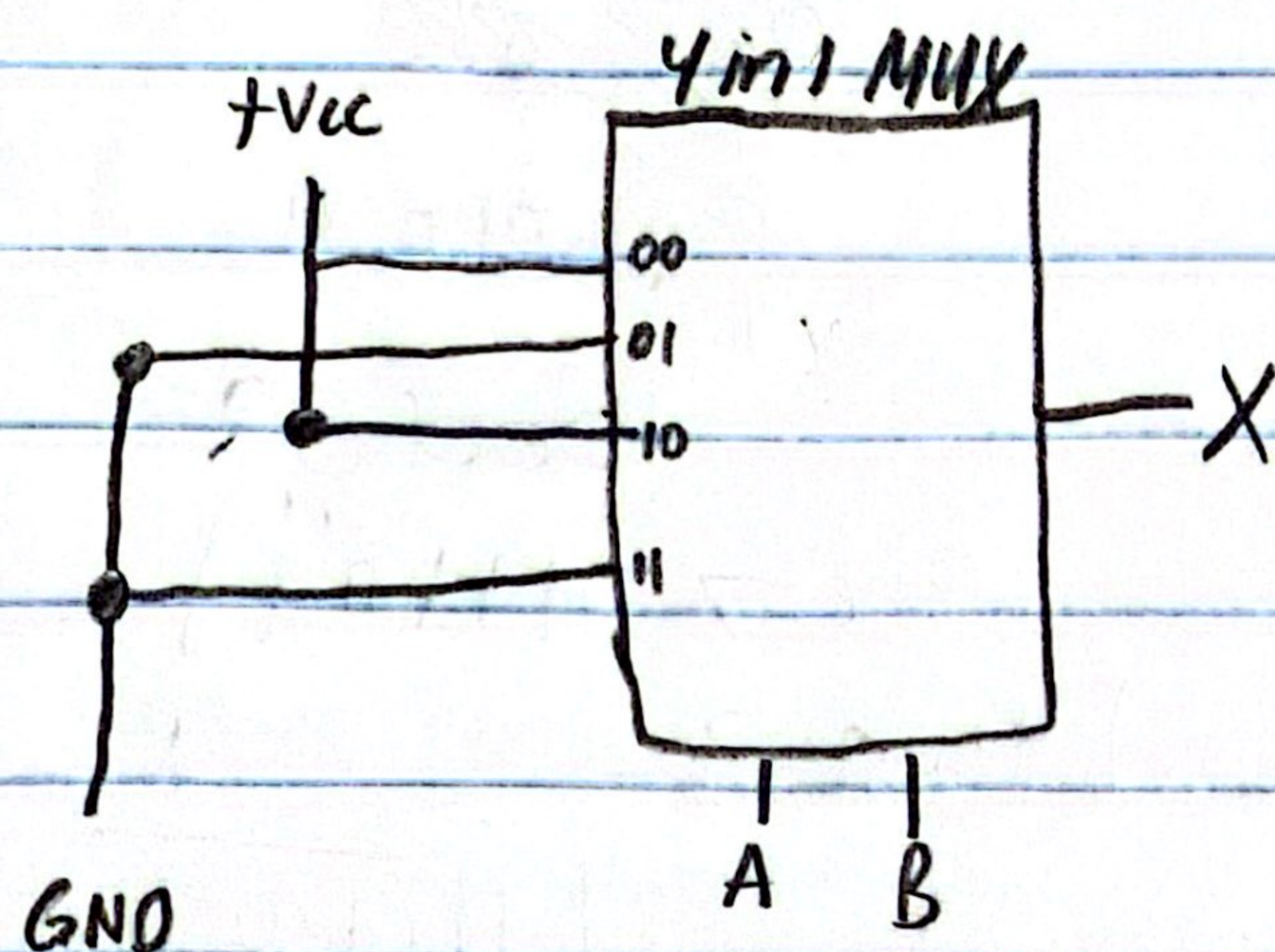


1.) 4 to 1 MUX for function $X \neq Y$

In	In	out	Out
A	B	X	Y
0	0	1	0
0	1	0	0
1	0	1	1
1	1	0	1

2 inputs \Rightarrow 4 lines



2.) 4 inputs A, B, C, D & 3 output functions X, Y, Z

The input is 4 bit binary pattern, & output is 3

of bits = 1 in input pattern. The MSB out output is X

4 inputs = $2^4 = 16$ lines

A	B	C	D	X	Y	Z
0	0	0	0	0	0	0
0	0	0	1	0	0	1
0	0	1	0	0	0	1
0	1	0	0	0	0	1
1	0	0	0	0	0	1

	A	B	C	D	$\rightarrow Z$
0	0	0	0	0	0
1	0	0	0	1	1
2	0	0	1	0	1
3	0	0	1	1	0
4	0	1	0	0	1
5	0	1	0	1	0
6	0	1	1	0	0
7	0	1	1	0	1
8	1	0	0	0	1
9	1	0	0	1	0
10	1	0	1	0	0
11	1	0	1	1	1
12	1	1	0	0	0
13	1	1	0	1	1
14	1	1	1	0	1
15	1	1	1	1	0

