

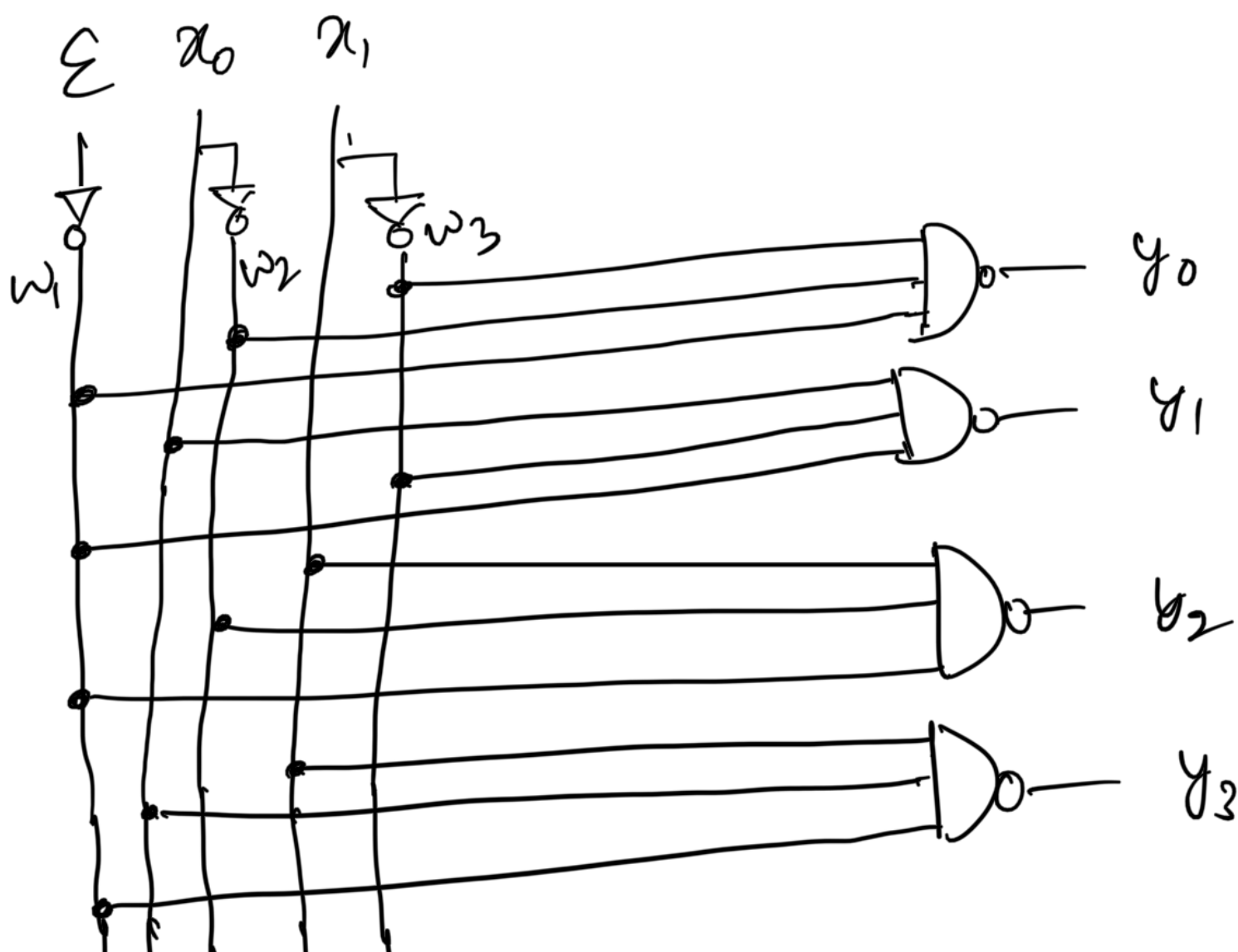
Decoders

For decoders, if there are 'n' i/p's then there will be 2^n o/p's

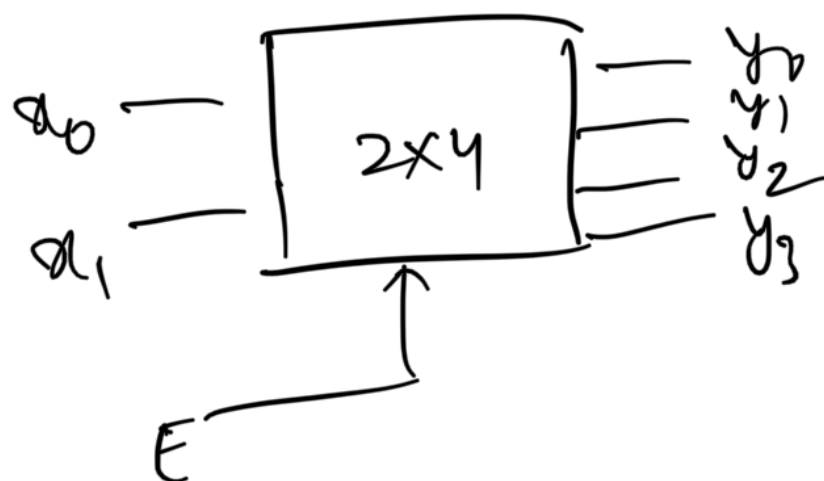
Consider 2×4 decoder with negative logic.

2 i/p's \rightarrow 4 o/p's
 (x_0, x_1) (y_0, y_1, y_2, y_3)

Enable \bar{E}	x_1 x_0	y_3 y_2 y_1 y_0
\uparrow	x x	1 1 1 1
0	0 0	1 1 1 0
0	0 1	1 1 0 1
0	1 0	1 0 1 1
0	1 1	0 1 1 1



1 1 1 1 1



3x8 decoder using 2x4 decoder:

Input x_2, x_1, x_0
 output $y_7, y_6, y_5, y_4, y_3, y_2, y_1, y_0$

x_2	x_1	x_0	y_7	y_6	y_5	y_4	y_3	y_2	y_1	y_0
0	0	0	0	0	0	0	0	0	0	1
0	0	1	0	0	0	0	0	0	1	0
0	1	0	0	0	0	0	0	1	0	0
0	1	1	0	0	0	0	1	0	0	0
1	0	0	0	0	0	1	0	0	0	0
1	0	1	0	0	1	0	0	0	0	0
1	1	0	0	1	0	0	0	0	0	0
1	1	1	1	0	0	0	0	0	0	0

