

2x4 decoder

en	in1	in0	y3	y2	y1	y0
0	*	*	1	1	1	1
1	0	0	1	1	1	0
	0	1	1	1	0	1
	1	0	1	0	1	1
	1	1	0	1	1	1

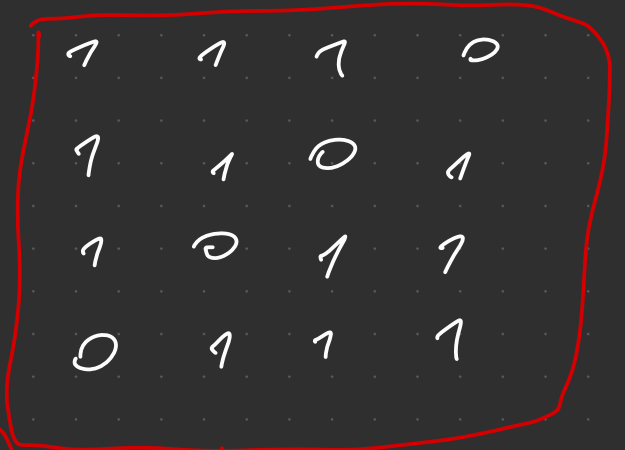
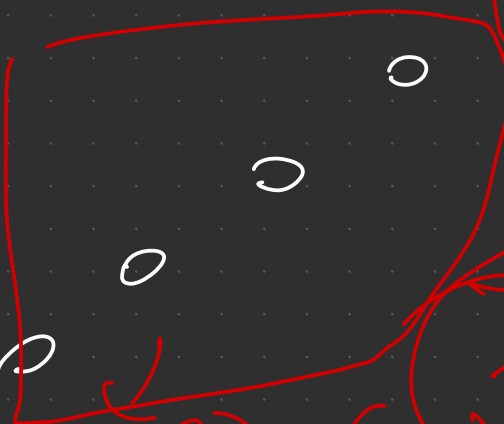
dec 3x8

$s_2 s_1 s_0 \quad y_7 y_6 y_5 y_4 y_3 y_2 y_1 y_0$

0	0	0	1	1	1	1	1	1	1	0
0	0	1								1
0	1	0								1
0	1	1								1

1	0	0	
1	0	1	
1	1	0	
1	1	1	0

dec 2x4



dec 2x4

$s_2 (s_1, s_0)$

$s_2, (s_1, s_0)$

fa    ba    fb    bb

$fa = fb \ \& \ ba = bb \rightarrow eq$

$fa = fb \ \& \ ba > bb \rightarrow gr$   
 $ba < bb \rightarrow ls$

$fa > fb \rightarrow gr$

$fa < fb \Rightarrow ls$

4 bit    x, y  
 1 bit    carry\_in

4 bit    z

+ EAC

x      0 0 1 1      C<sub>1</sub>

y      0 1 1 0      C<sub>1</sub>

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z      0 0 1