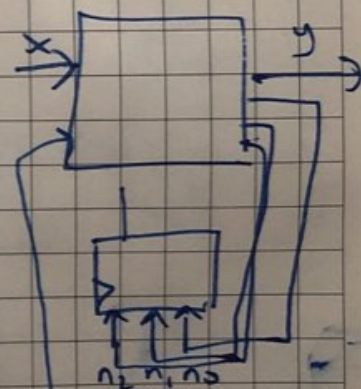


Truth table

s_2	s_1	s_0	x	n_2	n_1	n_0	y
0	0	0	0	0	0	0	0
0	0	0	1	0	0	1	0
0	0	1	X	0	1	0	1
0	1	0	X	0	1	1	1
0	1	1	0	0	0	0	1
0	1	1	1	1	0	0	1
1	0	0	0	0	0	0	0
1	0	0	1	1	0	0	0

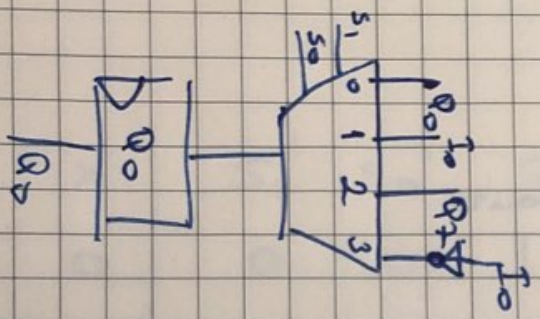
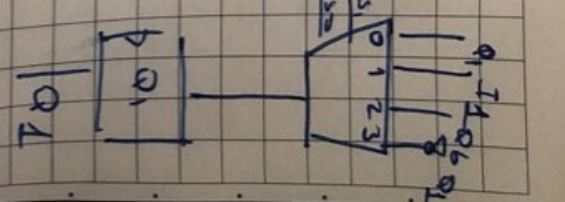
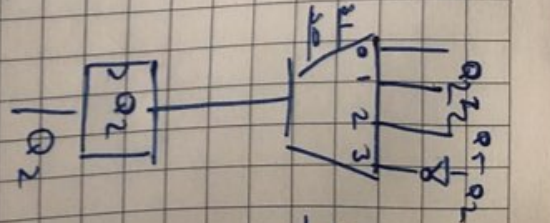
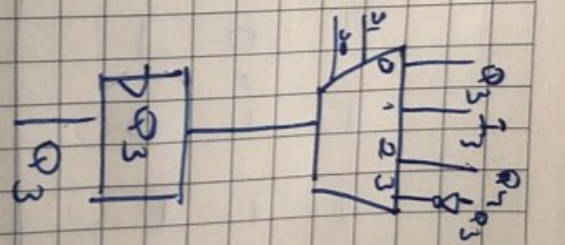
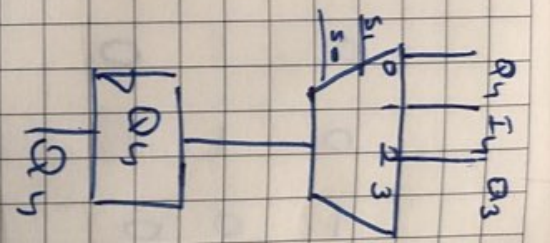
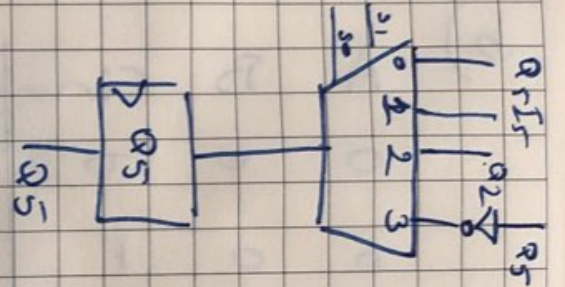
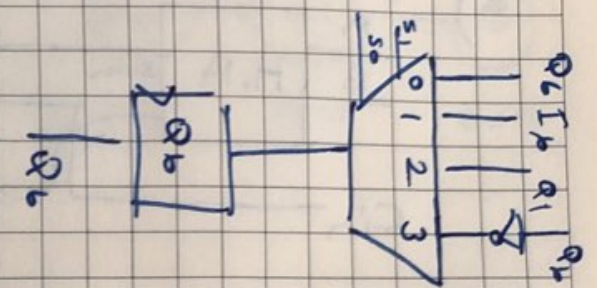
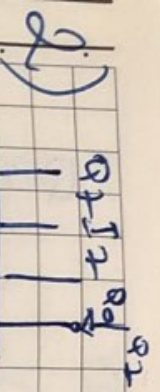


$$n_2 = s_2' s_1 s_0 x + s_2 s_1' s_0' x$$

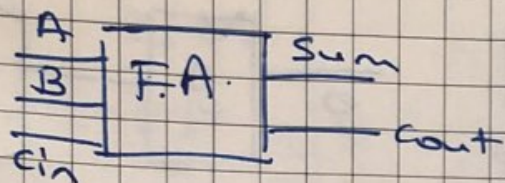
$$n_1 = s_2' s_1' s_0 + s_2' s_1 s_0'$$

$$n_0 = s_2' s_1' s_0' x + s_2' s_1 s_0$$

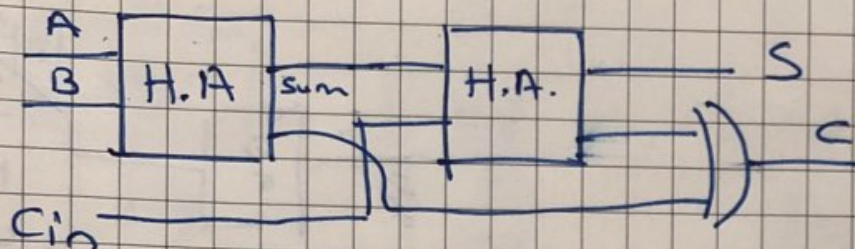
$$y = s_2' (s_1' s_0 + s_1 s_0' + s_1 s_0)$$



Q3)

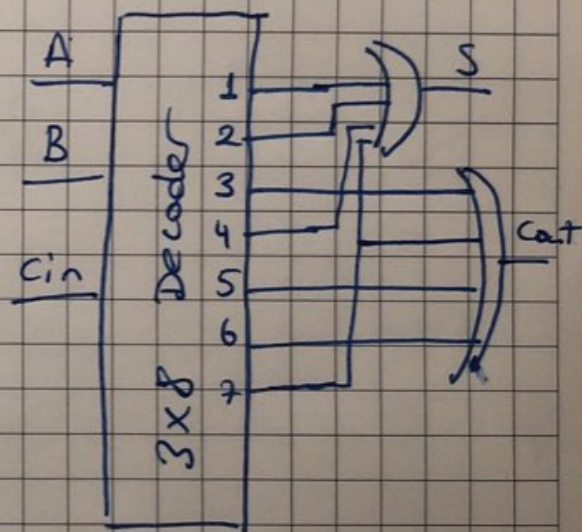


a)



b)

A	B	C_{in}	S	C_{out}
0	0	0	0	0
0	0	1	1	0
0	1	0	1	0
0	1	1	0	1
1	0	0	1	0
1	0	1	0	1
1	1	0	0	1
1	1	1	1	1



Q4)

S_1	S_0	X	S_1'	S_0'	Z
0	0	0	0	0	1
0	0	1	0	1	1
0	1	0	1	0	0
0	1	1	0	0	0
1	0	0	0	1	0
1	0	1	1	0	0
1	1	0	0	0	0
1	1	1	0	0	0

