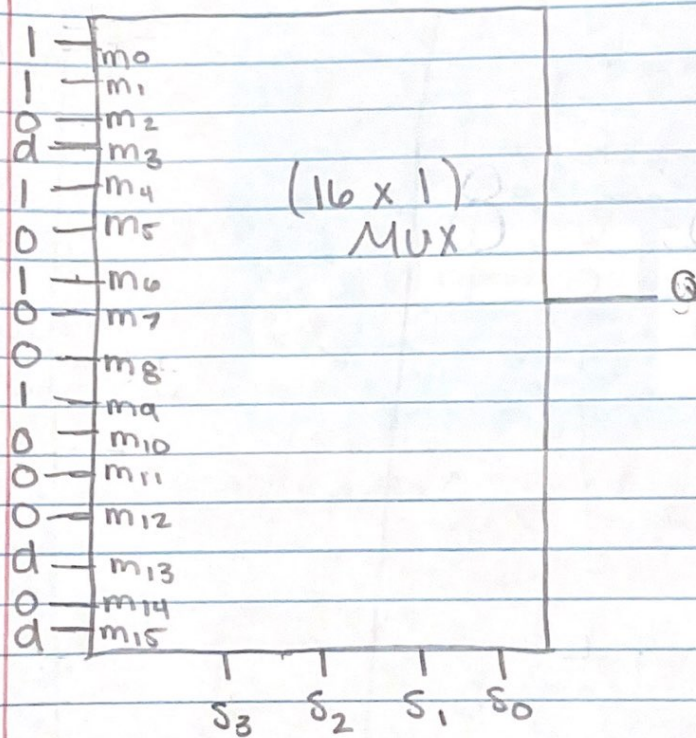


Jalen Powell.
Elec 2200

09/29/2021

Hw 14

1. $Q = m(0, 1, 4, 6, 9) + d(3, 13, 15)$



AB \ CD	00	01	11	10
00	1	1		
01	1		X	1
11	X			
10		1		

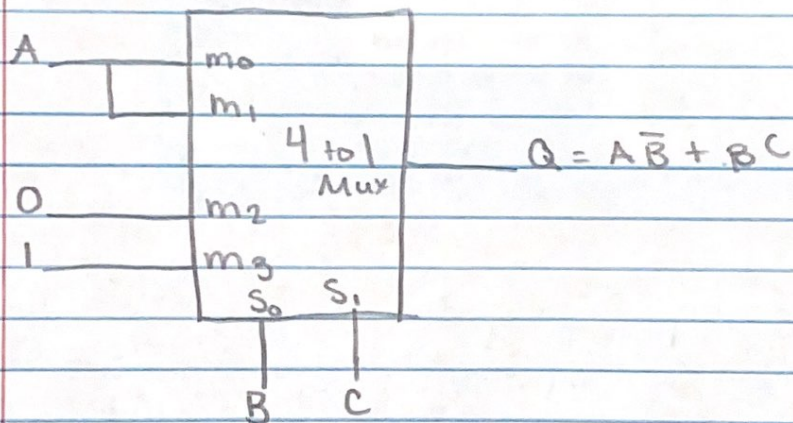
$$Y = \bar{A}\bar{B}\bar{C} + \bar{A}B\bar{C} + A\bar{C}D$$

$$2. Q = A\bar{B} + BC$$

A \ BC	$\bar{B}\bar{C}$	$\bar{B}C$	BC	$B\bar{C}$
\bar{A}	0	1	3	2
A	4	5	7	6

$$F(A,B,C) = \sum m(3,4,5,7)$$

	m_0	m_1	m_2	m_3
\bar{A}	0	1	2	3
A	4	5	6	7
	A	A	0	1



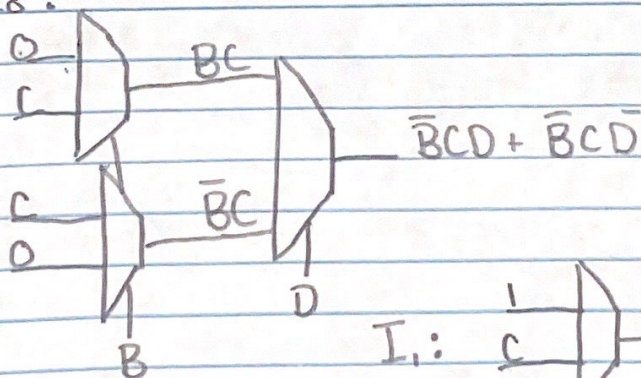
3. $Q = \Pi M(0, 4, 5, 7, 9, 12, 15) + d(1, 2, 11)$

	A	B	C	D	Q
0	0	0	0	0	0
1	0	0	0	1	X
2	0	0	1	0	X
3	0	0	1	1	1
4	0	1	0	0	0
5	0	1	0	1	0
6	0	1	1	0	1
7	0	1	1	1	0
8	1	0	0	0	1
9	1	0	0	1	0
10	1	0	1	0	1
11	1	0	1	1	X
12	1	1	0	0	0
13	1	1	0	1	1
14	1	1	1	0	1
15	1	1	1	1	0

$$I_0 = \bar{B}CD + B\bar{C}\bar{D}$$

$$\begin{aligned} I_1 &= \bar{B}\bar{C}\bar{D} + \bar{B}C\bar{D} + B\bar{C}\bar{D} + BC\bar{D} \\ &= \bar{B}\bar{C}\bar{D} + \bar{D}(\bar{B}(C + \bar{C}) + BC) \\ &= \bar{B}\bar{C}\bar{D} + (\bar{B} + BC)\bar{D} \end{aligned}$$

I_0 :



I_1 :

