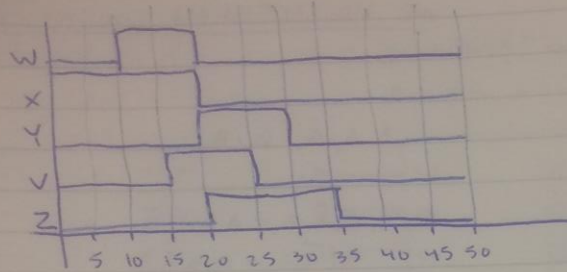


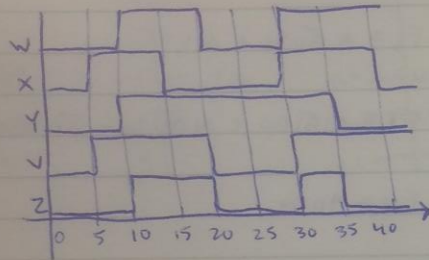
Homework 4

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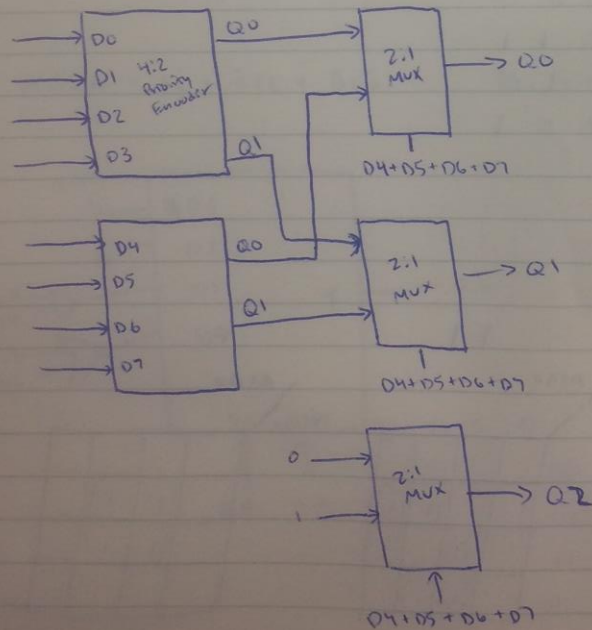
8.1



8.6



9.21



1 2 bit unsigned multiplier

WE HAVEN'T BEEN TAUGHT THIS

A1	A0	B1	B0	F3	F2	F1	F0
0	0	0	0	0	0	0	0
0	0	0	1	0	0	0	0
0	0	1	0	0	0	0	0
0	0	1	1	0	0	0	0
0	1	0	0	0	0	0	0
0	1	0	1	0	0	0	1
0	1	1	0	0	0	1	0
0	1	1	1	0	0	1	1
1	0	0	0	0	0	0	0
1	0	0	1	0	0	1	0
1	0	1	0	0	1	0	0
1	0	1	1	0	1	1	0
1	1	0	0	0	0	0	0
1	1	0	1	0	0	1	1
1	1	1	0	0	1	1	0
1	1	1	1	1	0	0	1

$$F_3 = A_1 \cdot A_0 \cdot B_1 \cdot B_0$$

$$F_2 = A_1 \cdot \bar{A}_0 \cdot B_1 + A_1 \cdot A_0 \cdot B_1 \cdot \bar{B}_0$$

$$= A_1 (\bar{A}_0 B_1 + A_0 B_1 \bar{B}_0)$$

$$F_2 = A_1 \cdot \bar{A}_0 \cdot B_1 + A_1 B_1 \bar{B}_0$$

$$F_1 = A_1 B_1 B_0 + A_1 \bar{A}_0 B_0 + \bar{A}_1 A_0 B_1 + A_0 B_0$$

$$F_0 = A_0 B_0$$

~~IN THE ABOVE~~

F2

F1

F0

A1A0

B1B0

00	00	01	11	10
00				
01				
11				11
10				11

A1A0

B1B0

00	00	01	11	10
00				
01			11	
11		11		11
10		11		11

A1A0

B1B0

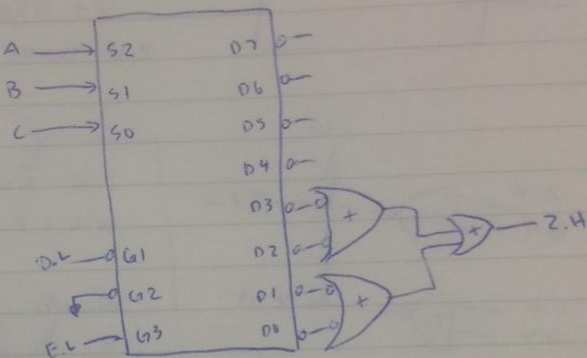
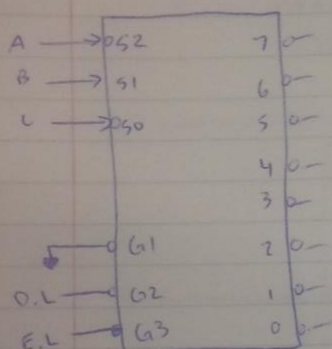
00	00	01	11	10
00				
01			11	
11		11		11
10		11		11

~~$F = A\bar{B}\bar{C}D + BC + \bar{B}C(E+\bar{G})$~~

~~C, E, F, G low~~  
~~B, D High~~

2.  $A\bar{B}C\bar{D}E = Y$   
all Low

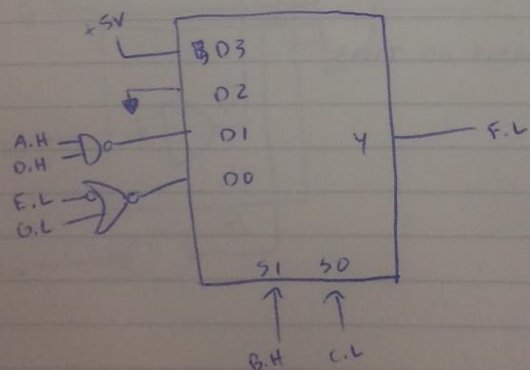
$Z = (AB+C)(DE) = AB\bar{D}E + C\bar{D}E$   
A.L, B.L, C.L, D.L, E.L, Z.H



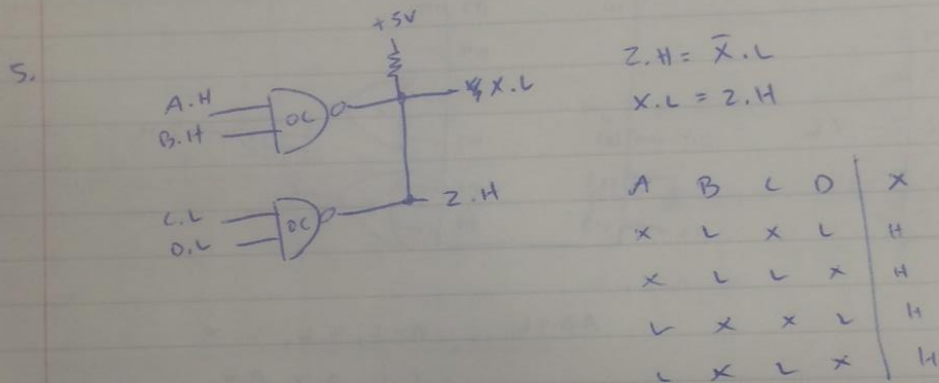
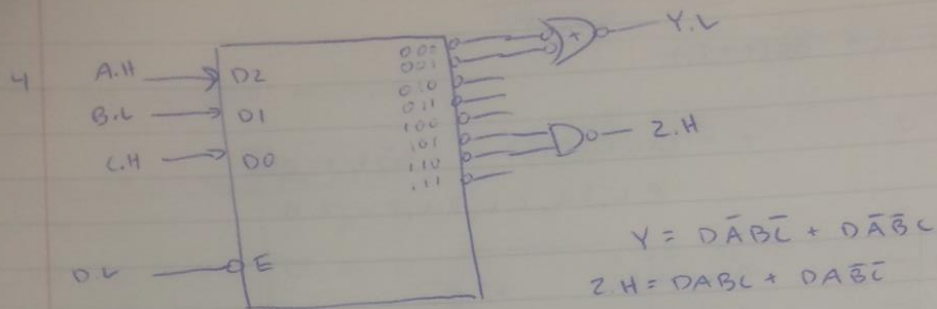
$AB+C$     A=L, B.L, C.X  
C.L, A.X, B.X

3.  $F = A\bar{B}\bar{C}D + BC + \bar{B}CE + \bar{B}C\bar{G}$

F.L, B.H, C.L, D.H, A.H, E.L, G.L



B <sub>H</sub>	C <sub>L</sub>	Y <sub>L</sub>
L	H	01
H	L	02
L	L	00



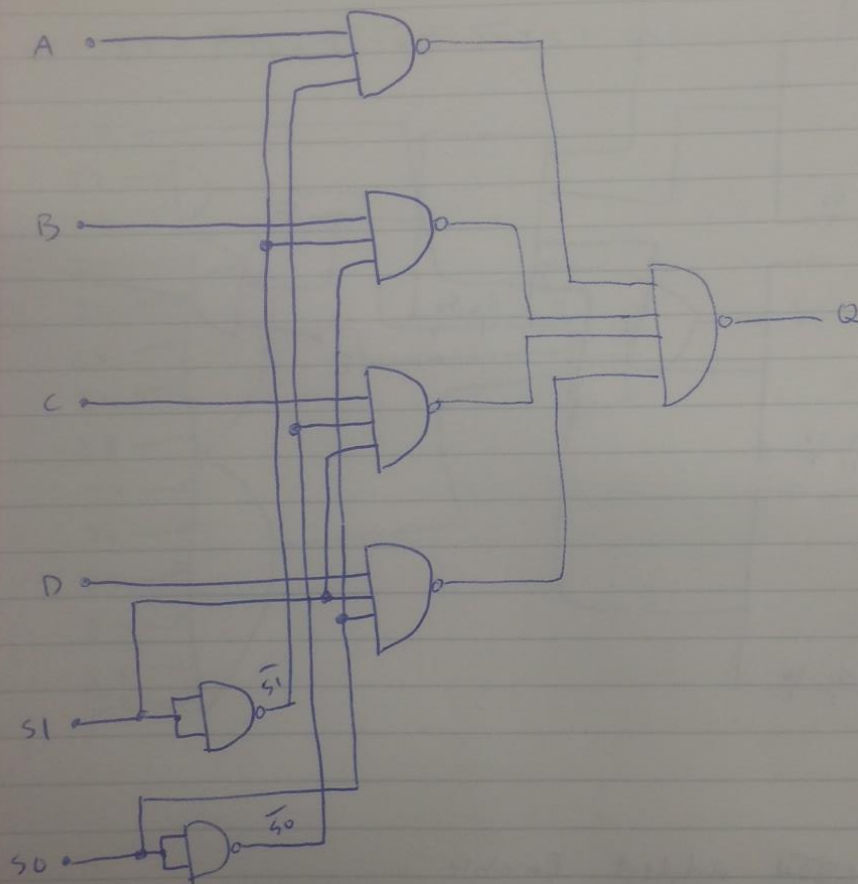
HAVEN'T BEEN TAUGHT ANY OF THIS

6. HAVEN'T BEEN TAUGHT ANY OF THIS

Mitchell Irvin  
Homework 4  
Section 7441  
TA: Ethan Lynch

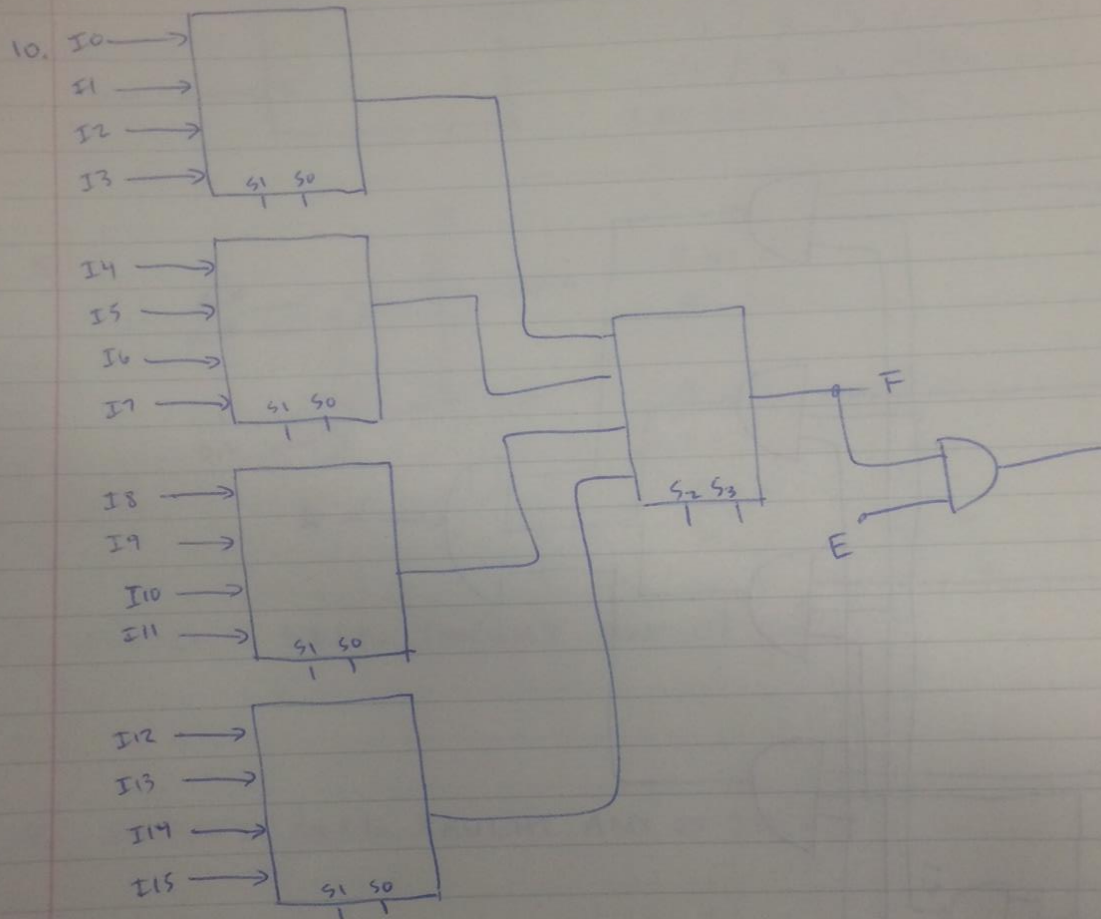
7.

S1	S0	D	C	B	A	Q
0	0	x	x	x	1	1
0	1	x	x	1	x	1
1	0	x	1	x	x	1
1	1	1	x	x	x	1





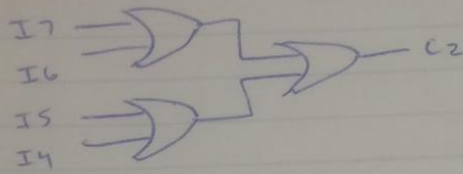
8. WE HAVEN'T BEEN TAUGHT TRI-STATE DEVICES???



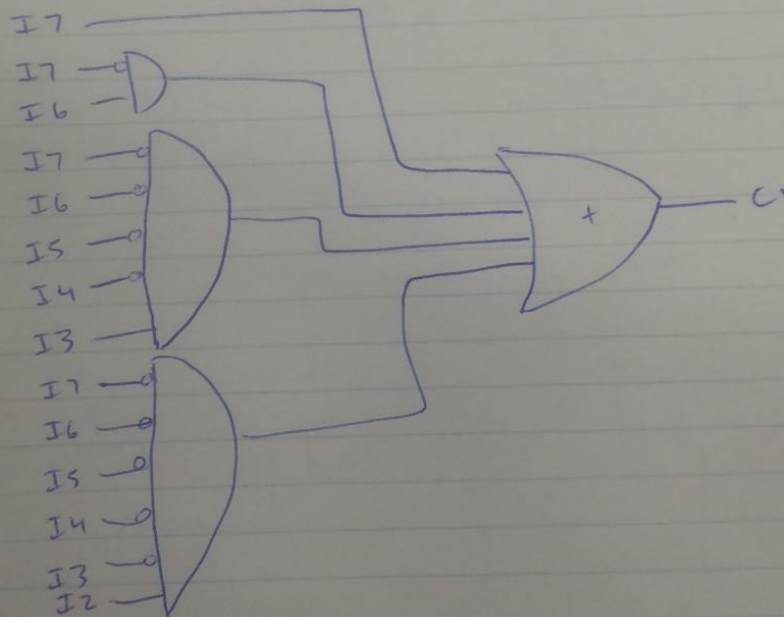
9. see above ~~added~~ added Enable

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Section 7441  
TA: Ethan Lynch

11.  $C2 = I7 + I6 + I5 + I4$



$$C1 = I7 + \bar{I}I6 + \bar{I}I6\bar{I}5\bar{I}4\bar{I}3 + \bar{I}I6\bar{I}3\bar{I}4\bar{I}3\bar{I}2$$



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$$C_0 = I_7 + \overline{I_7} \overline{I_6} \overline{I_5} \overline{I_4} \overline{I_3} + \overline{I_7} \overline{I_6} \overline{I_5} \overline{I_4} \overline{I_3} \overline{I_2} I_1$$

