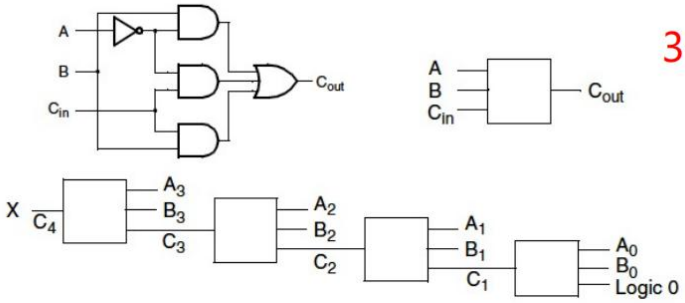
第四版	第五版
3_P1 中奇怪的第六章题目	
6-5	2-30（延迟时间数量级变化）
6-6	2-31
第四章	
4-2	3-50
4-3	3-51
4-4	3-52
4-11	3-59
4-12	3-60
4-14	3-62
第五章	
5-2	4-2
5-4	4-4
5-6	4-6（解析式相反）
5-9	4-9
5-11	4-11
5-12	4-12
5-20	4-21
5-21	4-22
5-24	4-25
5-28	4-29

5-33（J-K Flip-flop）	貌似没有
第六章	
6-9	4-58
6-10	4-59（注意具体数值变更）
6-12	5-4
6-20	5-12
第七章	
7-6	6-6
7-12	6-13
7-15	6-16
7-16	6-17
7-17	6-19
7-20	6-23
7-24	6-27
7-30	6-34
第八章	
8-1	7-1
8-4	7-4
8-5	7-5
8-8	7-8

4-12.+



3-60

4-14.+

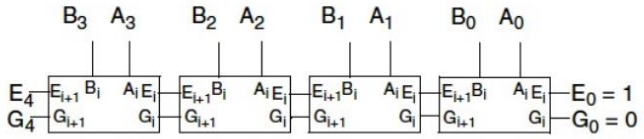
This problem requires two decisions: Is A > B? Is A = B? Two "carry" lines are required to build an iterative circuit, G_i and E_i. These carries are assumed to pass through the circuit from right to left with $G_0 = 0$ and $E_0 = 1$. Each cell has inputs A_i, B_i, G_i, and E_i and outputs G_{i+1} and E_{i+1}. Using K-maps, cell equations are:

$$E_{i+1} = \overline{A}_i\overline{B}_i\,E_i + A_iB_i\,E_i$$
$$G_{i+1} = A_i\overline{B}_i\,E_i + (A_i + \overline{B}_i)\,E_i$$

3-62

Using multilevel circuit techniques, the cost can be reduced by sharing terms:

$$E_{i+1} = \overline{(A_i\overline{B}_i + \overline{A}_iB_i)}\,E_i$$
$$G_{i+1} = (A_i\overline{B}_i + \overline{(\overline{A}_iB_i)}\,G_i$$



5-11 State Table & State Diagram

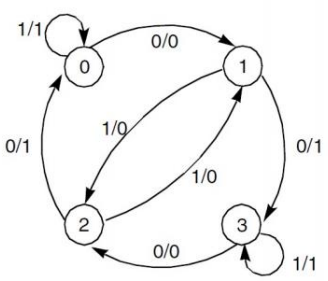
4-11

➢ Derive the function of the circuit as follows:

$$S_A = B \qquad S_B = \overline{X \oplus A}$$
$$R_A = \overline{B} \qquad R_B = X \oplus A$$

Answer:

Present state		Input	Next state		Output
A	*B*	*X*	*A*	*B*	*Y*
0	0	0	0	1	0
0	0	1	0	0	1
0	1	0	1	1	1
0	1	1	1	0	0
1	0	0	0	0	1
1	0	1	0	1	0
1	1	0	1	0	0
1	1	1	1	1	1

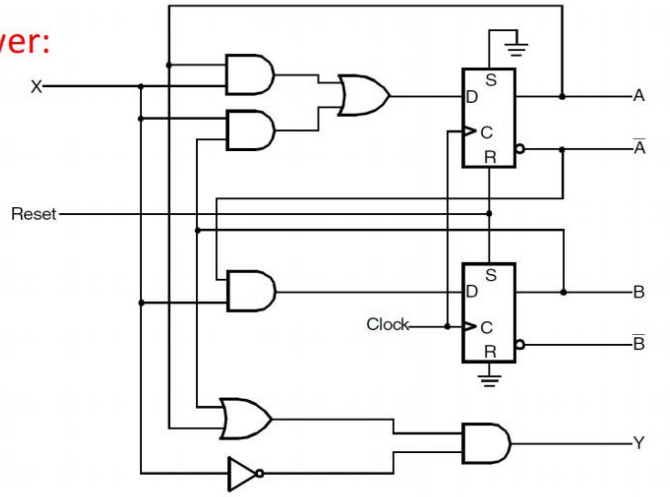


Format: X/Y

5-12 Circuit Modification 4-12

- a) When Reset=1, asynchronously reset state A=0,B=1.

Answer:



5-12 Circuit Modification

- b) When Reset=0, synchronously reset state A=0,B=0.

Answer: