

8. a. $\overline{AB+CD+EF} = \overline{AB} \cdot \overline{CD} \cdot \overline{EF} = \overline{AB} \cdot \overline{CD} \cdot \overline{EF}$

b. $A \cdot \overline{A} = 0$ $A \overline{A} B = 0$
 $B \cdot \overline{B} = 0$ $A B \overline{B} = 0$
 $0 + AB\overline{C} + 0 = AB\overline{C}$

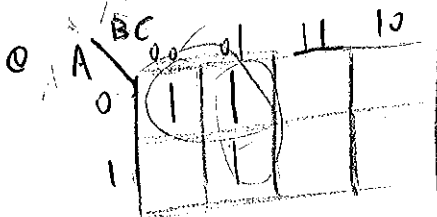
c. $BC + \overline{BC} = BC$
 $AC(B+C) + AC$

d. $C + \overline{C} = 1$
 $= AB + AC$

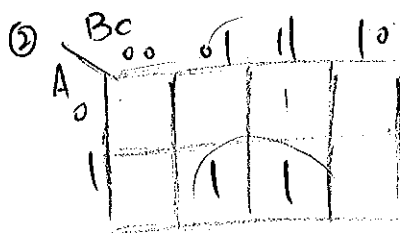
e. $(1+C) \overline{A} \overline{B}$
 $= \overline{A} \overline{B}$

f. $\overline{AB(C+\overline{CD})}$

38.

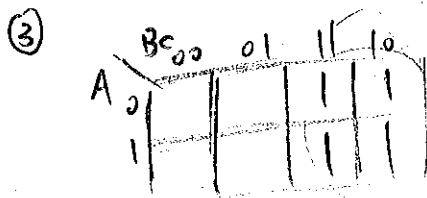


$\overline{A} \overline{B} + \overline{B} \overline{C}$



$\overline{A} \overline{B} C + A \overline{C}$

$\cdot AC$



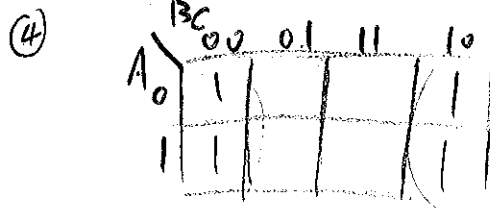
$\overline{A} \overline{B} C + \overline{A} B \overline{C} + A B C + A \overline{B} \overline{C}$

9. $\overline{A+B+C+D}$
 $\overline{A+B+C+D}$

10. ① $\overline{A+B+C+D} = \overline{A} \overline{B} \overline{C} \overline{D}$

② $\overline{A+B+C+D} = \overline{A} \overline{B} \overline{C} \overline{D}$

③ $\overline{A} \overline{B} \overline{C} \overline{D} + \overline{A} \overline{B} C D$



$\overline{A} \overline{B} \overline{C} + \overline{A} \overline{B} C + \overline{A} B \overline{C} + A B C$

\overline{C}

39. EF

	00	01	11	10
D	0	1	1	1
1	1	1	1	1

110

$$\overline{E}F + \overline{D}\overline{F}$$

④

	00	01	11	10
AB	00	01	11	10
00			1	1
01				
11			1	1
10			1	1

$$\overline{A}\overline{B}CD + \overline{A}B\overline{C}\overline{D} + A\overline{B}C\overline{D} + A\overline{B}C\overline{D}$$

42. ①

	00	01	11	10
AB	00	01	11	10
00	1	1	1	1
01	1	1	1	1
11	1	1	1	1
10	1	1	1	1

$$A + B\overline{C} + \overline{C}D$$

$$\overline{B}C$$

⑤

	00	01	11	10
AB	00	01	11	10
00	X	X	X	X
01	X			X
11	X		X	X
10	X	X	X	X

$$\overline{A}\overline{B} + \overline{C}D + A\overline{B} + C\overline{D} = \overline{B} + \overline{D}$$

②

	00	01	11	10
AB	00	01	11	10
00	1	1	1	1
01				
11			1	1
10				

$$\overline{A}\overline{B}\overline{C} + ABC$$

③

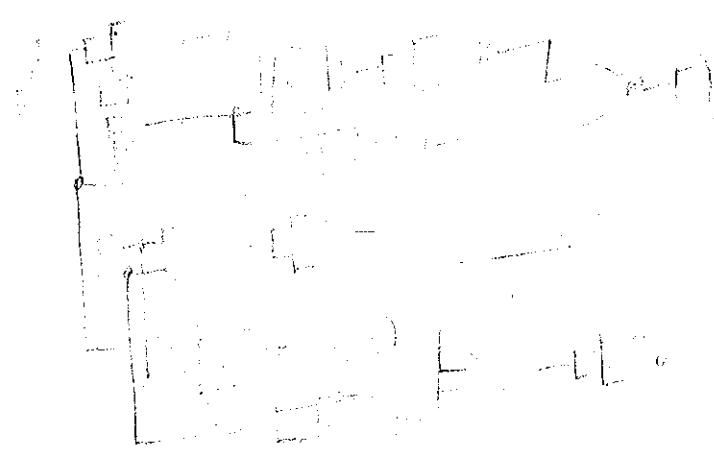
	00	01	11	10
AB	00	01	11	10
00				
01	1	1		1
11	1	1		
10				1

$$\overline{B}\overline{C} + \overline{B}C + A\overline{C}D$$

1100

$$\overline{A}\overline{B}\overline{C}\overline{D} + \overline{A}\overline{B}C\overline{D} + A\overline{B}\overline{C}\overline{D} + A\overline{B}C\overline{D} + A\overline{B}C\overline{D}$$

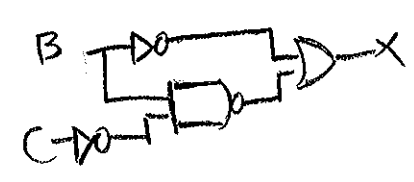
A 10



11.

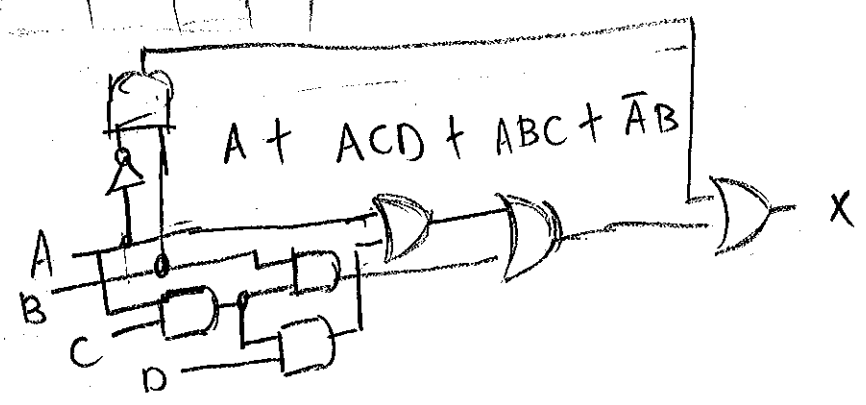
	BC			
	00	01	11	10
A=0	1	1	0	1
A=1	1	1	X	1

$$\bar{B} + B\bar{C}$$



12.

	CD			
	00	01	11	10
AB=00	0	0	1	1
AB=01	1	0	0	0
AB=11	0	0	1	0
AB=10	1	1	1	1

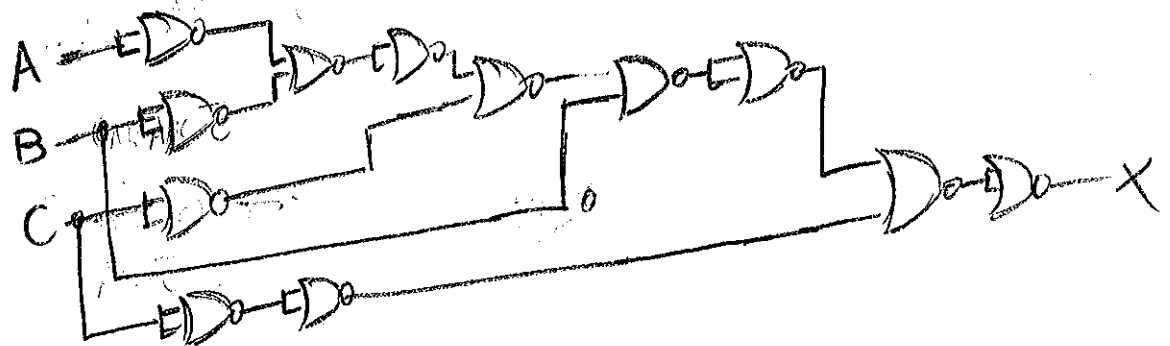
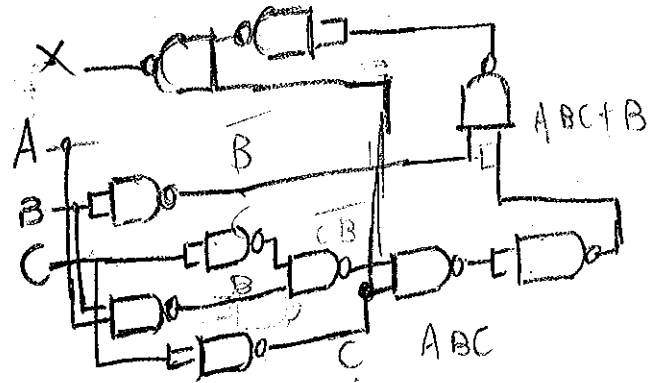


$$(\overline{AB} \cdot B + C) + C$$

$$(\overline{AB} \cdot B + \overline{AB} \cdot \overline{B} + C$$

$$B + C)$$

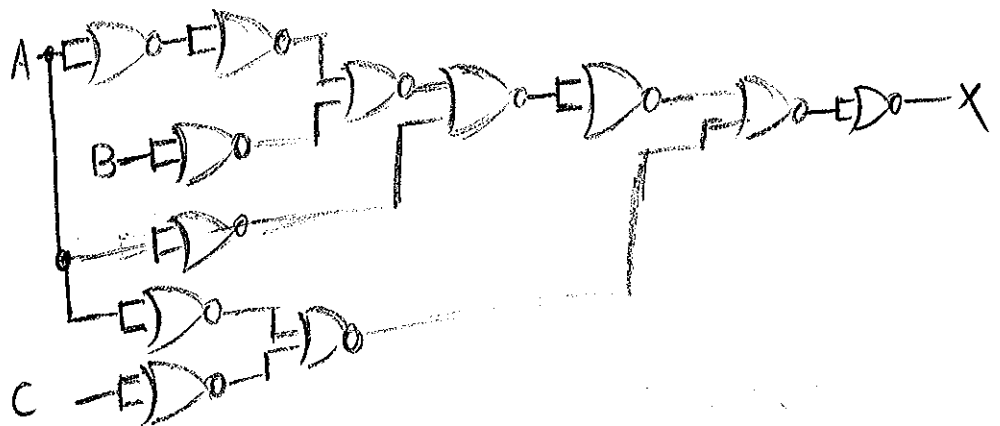
$$B + ABC + C$$



20.

$$\overline{AB} + \overline{A} + AC$$

a.



b.

$$\overline{AB} + \overline{A} + C$$

