M. Hasyim Abdillah P. 1101191095 TT-43-11

1. $F(A, B, C) = \sum m(0, 1, 4, 5, 7)$

a.

A	B	C	F
0	0	0	1
0	0	1	1
0	1	0	0
0	1	1	0
1	0	0	1
1	0	1	1
1	1	0	0
1	1	1	1

b. $F = \bar{A}\bar{B}\bar{C} + \bar{A}\bar{B}C + A\bar{B}\bar{C} + A\bar{B}C + ABC$

c. * Aljabar Boolean

$F = \bar{A}\bar{B}\bar{C} + \bar{A}\bar{B}C + A\bar{B}\bar{C} + A\bar{B}C + ABC$

$= \bar{A}\bar{B}(\bar{C} + C) + A\bar{B}(\bar{C} + C) + ABC$

$= \bar{A}\bar{B} + A\bar{B} + ABC$

$= (\bar{A} + A)\bar{B} + ABC$

$= \bar{B} + ABC$

$= \bar{B} + AC$

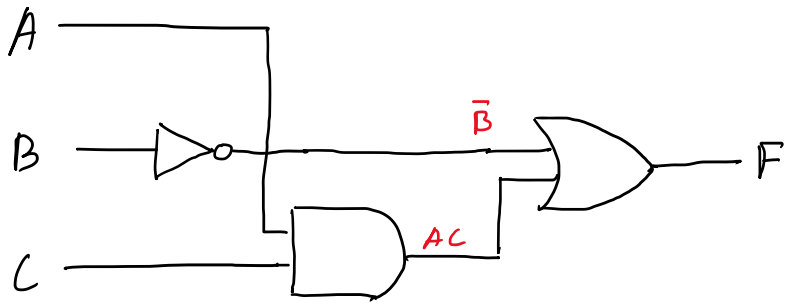
* K-Map

F \ BC / A	00	01	11	10
0	1	1	0	0
1	1 (I)	1	1 (II)	0

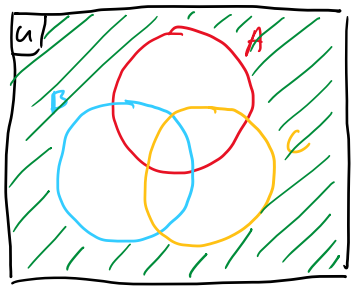
$F = \overset{I}{\bar{B}} + \overset{II}{AC}$

>

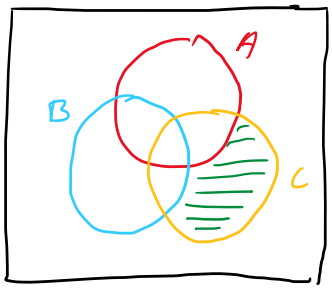
d. $F = \bar{B} + AC$



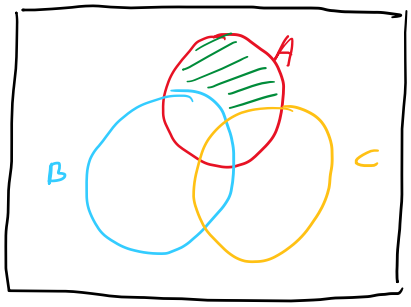
e. ⇒ $\bar{A}\bar{B}\bar{C}$:



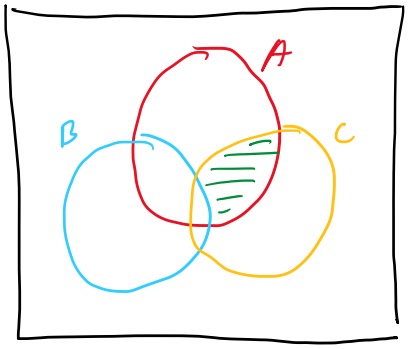
⇒ $\bar{A}\bar{B}C$:



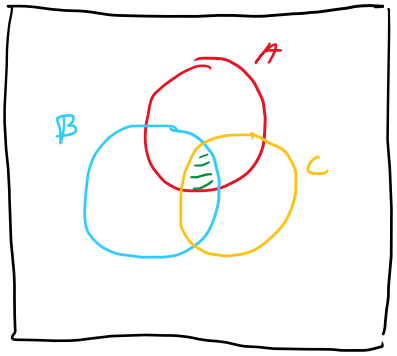
⇒ $A\bar{B}\bar{C}$:



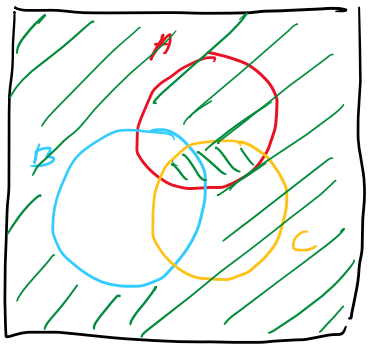
⇒ $A\bar{B}C$:



⇒ $AB\bar{C}$:



⇒ $\bar{B} + AC$



∴ $F = \bar{A}\bar{B}\bar{C} + \bar{A}\bar{B}C + A\bar{B}\bar{C} + A\bar{B}C + ABC = \bar{B} + AC$

2.

No	Desimal	Biner	Oktal	Heksadesimal
1	669	1010011101	1235	29D
2	1211	10010111011	2273	4BB
3	28	11100	34	1C
4	785	1100010001	1421	311