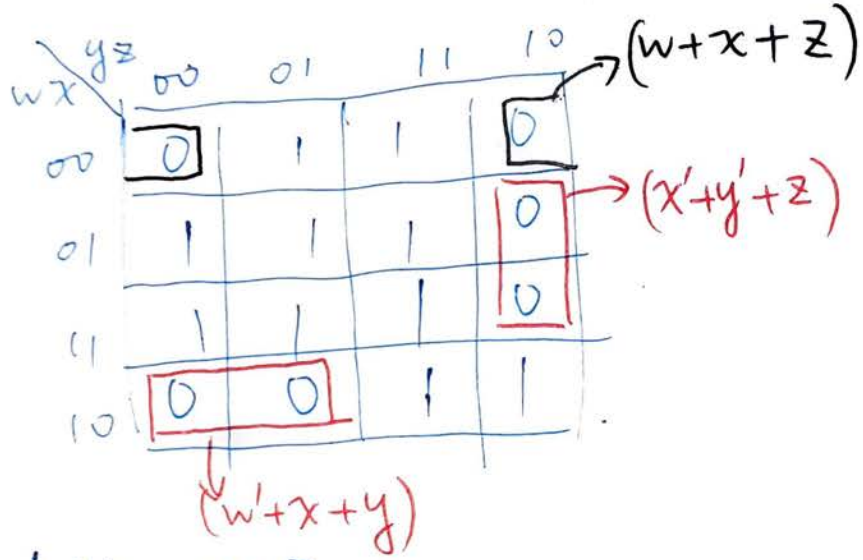
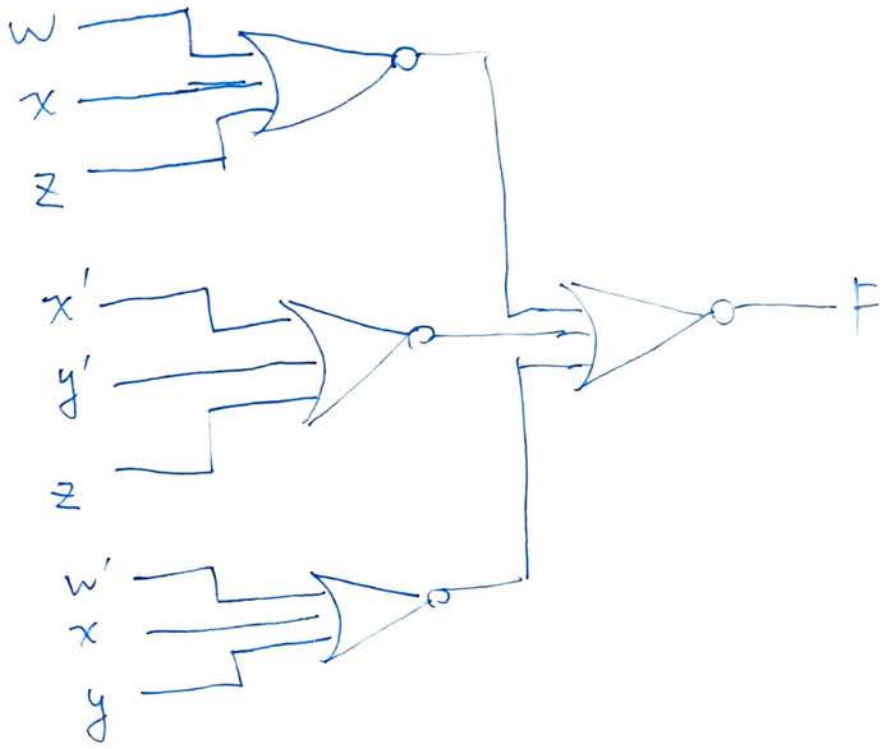
b.

$F(w,x,y,z) = w'z + xy' + yz + wx'y$





NOR – NOR

$[(\alpha+\beta)' + (\gamma+\omega)']$

$= (\alpha+\beta) \cdot (\gamma+\omega)$. (product of sum)

product of sum

$\Rightarrow F(w,x,y,z) = (w+x+z) \cdot (x'+y'+z) \cdot (w'+x+y)$

$F' = (w+x+z)' + (x'+y'+z)' + (w'+x+y)'$

$F = [(w+x+z)' + (x'+y'+z)' + (w'+x+y)']'$ ※