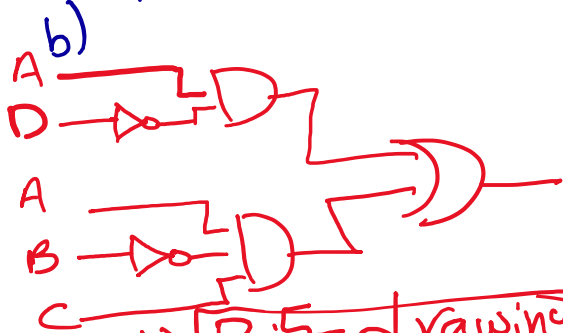


1-Simplified equation

Q1) a)  $F = AD + AB C$



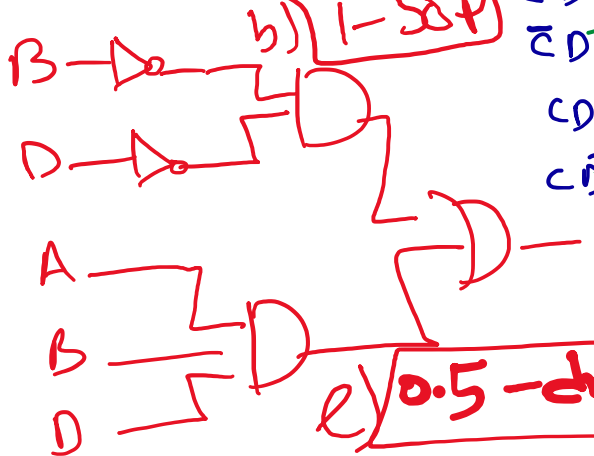
a)

	$\bar{A}\bar{B}$	$\bar{A}B$	$AB$	$A\bar{B}$
$\bar{C}\bar{D}$			1	1
$\bar{C}D$				
$CD$				1
$C\bar{D}$			1	1

a)

0.5 K-map + Bubbles

Q2)  $F = \bar{B}\bar{D} + ABD$



a)

	$\bar{A}\bar{B}$	$\bar{A}B$	$AB$	$A\bar{B}$
$\bar{C}\bar{D}$	1			1
$\bar{C}D$			1	
$CD$			1	
$C\bar{D}$	1			

a)

1 - 12-map + Bubbles

c) 0.5-drawing

$\bar{F} = \bar{A}D + B\bar{D} + \bar{B}D$

$F = \bar{A}D \cdot \bar{B}\bar{D} \cdot \bar{B}D$

$\bar{F} = \bar{A}B + B\bar{D} + \bar{B}D$

$F = \bar{A}B \cdot \bar{B}\bar{D} \cdot \bar{B}D$

c)

0.5 pos

$F = (A + \bar{D}) \cdot (\bar{B} + D) \cdot (B + \bar{D})$

d) Yes

1-Sol = Pos

Q3) a)

w	x	y	z	F
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	0
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	0
1	0	0	1	0
1	0	1	0	0
1	0	1	1	0
1	1	0	0	0
1	1	0	1	0
1	1	1	0	0
1	1	1	1	0

a)

1-Truth table

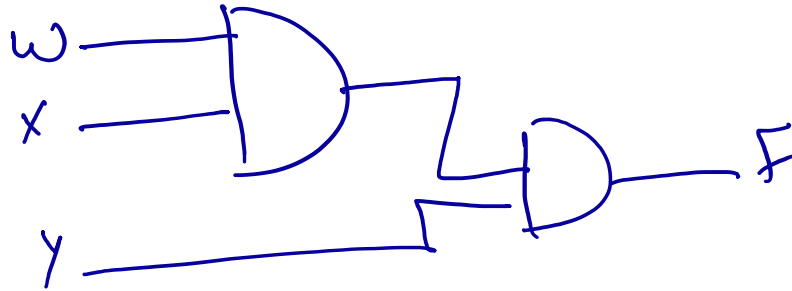
b)

	$\bar{w}x$	$\bar{w}x$	$wx$	$wx$
$\bar{y}z$				
$\bar{y}z$				
$yz$			1	
$y\bar{z}$			1	

$$F = wxz$$

1- SOP

c)



1-drawing

d)



1-drawing