پاسخ تمرین کوئیز دوم

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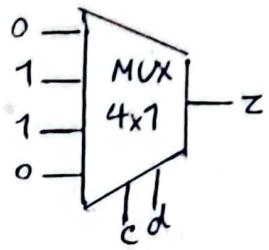
a	b	c	d	x	y	z	w
0	0	0	0	0	0	0	0
0	0	0	1	1	1	1	1
0	0	1	0	1	1	1	0
0	0	1	1	1	1	0	1
0	1	0	0	1	1	0	0
0	1	0	1	1	0	1	1
0	1	1	0	1	0	1	0
0	1	1	1	1	0	0	1
1	0	0	0	1	0	0	0
1	0	0	1	0	1	1	1
1	0	1	0	0	1	1	0
1	0	1	1	0	1	0	1
1	1	0	0	0	1	0	0
1	1	0	1	0	0	1	1
1	1	1	0	0	0	1	0
1	1	1	1	0	0	0	1

$w = d$

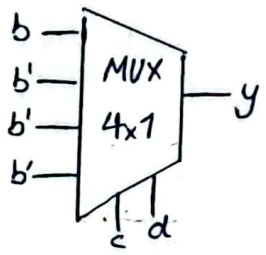
$z = \Sigma(1,2,5,6,9,10,13,14)$

	I_0	I_1	I_2	I_3
$a'b'$	0	①	②	3
$a'b$	4	⑤	⑥	7
ab	12	⑬	⑭	15
ab'	8	⑨	⑩	11
	0	1	1	0



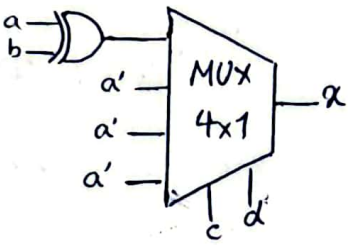
$y = \Sigma(1,2,3,4,9,10,11,12)$

	I_0	I_1	I_2	I_3
$a'b'$	0	①	②	③
$a'b$	④	5	6	7
ab	⑫	13	14	15
ab'	8	⑨	⑩	⑪
	b	b'	b'	b'



$x = \Sigma(1,2,3,4,5,6,7,8)$

	I_0	I_1	I_2	I_3
$a'b'$	0	①	②	③
$a'b$	④	⑤	⑥	⑦
ab	12	13	14	15
ab'	⑧	9	10	11
	$(a \oplus b)$	a'	a'	a'



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	I_0	I_1	I_2	I_3
$b'c'$	0	①	⑧	⑨
$b'c$	2	③	10	11
bc	⑥	7	14	⑮
bc'	4	5	⑫	13

$(b'+c')' = bc$

$\Rightarrow \pi(0,2,4,5,7,10,11,13,14)$

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a	b	c	d	x	y	z	w
0	0	0	0	0	0	0	1
0	0	0	1	0	0	0	0
0	0	1	0	0	0	1	0
0	0	1	1	0	0	1	1
0	1	0	0	0	1	1	1
0	1	0	1	0	1	1	0
0	1	1	0	0	1	0	0
0	1	1	1	0	1	0	1
1	0	0	0	1	1	0	1
1	0	0	1	1	1	0	0

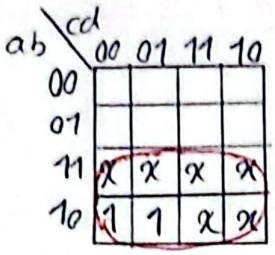
$x = a \Rightarrow ROM = 2^4 \times 3$

$x = \Sigma(8,9) + d(10 \dots 15)$

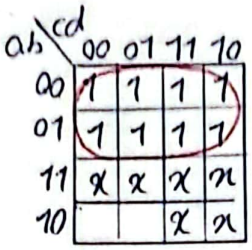
$y = \Sigma(4,5,6,7,8,9) + d(10 \dots 15)$

$z = \Sigma(2,3,4,5) + d(10 \dots 15)$

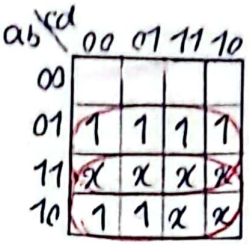
$w = \Sigma(0,3,4,7,8) + d(10 \dots 15)$



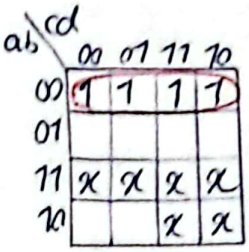
$x = a$



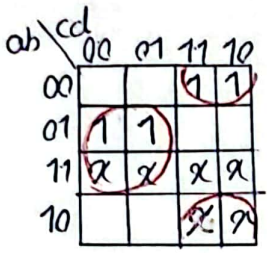
$x' = a'$



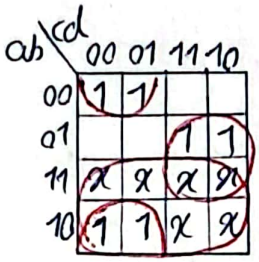
$y = b + a$



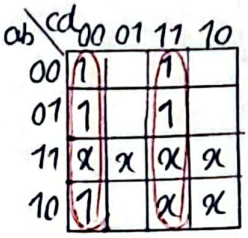
$y' = a'b'$



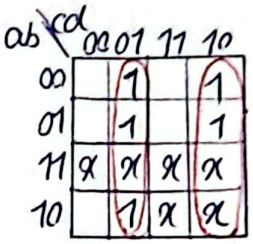
$z = bc' + b'c$



$z' = a + b'c' + bc$



$w = c'd' + cd$



$w' = c'd + cd'$

	a	b	c	d	x	y	z	w
a	1	-	-	-	1	1	-	-
b	-	1	-	-	-	1	-	-
bc'	-	1	0	-	-	-	1	-
b'c	-	0	1	-	-	-	1	-
c'd	-	-	0	1	-	-	-	1
cd'	-	-	1	0	-	-	-	1
					T	T	T	C

امتیازی:

عدد کوبیت $\underbrace{abcde}$ $\Rightarrow max = 31$ $\xrightarrow{\text{بتوان ۲}}$ 961 $\Rightarrow$ مابیت $\Rightarrow (a', b', c', d', e', f', g', h', i', j')$

* $j' = e$ { اگر عدد فرد ($e=1$) به توان دوهم برسد فرد است ($j'=1$)
اگر عدد زوج ($e=0$) به توان دوهم برسد زوج است ($j'=0$)

عدد زوج
$n = 2k \Rightarrow n^2 = (2k)^2 = 4k^2 \Rightarrow 4k^2 \% 4 = 0$

$n = \underset{\text{عدد فرد}}{2k+1} \Rightarrow n^2 = 4k^2 + 4k + 1 \Rightarrow 4k^2 + 4k + 1 \% 4 = 1$

} هیچ مؤلفه ۲ در آنها نیست
** $i' = 0$ پس

* , ** $\Rightarrow$ ROM $= 32 \times 8$