

K-Maps Home Work

Name _____

For the following questions, give the simplified Boolean expression derived from the K-map. Show your groupings on the maps provided.

1)

Z \ XY				
	00	01	11	10
0			1	
1	1		1	1

2)

C \ AB				
	00	01	11	10
0	1		1	1
1	1		1	

3)

Z \ XY				
	00	01	11	10
0	1	1		1
1	1	1		1

4)

		XY			
		00	01	11	10
Z	0	1	1	1	
	1		1	1	

5)

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

6)

		PD			
		00	01	11	10
QR	00	1	1	1	1
	01				1
	11			1	
	10	1	1	1	1

7)

		CD			
		00	01	11	10
EF	00	1	1	1	1
	01		1	1	
	11		1	1	
	10			1	

8)

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

9)

CD \ AB	AB			
	00	01	11	10
00	1			1
01	1		1	
11	1	1	1	
10	1			

For the following, fill in the K-map using the information from the truth table. Then, using the k-map, give the simplified Boolean expression.

10)

A	B	C	OUT
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	0

C \ AB	AB			
	00	01	11	10
0				
1				

11)

W	X	Y	Z	OUT
0	0	0	0	0
0	0	0	1	1
0	0	1	0	1
0	0	1	1	0
0	1	0	0	1
0	1	0	1	1
0	1	1	0	1
0	1	1	1	0
1	0	0	0	1
1	0	0	1	0
1	0	1	0	1
1	0	1	1	0
1	1	0	0	0
1	1	0	1	1
1	1	1	0	1
1	1	1	1	1

WX

YZ
