

CD \ AB	00	01	11	10
00	0	0	0	0
01	0	0	0	0
11	0	0	0	0
10	0	0	0	0

R1:

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

$$\overline{B}\overline{C}D + \overline{A}\overline{C}D + \overline{A}BC + \overline{A}C\overline{D}$$

$$\overline{C}D(\overline{A} + B) + \overline{A}C(B + \overline{D})$$

G1:

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

$$\overline{A}\overline{B}CD + \overline{A}\overline{C}\overline{D} + \overline{B}\overline{C}\overline{D}$$

$$\overline{A}\overline{B}CD + \overline{C}\overline{D}(\overline{A} + \overline{B})$$

$$\overline{A}\overline{B}CD + (\overline{C} + \overline{D})(\overline{A}\overline{B})$$

R2:

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

$$\overline{A}\overline{B}D + \overline{A}CD + A\overline{B}\overline{C}$$

$$\overline{A}D(\overline{B} + C) + A\overline{B}\overline{C}$$

G2:

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