Ejercicios: Encontrar la función en su mínima expresión a partir de la siguiente tabla de verdad mediante mapas de Karnaugh.

1)

A	B	C	f
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	0
1	1	1	0

$f = A\bar{B} + B$

A/BC	00	01	11	10
0	0	0	1	1
1	1	1	0	0

2)

A	B	C	f
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	1

$f = A\bar{C} + A\bar{B} + BC$

A/BC	00	01	11	10
0	0	0	1	0
1	1	0	1	1

3)

A	B	C	f
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	0

$$f = B\bar{C} + A\bar{C} + BC$$

A/BC	00	01	11	10
0	1	0	1	0
1	1	0	0	1

4)

A	B	C	f
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	0

$f = \bar{B} + BC$

A/BC	00	01	11	10
0	1	1	0	1
1	1	1	0	1

5)

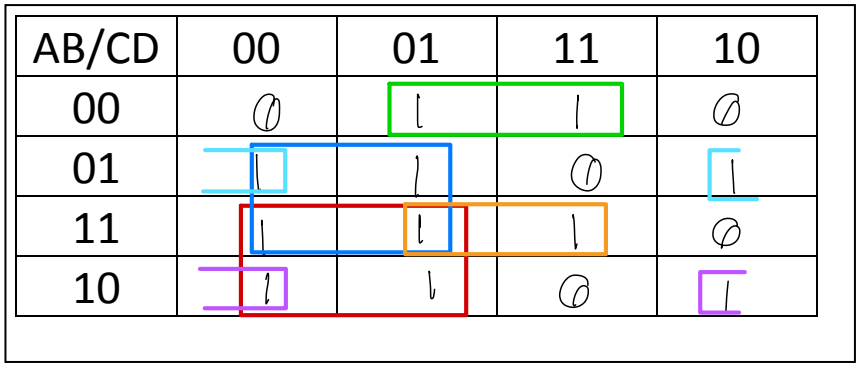
A	B	C	D	f
0	0	0	0	0
0	0	0	1	1
0	0	1	0	0
0	0	1	1	1
0	1	0	0	0
0	1	0	1	1
0	1	1	0	0
0	1	1	1	1
1	0	0	0	1
1	0	0	1	0
1	0	1	0	0
1	0	1	1	1
1	1	0	0	0
1	1	0	1	0
1	1	1	0	0
1	1	1	1	1

AB/CD	00	01	11	10
00	0	1	1	0
01	0	1	1	0
11	0	0	1	0
10	1	0	1	0

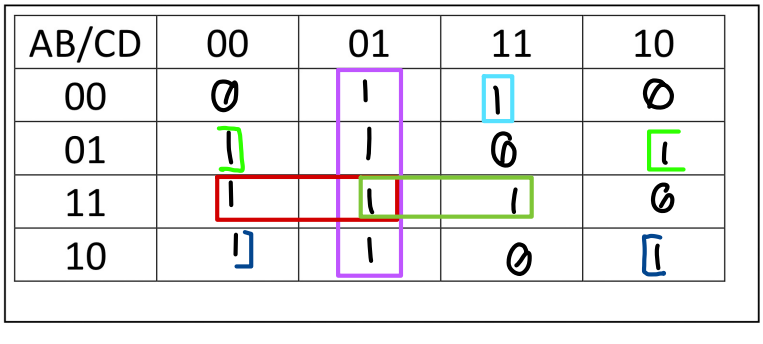
$f = \bar{A}D + CD + AB\bar{C}\bar{D}$

6)

A	B	C	D	f
0	0	0	0	0
0	0	0	1	1
0	0	1	0	0
0	0	1	1	1
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	1
1	0	1	0	1
1	0	1	1	0
1	1	0	0	1
1	1	0	1	1
1	1	1	0	0
1	1	1	1	1



$f = A\bar{C} + B\bar{C} + \bar{A}\bar{B}D + ABD + \bar{A}B\bar{D} + AB\bar{D}$



$f = CD + AB\bar{C} + ABD + B\bar{D} + A\bar{D} + \bar{A}\bar{B}CD$

7)

A	B	C	D	f
0	0	0	0	1
0	0	0	1	0
0	0	1	0	*
0	0	1	1	1
0	1	0	0	1
0	1	0	1	1
0	1	1	0	1
0	1	1	1	0
1	0	0	0	0
1	0	0	1	0
1	0	1	0	1
1	0	1	1	1
1	1	0	0	0
1	1	0	1	0
1	1	1	0	*
1	1	1	1	0

* Don't care

AB/CD	00	01	11	10
00	1	Ø	1	1
01	1	1	Ø	1
11	Ø	Ø	Ø	1
10	Ø	Ø	1	1

$f = C\bar{D} + A\bar{D} + A\bar{B}\bar{C} + \bar{B}CD$