



Nome: _____ Prontuário: _____

1 – Simplifique usando Karnaugh as seguintes tabelas verdade e monte o circuito lógico:

a)

A	B	C	S
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	0

b)

A	B	C	S
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	0

c)

A	B	C	S
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	-
1	1	0	-
1	1	1	-

d)

A	B	C	D	S
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	1
1	0	0	1	1
1	0	1	0	1
1	0	1	1	1
1	1	0	0	1
1	1	0	1	0
1	1	1	0	1
1	1	1	1	1

e)

A	B	C	D	S
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	1
0	1	1	0	1
0	1	1	1	1
1	0	0	0	1
1	0	0	1	1
1	0	1	0	-
1	0	1	1	-
1	1	0	0	-
1	1	0	1	-
1	1	1	0	-
1	1	1	1	-

2) Simplifique usando mapas de Karnaugh:

a)

$$\bar{A}.\bar{B}.\bar{C}.\bar{D} + \bar{A}.\bar{B}.\bar{C}.D + \bar{A}.\bar{B}.C.\bar{D} + \bar{A}.\bar{B}.C.D + A.\bar{B}.\bar{C}.\bar{D} + A.\bar{B}.\bar{C}.D$$

b)

$$\bar{A}.\bar{B}.C + \bar{A}.B.C + \bar{A}.B.\bar{C} + A.B.C + A.B.\bar{C}$$

c)

$$\overline{A.B.C.D} + \bar{A}.\bar{B}.\bar{C}.D + \bar{A}.B.\bar{C}.D + + \bar{A}.B.\bar{C}.D$$

d)

$$\bar{A}.\bar{B}.\bar{C}.\bar{D} + \bar{A}.B.\bar{C}.\bar{D}$$

e)

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