

# Atividade de Casa - Exer 3 p/ BCD - Subcircuitos

## Tabela Verdade

E3	E2	E1	E0	Sub.4	Sub.3	Sub.2	Sub.1	Decimal
0	0	0	0	X	X	X	X	—
0	0	0	1	X	X	X	X	—
0	0	1	0	X	X	X	X	—
0	0	1	1	0	0	0	0	0
0	1	0	0	1	0	0	0	1
0	1	0	1	0	1	0	0	2
0	1	1	0	1	1	0	0	3
0	1	1	1	0	0	1	0	4
1	0	0	0	1	0	1	0	5
1	0	0	1	0	1	1	0	6
1	0	1	0	1	1	1	0	7
1	0	1	1	0	0	0	1	8
1	1	0	0	1	0	0	1	9
1	1	0	1	X	X	X	X	—
1	1	1	0	X	X	X	X	—
1	1	1	1	X	X	X	X	—



• Simplificando por Mapa de Karnaugh . . .

• Subconjuntos:

Sub1

X	X	0	X
1	0	0	1
1	X	X	X
1	0	0	1

}

$$\text{Sub1} = E_0$$

Sub2

X	X	0	X
0	1	0	1
0	X	X	X
0	1	0	1

}

$$\begin{aligned} \text{Sub2} &= \bar{E}_1 E_0 + E_1 \bar{E}_0 \\ &\text{ou} \\ &E_1 \oplus E_0 \end{aligned}$$

Sub3

X	X	0	X
0	0	1	0
0	X	X	X
1	1	0	1

}

$$\begin{aligned} \text{Sub3} &= \bar{E}_2 \bar{E}_0 + \bar{E}_2 \bar{E}_1 + \\ &E_2 E_1 E_0 \end{aligned}$$

Sub4

X	X	0	X
0	0	0	0
1	X	X	X
0	0	1	0

}

$$\text{Sub4} = E_3 E_2 + E_3 E_1 E_0$$



