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Mapa de Karnaugh

Ngray[3]

Nbin[3] Nbin[2]

Nbin[1] Nbin[0]	00	01	11	10
00	1	0	1	0
01	0	0	1	1
11	0	0	1	1
10	0	0	1	1

Ngray[2]

Nbin[3] Nbin[2]

Nbin[1] Nbin[0]	00	01	11	10
00	0	0	1	1
01	0	1	0	1
11	0	1	0	1
10	0	1	0	1

Ngray[1]

Nbin[3] Nbin[2]

Nbin[1] Nbin[0]	00	01	11	10
00	0	1	1	0
01	0	1	1	0
11	1	0	0	1
10	0	1	1	0

Ngray[0]

Nbin[3] Nbin[2]

Nbin[1] Nbin[0]	00	01	11	10
00	0	0	0	0
01	0	0	0	0
11	1	1	1	1
10	1	1	1	1

Solução

$Ngray[3] = \overline{Nbin[3]} \cdot \overline{NBin[2]} \cdot \overline{Nbin[1]} \cdot \overline{Nbin[0]} + Nbin[3] \cdot \overline{Nbin[1]} \cdot Nbin[0] + Nbin[3] \cdot Nbin[1] + Nbin[3] \cdot Nbin[2] \cdot \overline{Nbin[1]}$

$Ngray[2] = Nbin[3] \cdot \overline{Nbin[2]} + Nbin[3] \cdot \overline{Nbin[1]} \cdot \overline{Nbin[0]} + \overline{Nbin[3]} \cdot Nbin[2] \cdot Nbin[0] + \overline{Nbin[3]} \cdot Nbin[2] \cdot Nbin[1]$

$Ngray[1] = Nbin[2] \cdot \overline{Nbin[1]} + \overline{Nbin[2]} \cdot Nbin[1] \cdot Nbin[0] + Nbin[2] \cdot Nbin[1] \cdot \overline{Nbin[0]}$

$Ngray[0] = Nbin[1]$

Diagrama lógico