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1. Multiplica-se dois números em binário usando a matemática convencional. Quando a soma dos termos for 2, coloca 0 no resultado e acumula 1 no próximo número. Se o resultado não preencher as casas decimais do bit resultante, completa com 0.

Tabela Verdade Multiplicador

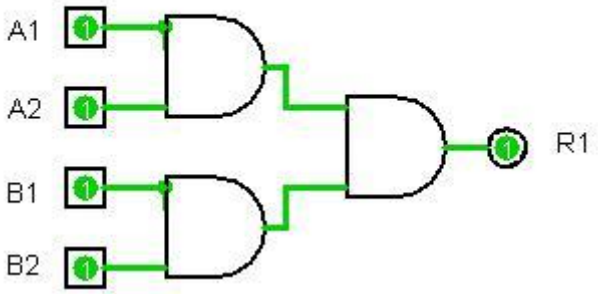
A1	A2	B1	B2	**R1**	**R2**	**R3**	**R4**
0	0	0	0	**0**	**0**	**0**	**0**
0	0	0	1	**0**	**0**	**0**	**0**
0	0	1	0	**0**	**0**	**0**	**0**
0	0	1	1	**0**	**0**	**0**	**0**
0	1	0	0	**0**	**0**	**0**	**0**
0	1	0	1	**0**	**0**	**0**	**1**
0	1	1	0	**0**	**0**	**1**	**0**
0	1	1	1	**0**	**0**	**1**	**1**
1	0	0	0	**0**	**0**	**0**	**0**
1	0	0	1	**0**	**0**	**1**	**0**
1	0	1	0	**0**	**1**	**0**	**0**
1	0	1	1	**0**	**1**	**1**	**0**
1	1	0	0	**0**	**0**	**0**	**0**
1	1	0	1	**0**	**0**	**1**	**1**
1	1	1	0	**0**	**1**	**1**	**0**
1	1	1	1	**1**	**0**	**0**	**1**

Karnaugh R1

A1 A2/B1 B2	00	01	11	10
00	0	0	0	0
01	0	0	0	0
11	0	0	1	0
10	0	0	0	0

R1 = A1.A2.B1.B2

Karnaugh R1

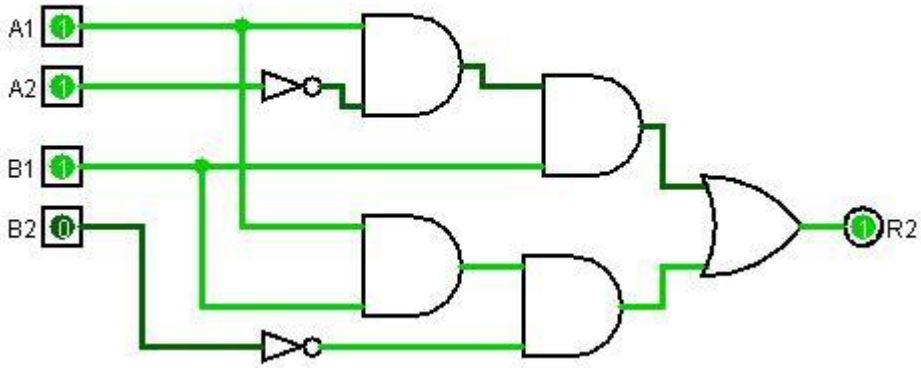


Karnaugh R2

A1 A2/B1 B2	00	01	11	10
00	0	0	0	0
01	0	0	0	0
11	0	0	1	1
10	0	0	1	1

R2 = A1.$\overline{A2}$.B1 + A1.B1.$\overline{B2}$

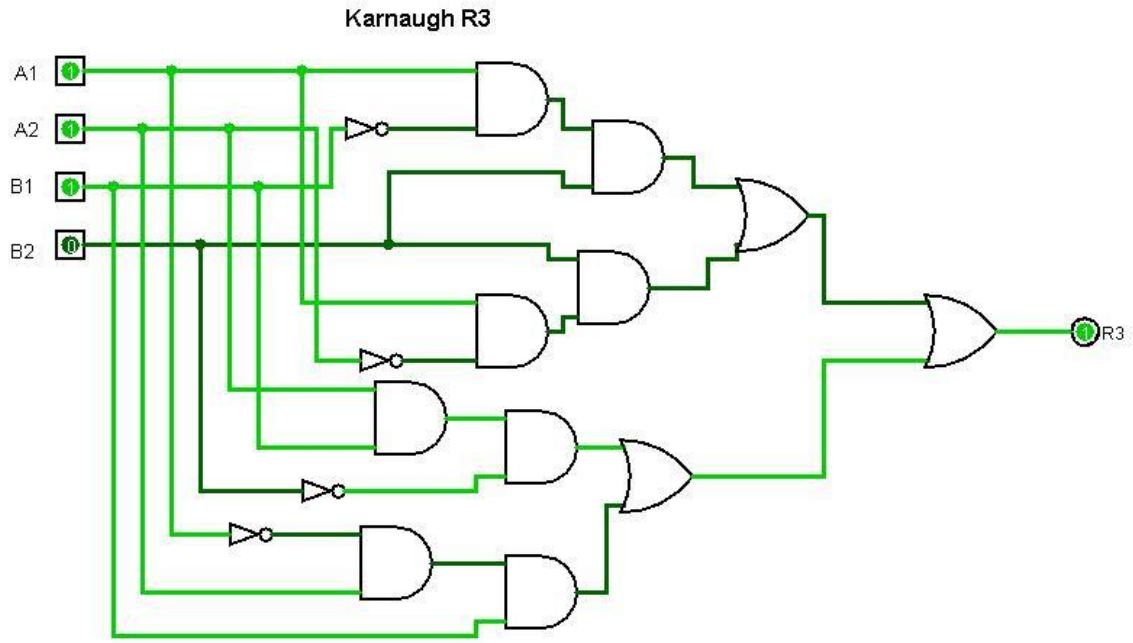
Karnaugh R2



Karnaugh R3

A1 A2/B1 B2	00	01	11	10
00	0	0	0	0
01	0	0	1	1
11	0	1	0	1
10	0	1	1	0

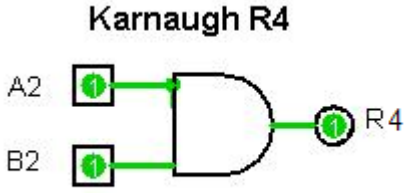
R3 = A1.$\overline{B1}$.B2 + A1. $\overline{A2}$.B2 + A2.B1. $\overline{B2}$ + $\overline{A1}$.A2.B1



Karnaugh R4

A1 A2/B1 B2	00	01	11	10
00	0	0	0	0
01	0	1	1	0
11	0	1	1	0
10	0	0	0	0

R4 = A2.B2



5.

Circuito Final