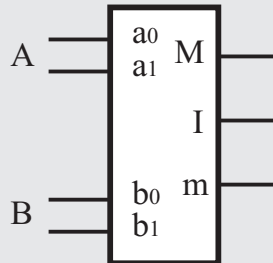


Comparador de magnitud



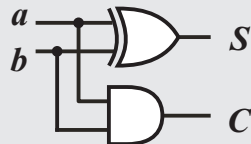
Comparador de 2 bits

$$M = a_1 \bar{b}_1 + a_1 a_0 \bar{b}_0 + a_0 \bar{b}_1 \bar{b}_0$$

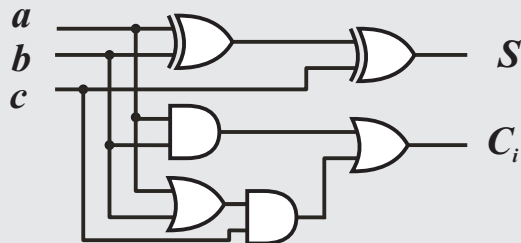
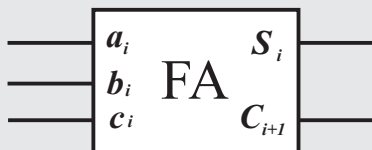
$$m = \bar{a}_1 b_1 + \bar{a}_0 b_1 b_0 + \bar{a}_1 \bar{a}_0 b_0$$

$$\begin{aligned} I &= \bar{a}_1 \bar{a}_0 \bar{b}_1 \bar{b}_0 + \bar{a}_1 a_0 \bar{b}_1 b_0 + a_1 \bar{a}_0 b_1 \bar{b}_0 + a_1 a_0 b_1 b_0 = \\ &= \bar{a}_1 \bar{b}_1 (\bar{a}_0 \bar{b}_0 + a_0 b_0) + a_1 b_1 (\bar{a}_0 \bar{b}_0 + a_0 b_0) = \\ &= (\bar{a}_0 \bar{b}_0 + a_0 b_0) \cdot (\bar{a}_1 \bar{b}_1 + a_1 b_1) \end{aligned}$$

Semisumador



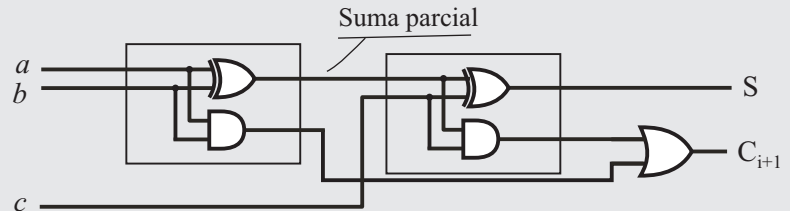
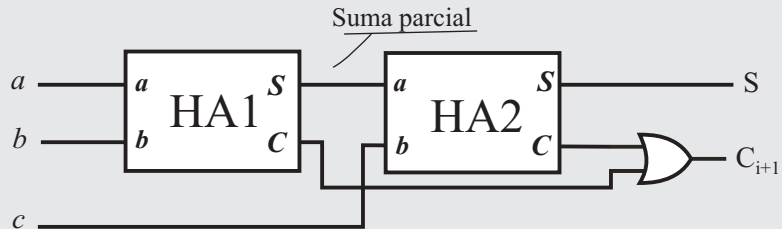
Sumador total



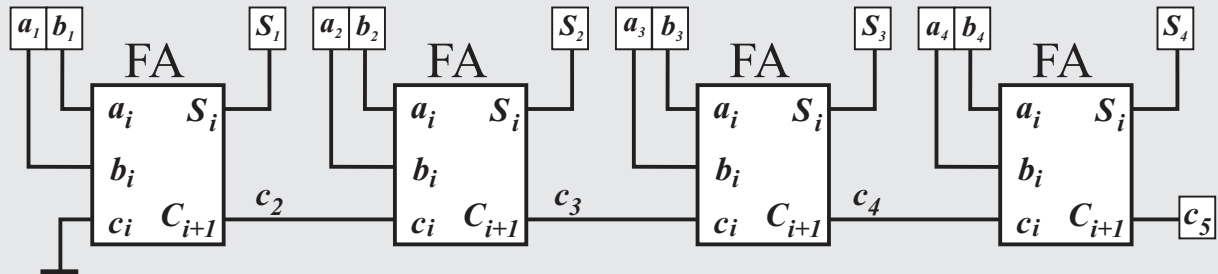
Sumador realizado con semisumadores

			HA1			
	+	1	0	1	1	0
		1	1	0	1	1
Suma parcial		0	1	1	0	1
Carry	+	1	1	1	0	0
Suma		1	1	0	0	1
			HA2			

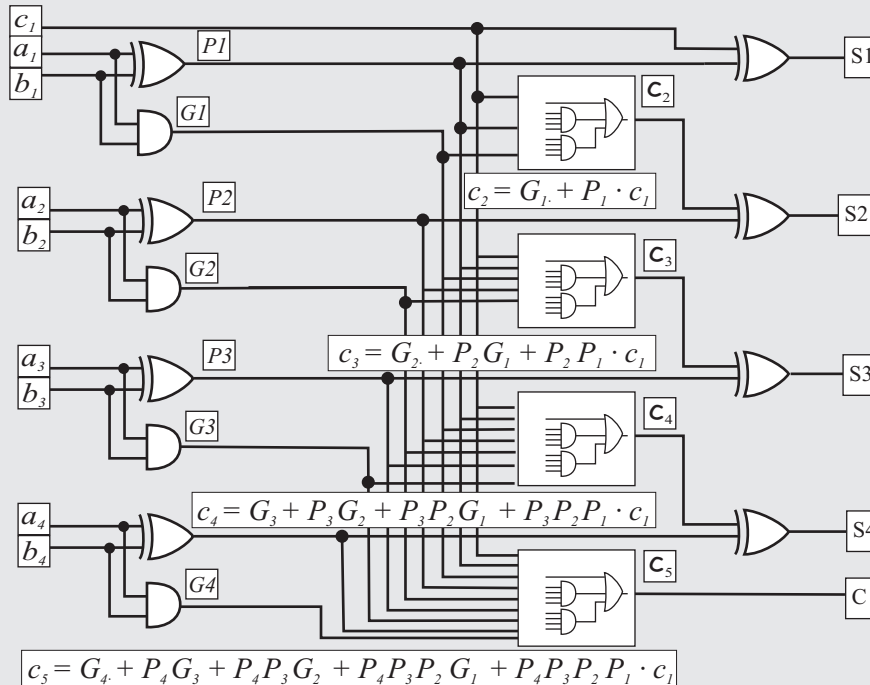
Diagram illustrating the addition of two 3-bit numbers using two Half Adders (HA1 and HA2). The first summand is 101 and the second is 110. The partial sum (Suma parcial) is 011, and the carry (Carry) is 110. The final sum (Suma) is 1101. The diagram shows the carry from the first summand being added to the second summand's carry, and the carry from the second summand being added to the first summand's carry.



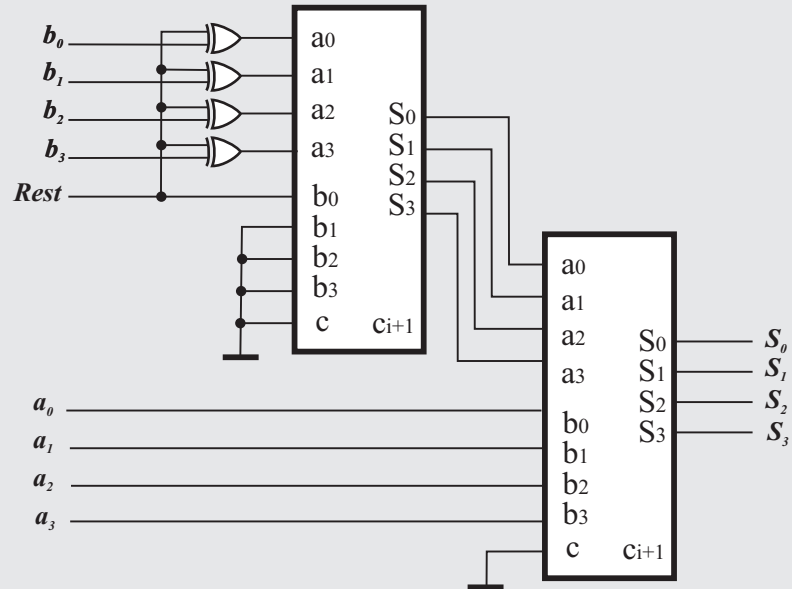
Sumador de 4 bits



Sumador de 4 bits con acarreo anticipado



Circuito sumador - restador de 4 bits



Multiplicador de 4 bits

