

```

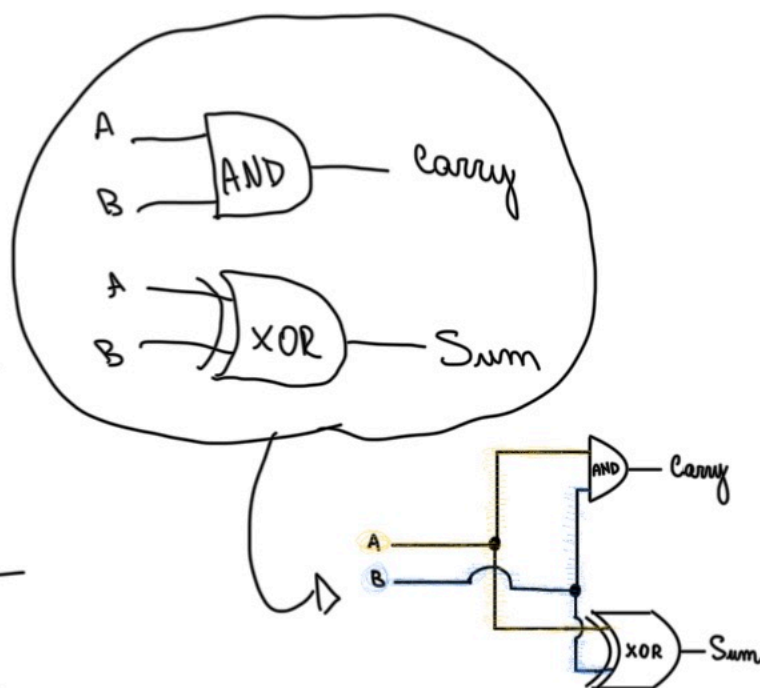
CHIP Adder2 {
    IN a, b;
    OUT sum;
    PARTS:
    And2(a=a, b=b, out=sum);
}

```

HALF-ADDER

A	B	Carry	Sum
0	0	0	0
0	1	0	1
1	0	0	1
1	1	1	0

in AND gate XOR gate



```

8 CHIP HalfAdder {
9     IN a, b;      // 1-bit inputs
10    OUT sum,      // Right bit of a + b
11           carry; // Left bit of a + b
12
13    PARTS:
14    And(a = a, b = b, out = carry);
15    Xor(a = a, b = b, out = sum);
16 }

```

FULL-ADDER

A	B	C	Carry	Sum
0	0	0	0	0

Let $A = 0$, $B = 0$, $C = 0$ → Carry = 0, Sum = 0

Let $A = 1$, $B = 0$, $C = 0$ → Carry = 0, Sum = 1