Truth Table to Circuit: Half Adder

By Max Edward

Part A: Analyze the following Truth Table:

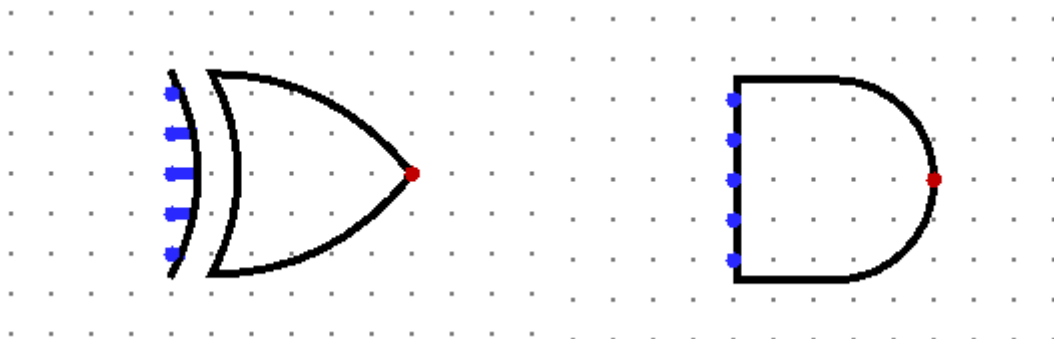| A (Input)	B (Input)	Sum (Output)	Carry (Output)
0	0	0	0
0	1	1	0
1	0	1	0
1	1	0	1

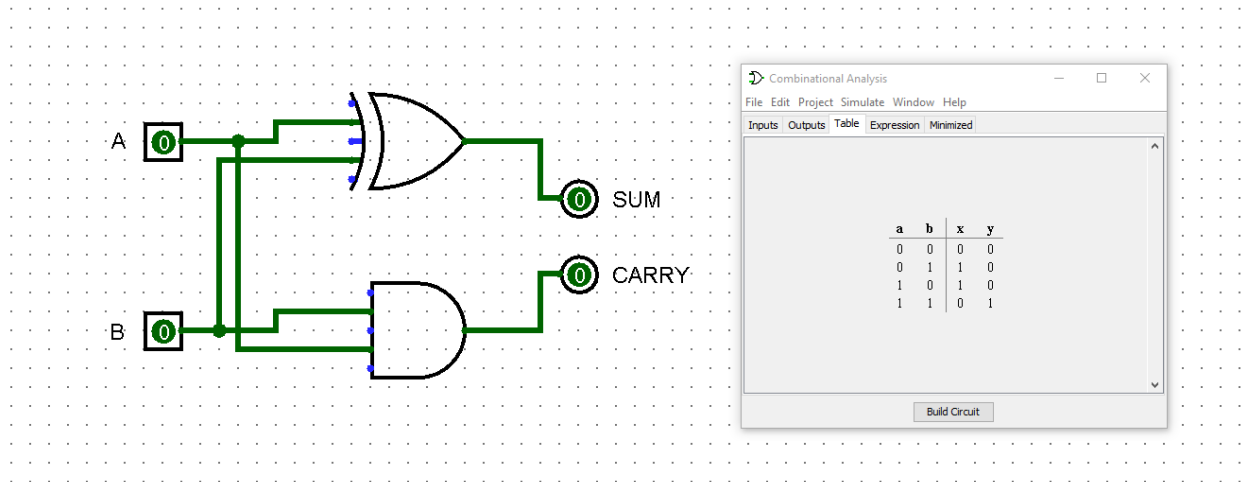Expression for truth table:

Output X (SUM): ((A'B)+(AB'))

Output Y (CARRY): (AB)

Part B: Determine Digital Logic Gates:

After researching the circuit, the two gates that I need for this circuit are a XOR Gate and an AND Gate

Part C: Build in Logisim:

a	b	x	y
0	0	0	0
0	1	1	0
1	0	1	0
1	1	0	1

Part D: Construct Circuit on Breadboard: