

PONTIFÍCIA UNIVERSIDADE CATÓLICA DE MINAS GERAIS

Bacharelado em Ciência da Computação

Trabalho Prático 1

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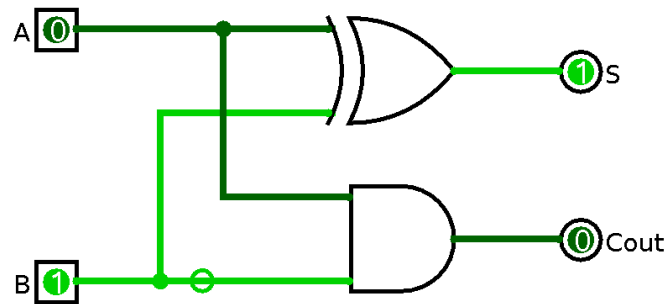
Belo Horizonte

2.2022

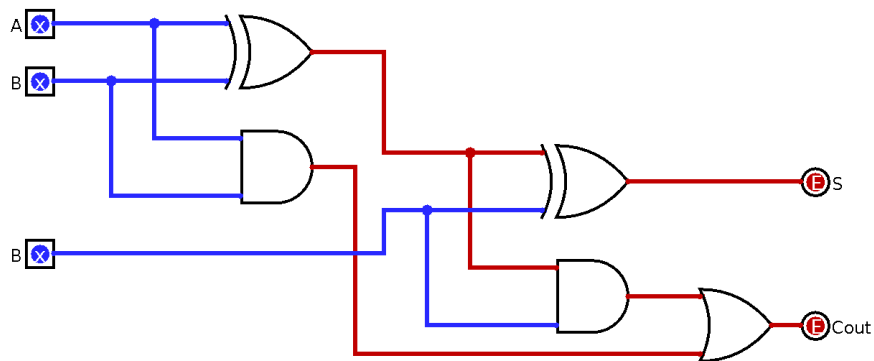
Logisim

Para o Logisim, temos os circuitos:

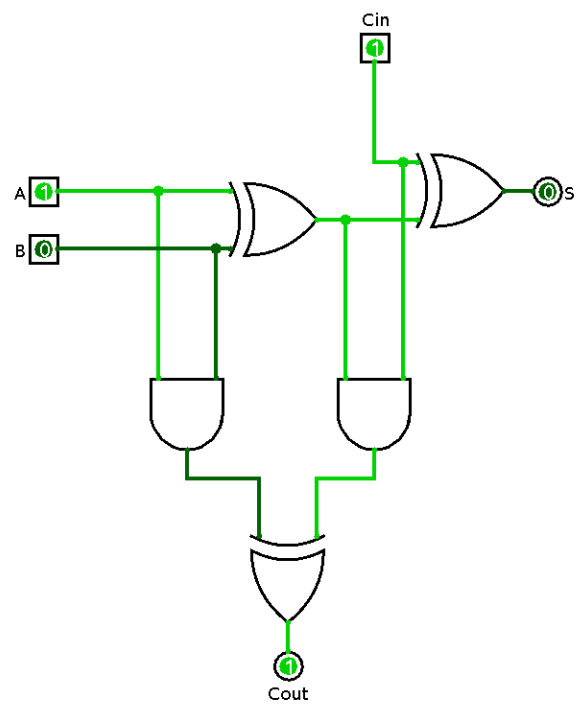
Meio Somador



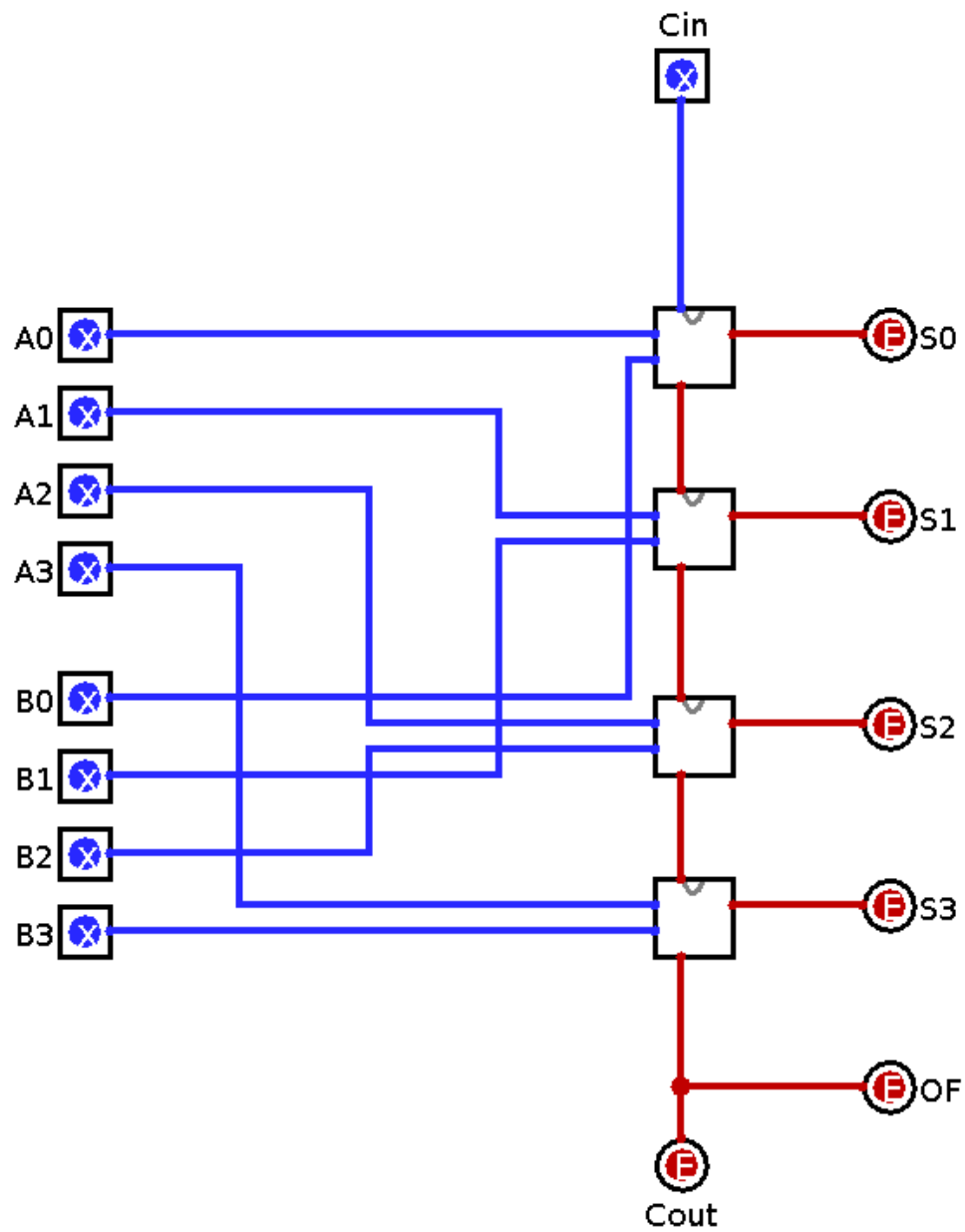
Somador completo



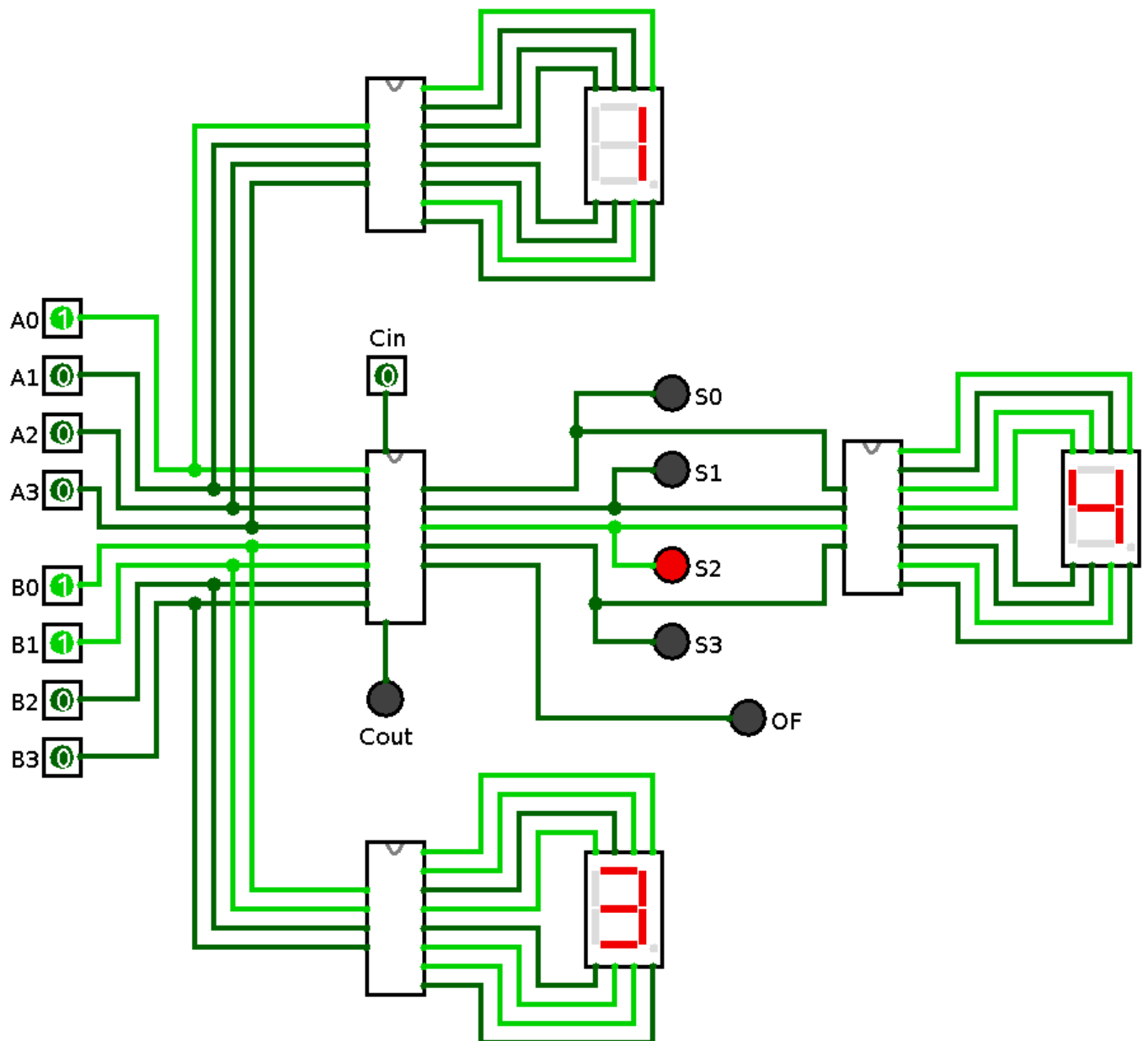
Ou...



Somador de 4 bits



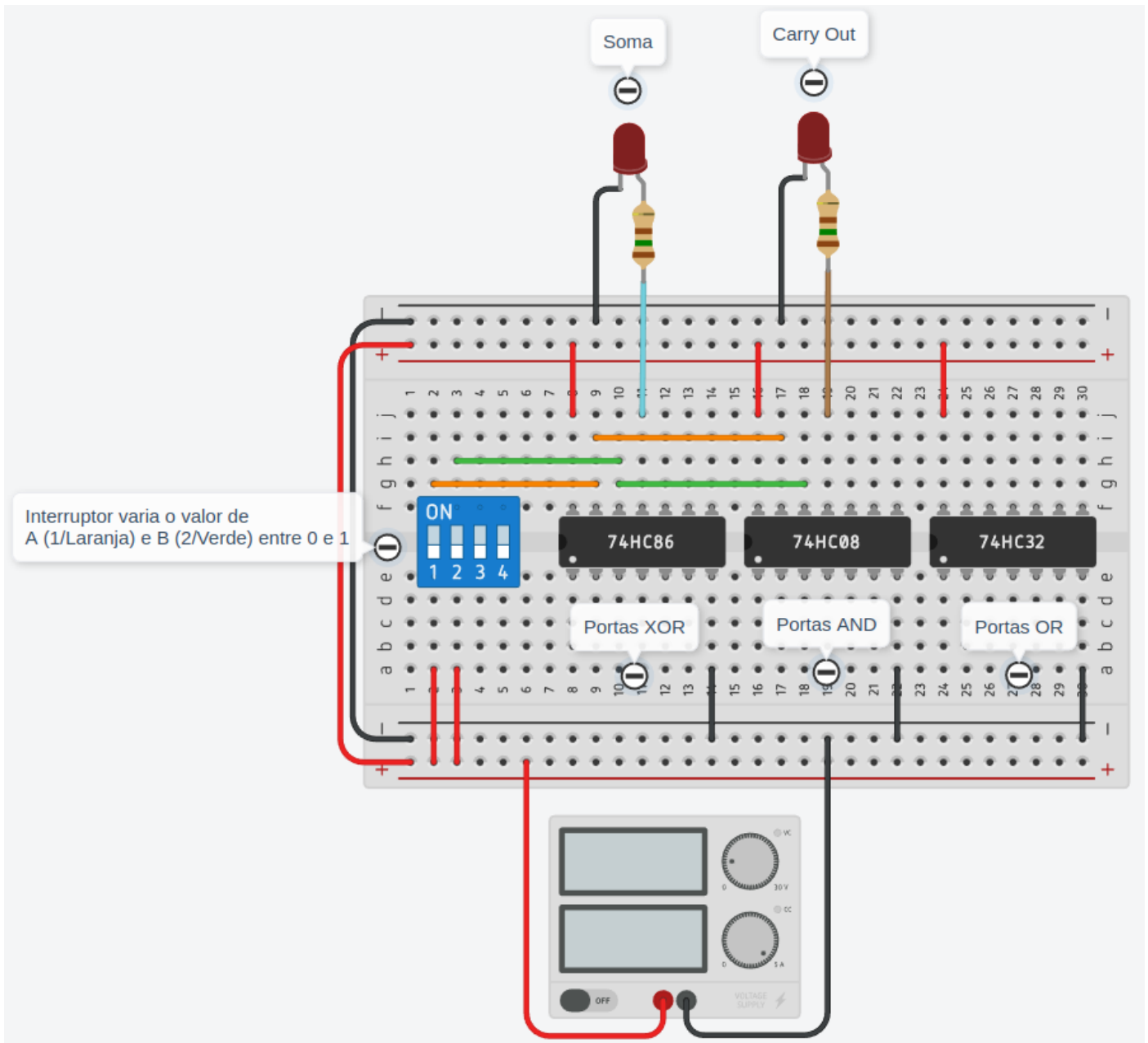
Calculadora
Matricula: 536013



TinkerCad

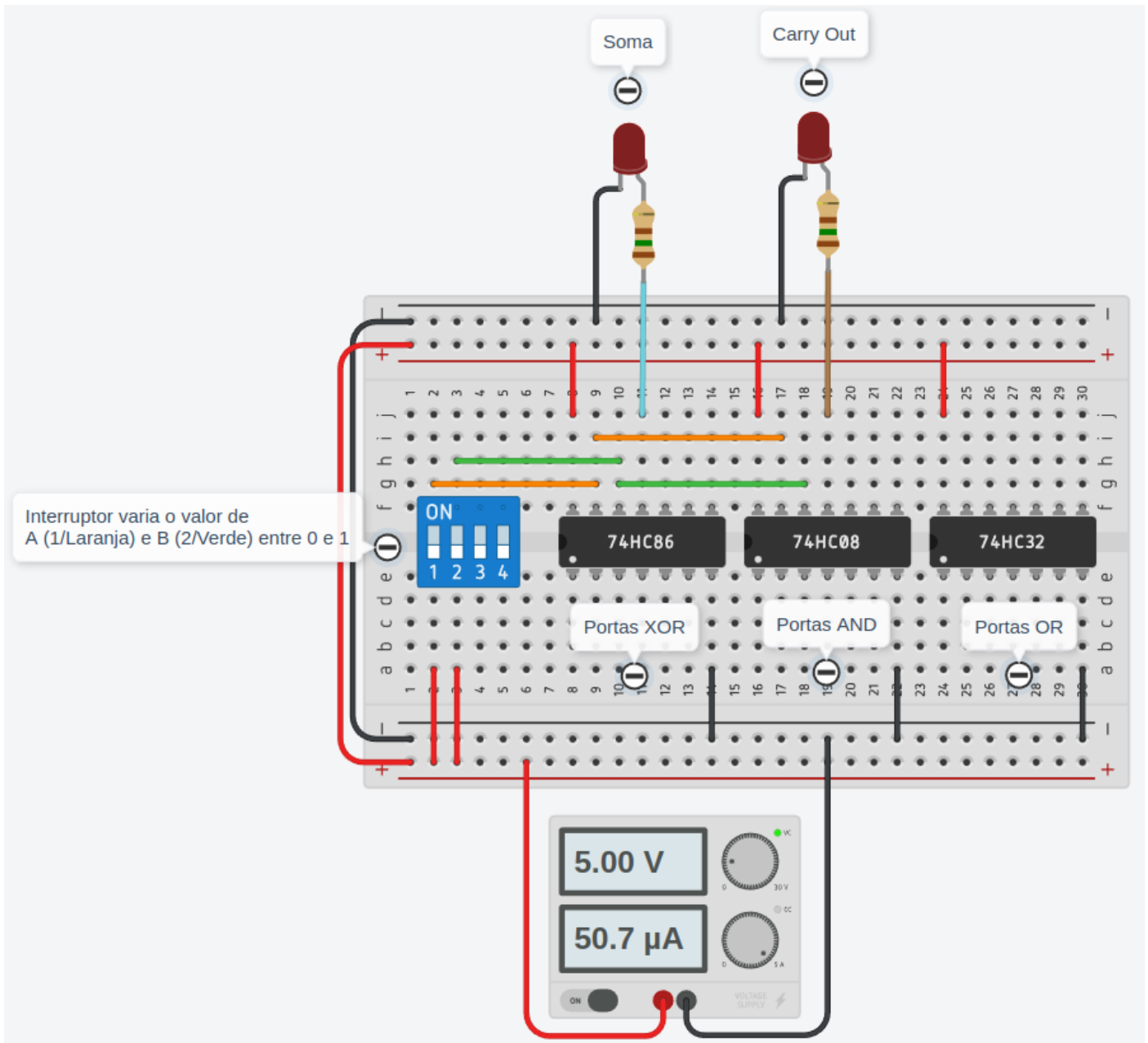
Para a parte do TinkerCad, era necessário encontrar um chip que contivesse as portas lógicas XOR, AND e OR. Entretanto não encontrei um chip que realizasse as 3 operações. Por isso, uni 3 chips (cada um com 4 entradas para uma porta logica) para simular um meio somador.

Como as imagens são grandes, vou colocar cada item da tabela verdade em uma página.



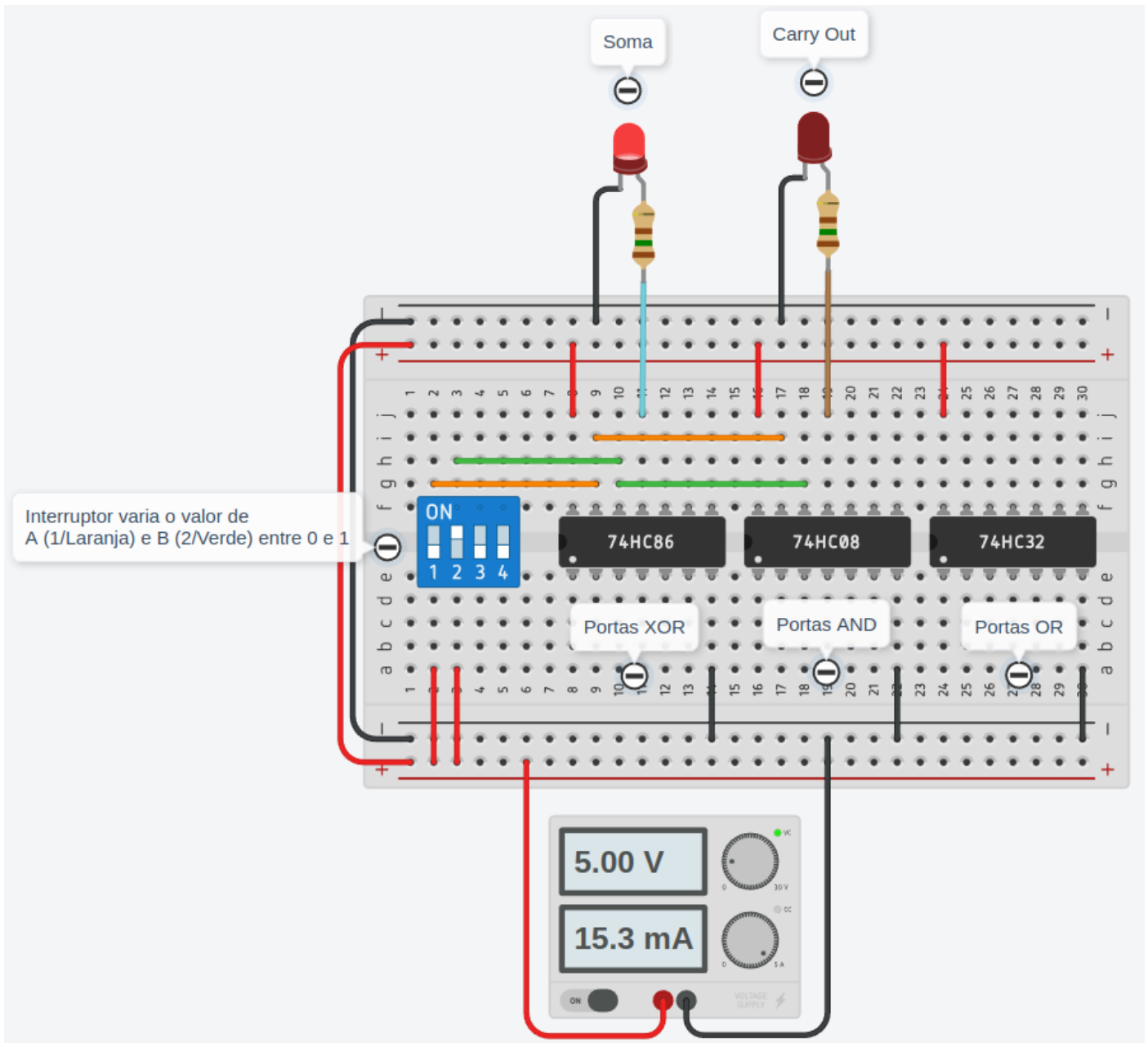
A = 0

B = 0



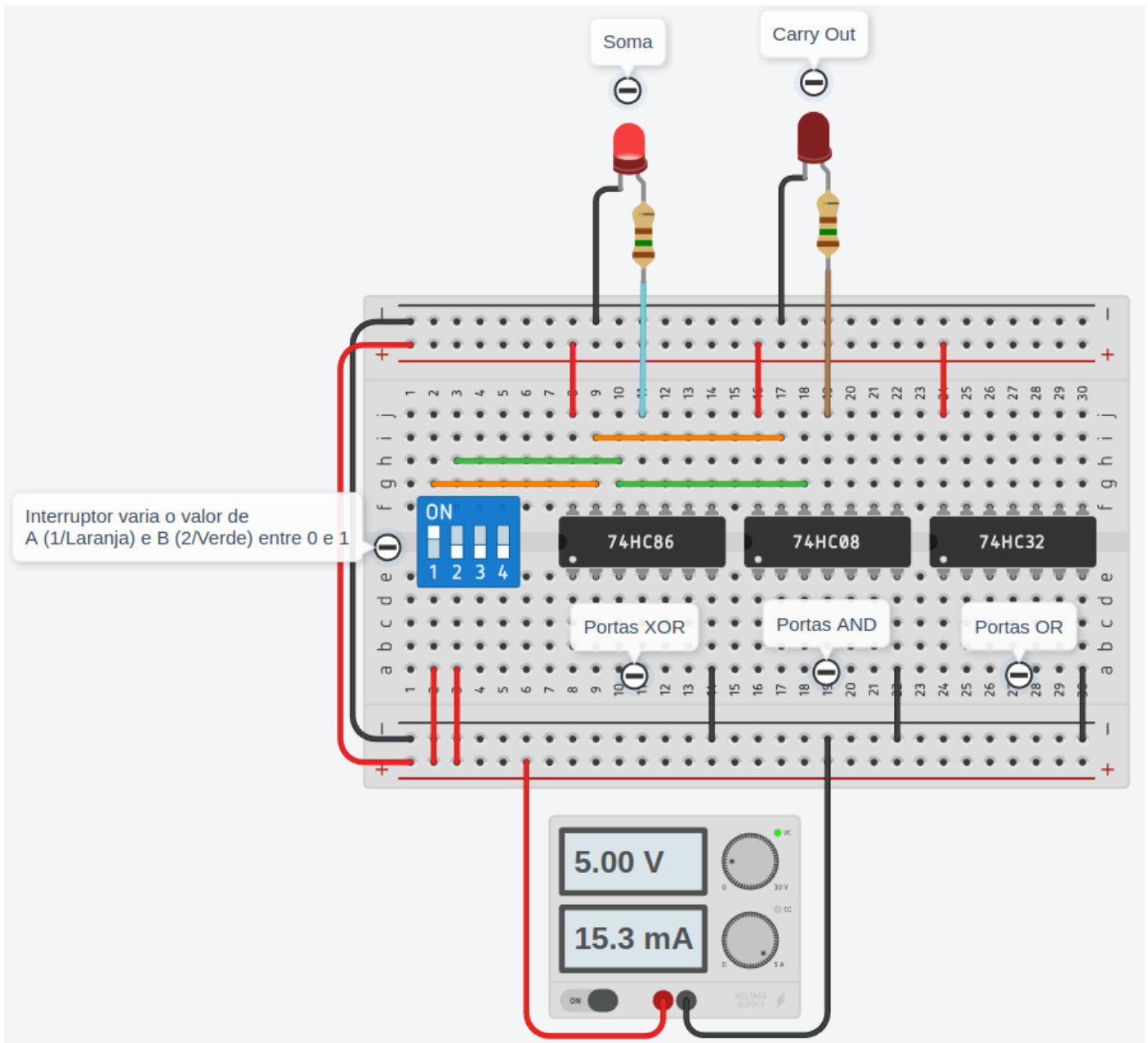
A = 0

B = 1



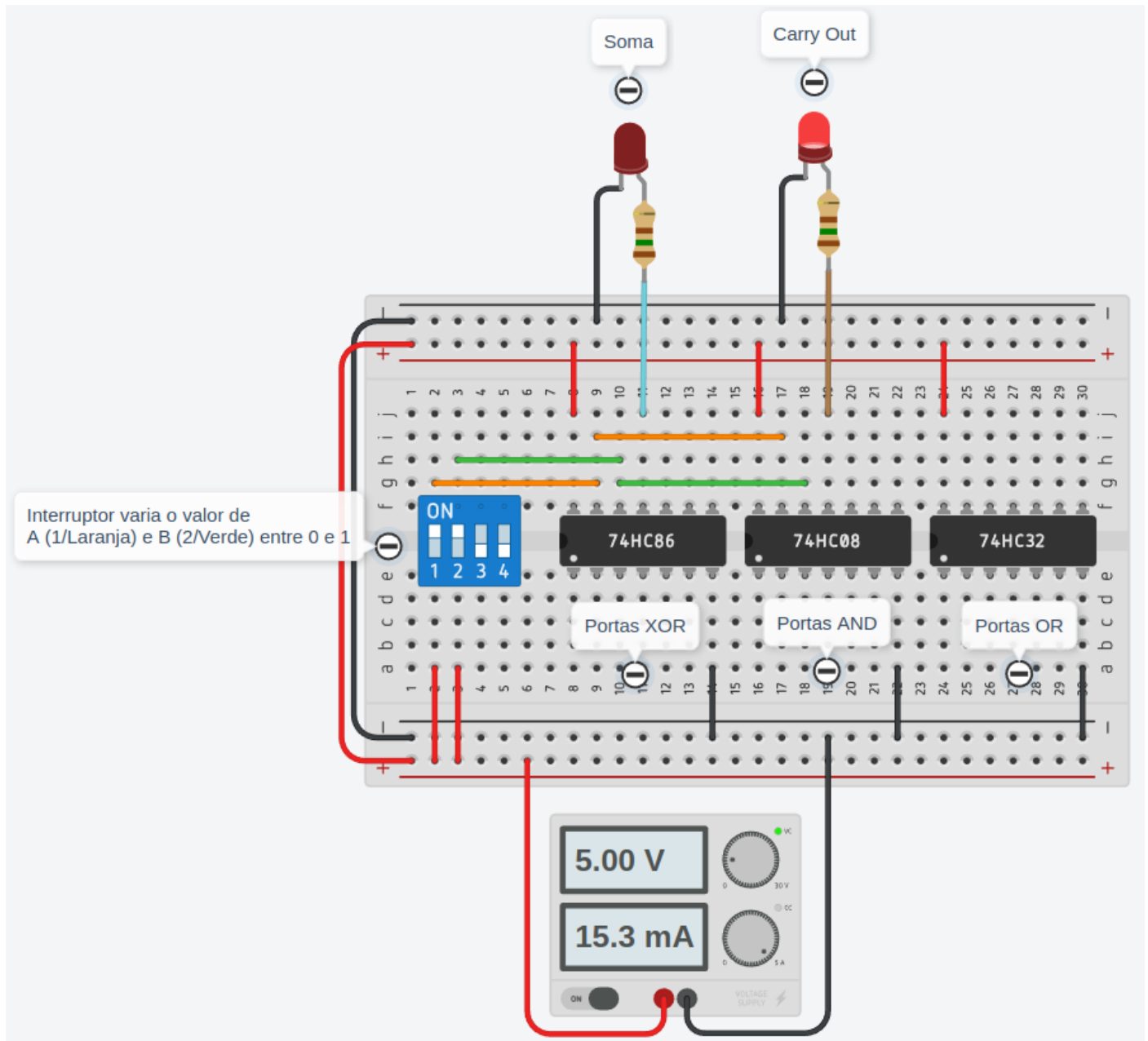
A = 1

B = 0

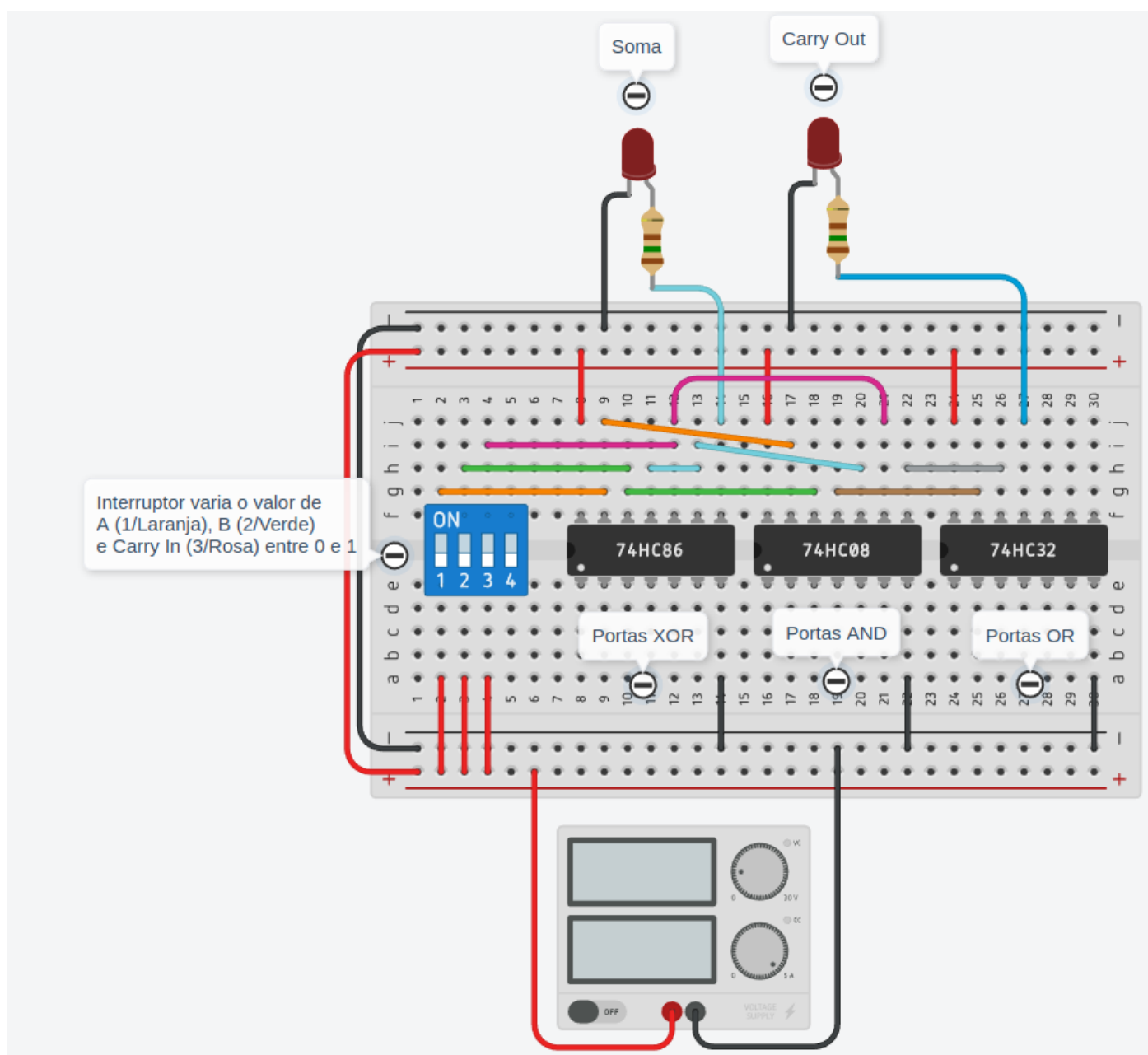


A = 1

B = 1



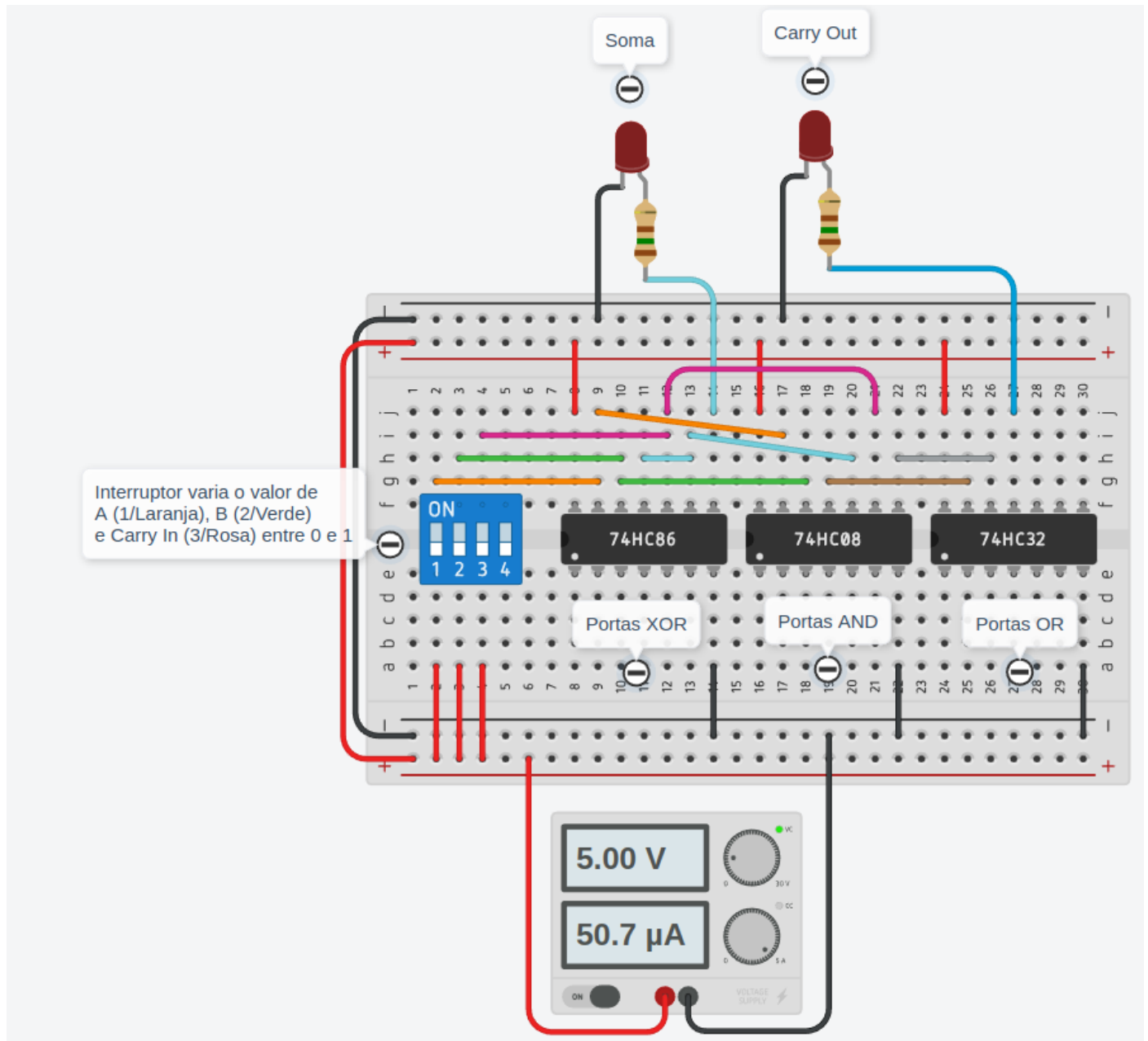
Para o somador completo, teremos:



A = 0

B = 0

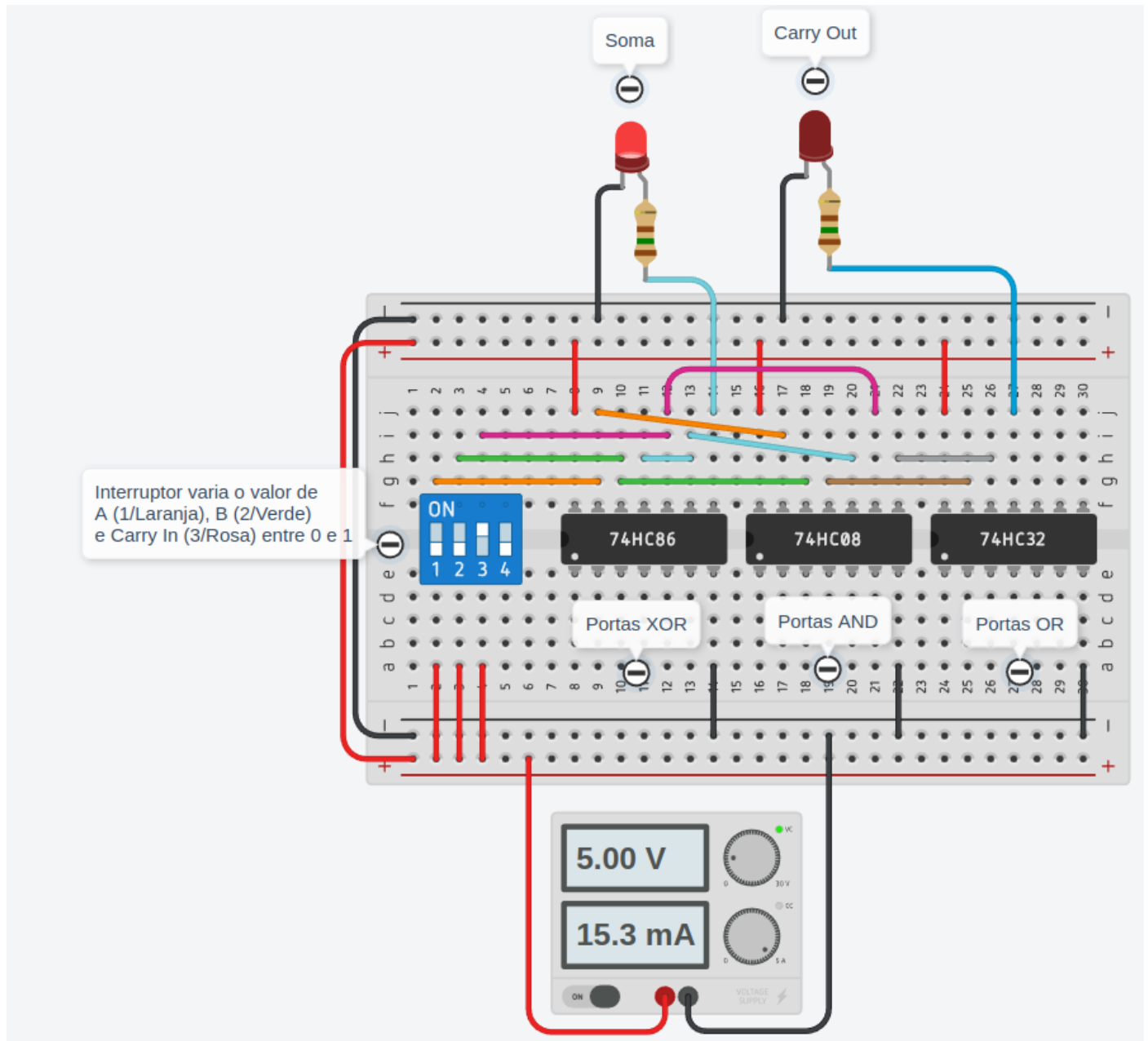
Carry in = 0



A = 0

B = 0

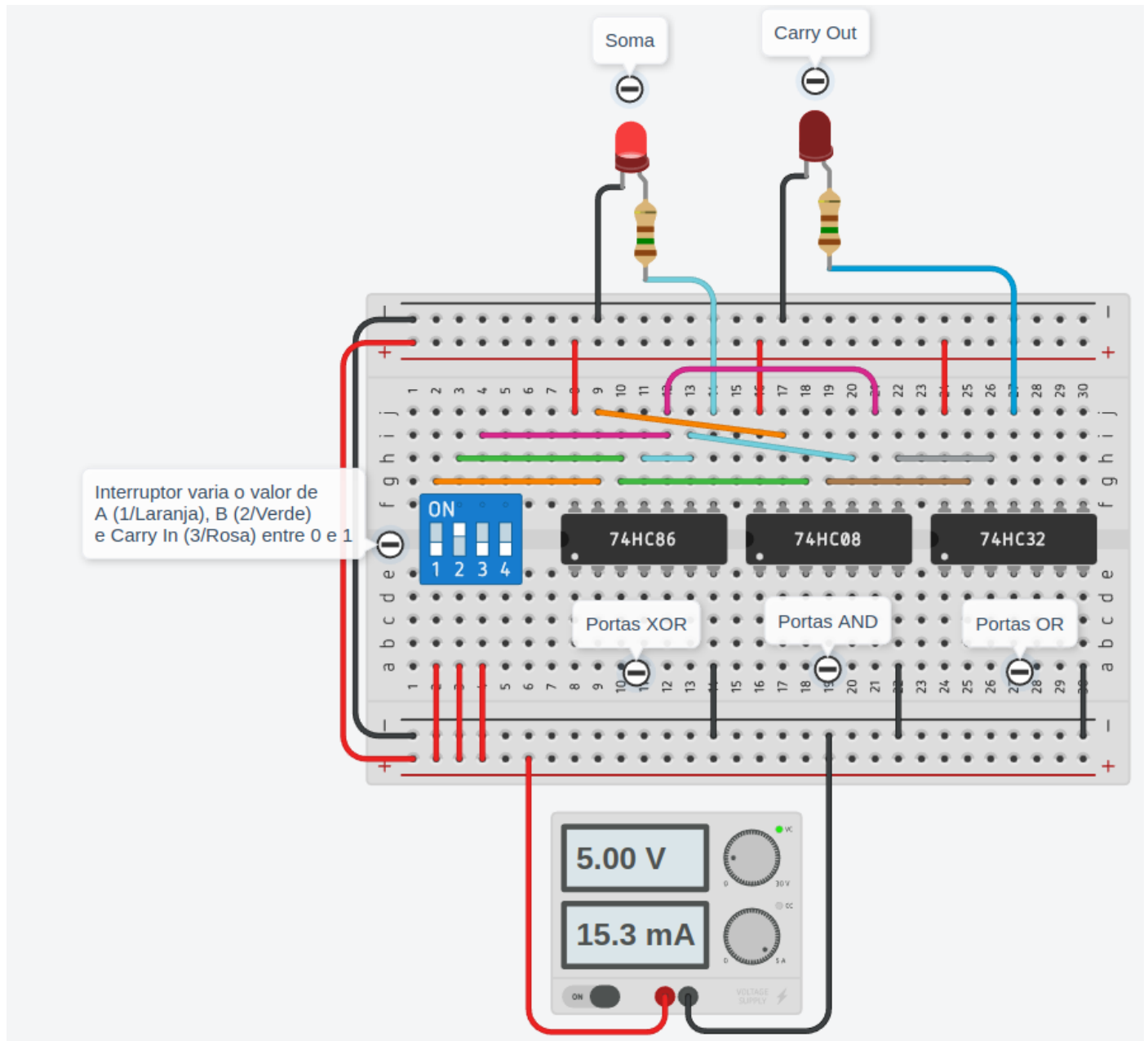
Carry in = 1



A = 0

B = 1

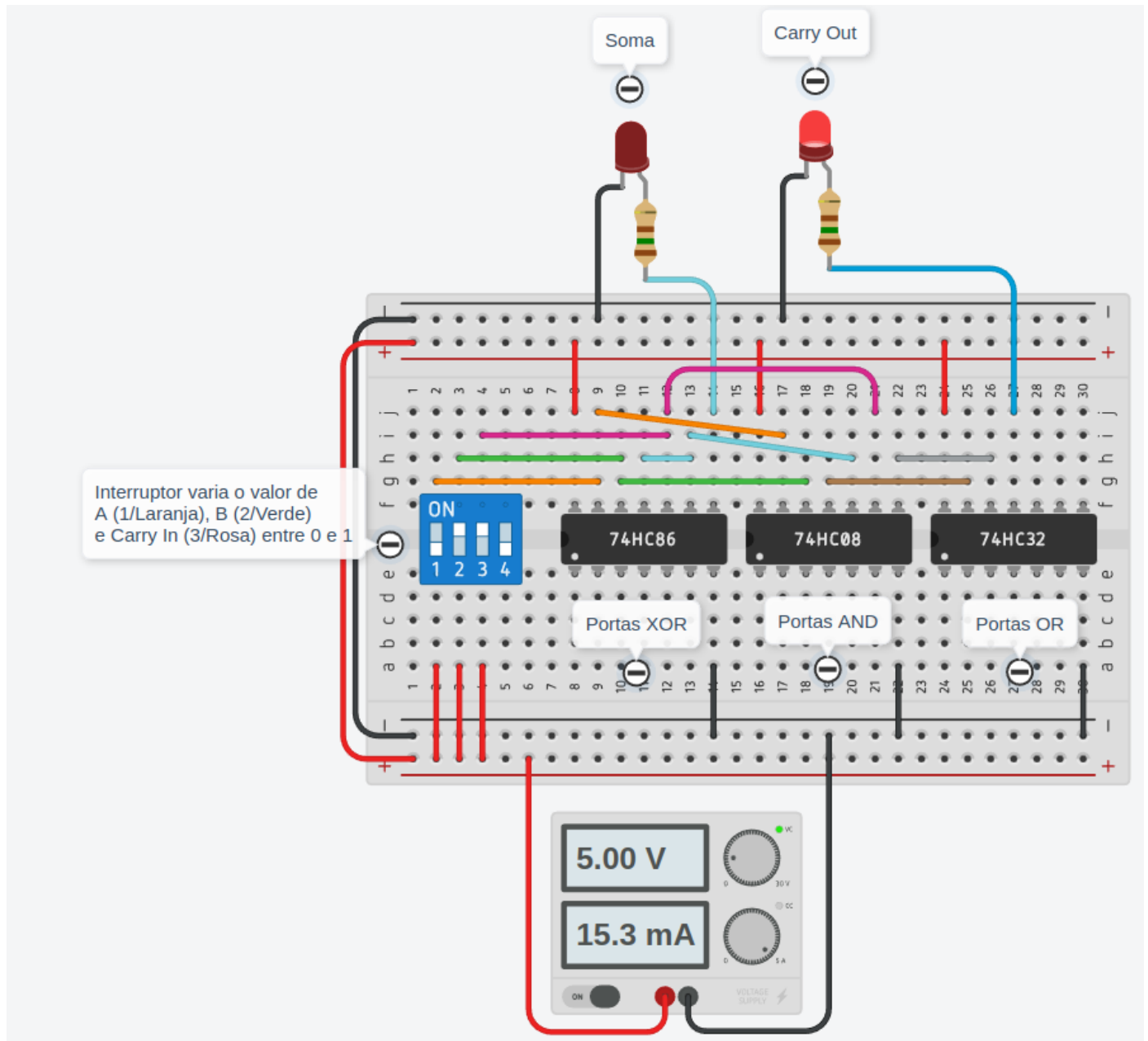
Carry in = 0



A = 0

B = 1

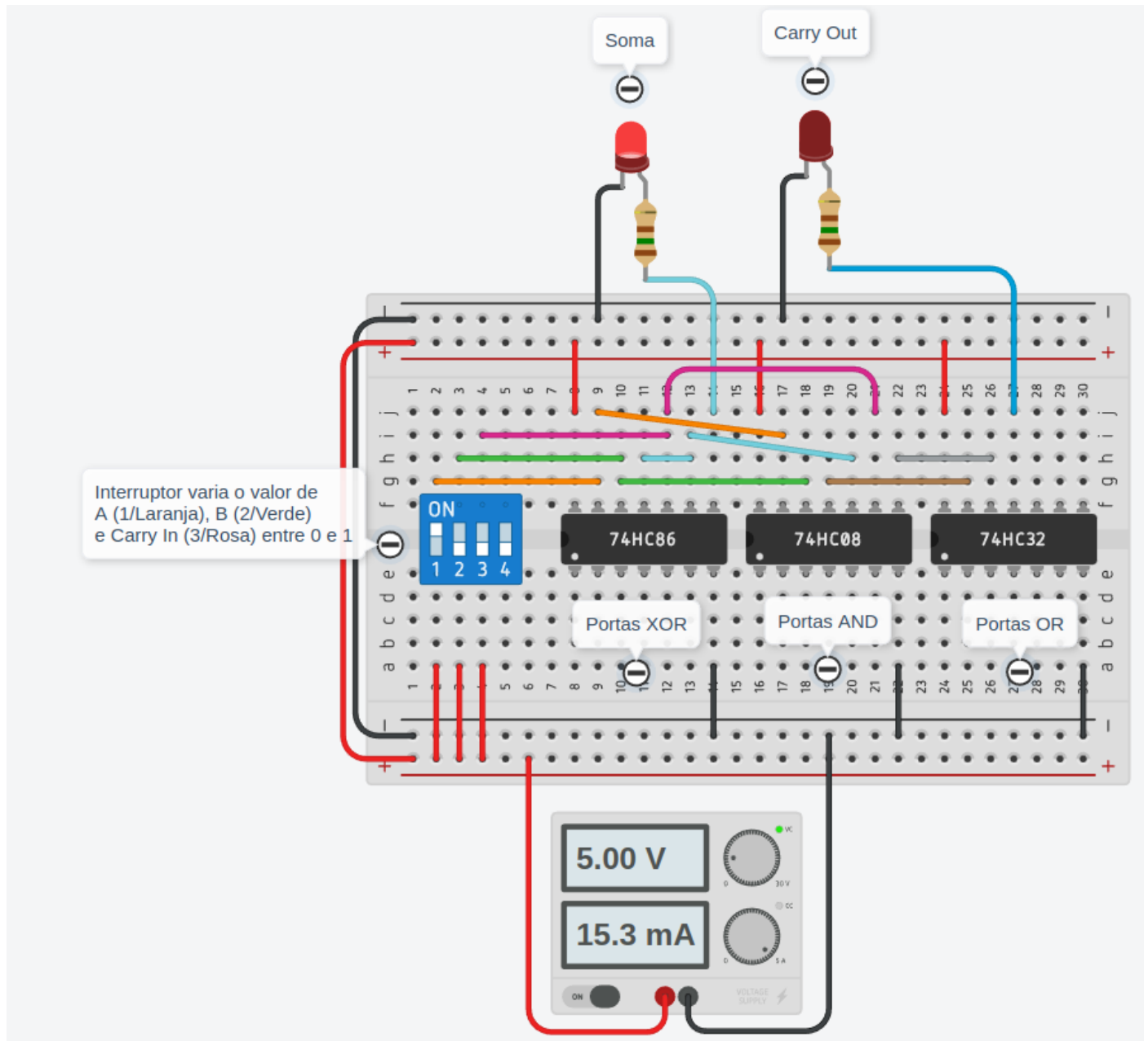
Carry in = 1



A = 1

B = 0

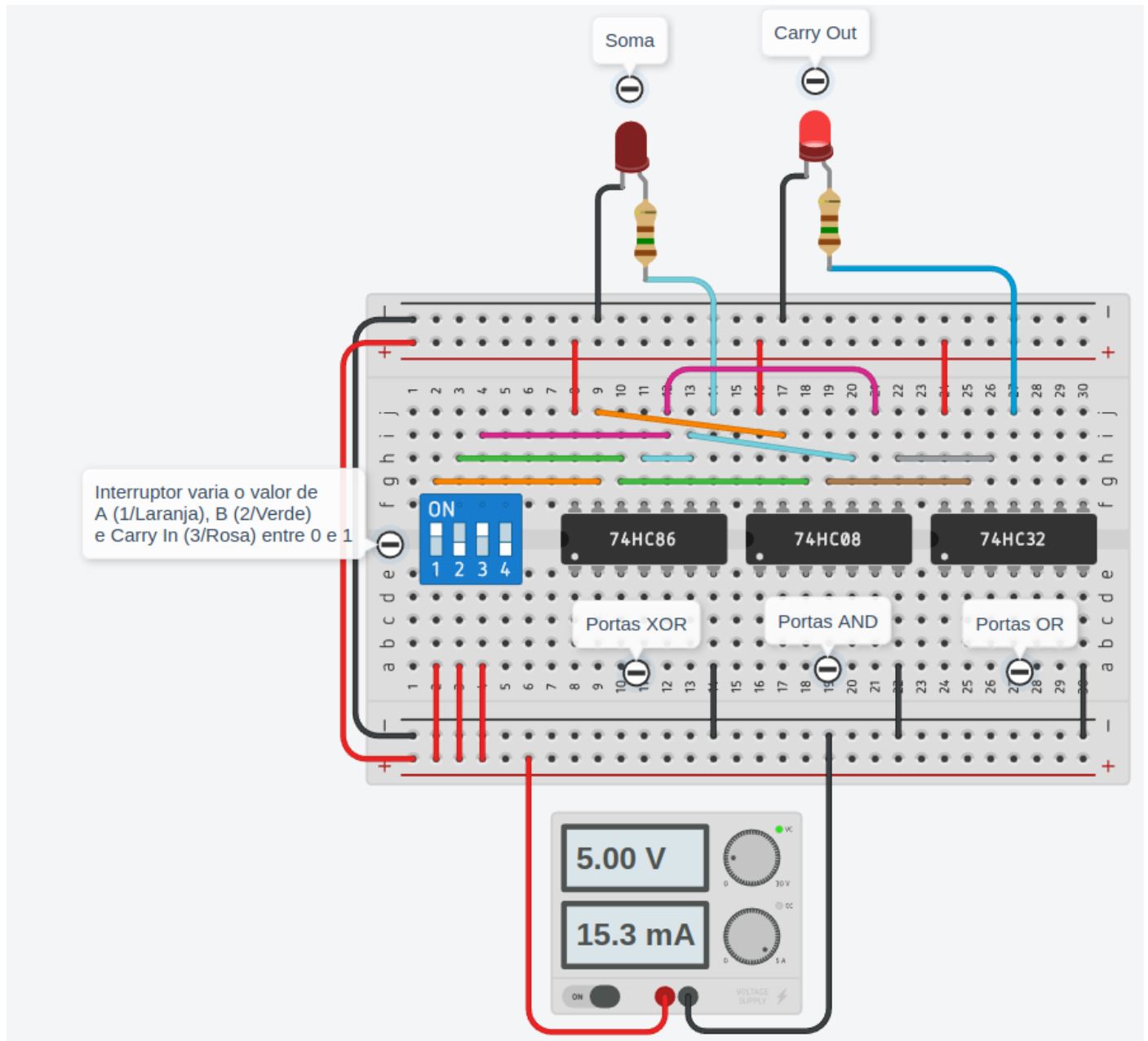
Carry in = 0



A = 1

B = 0

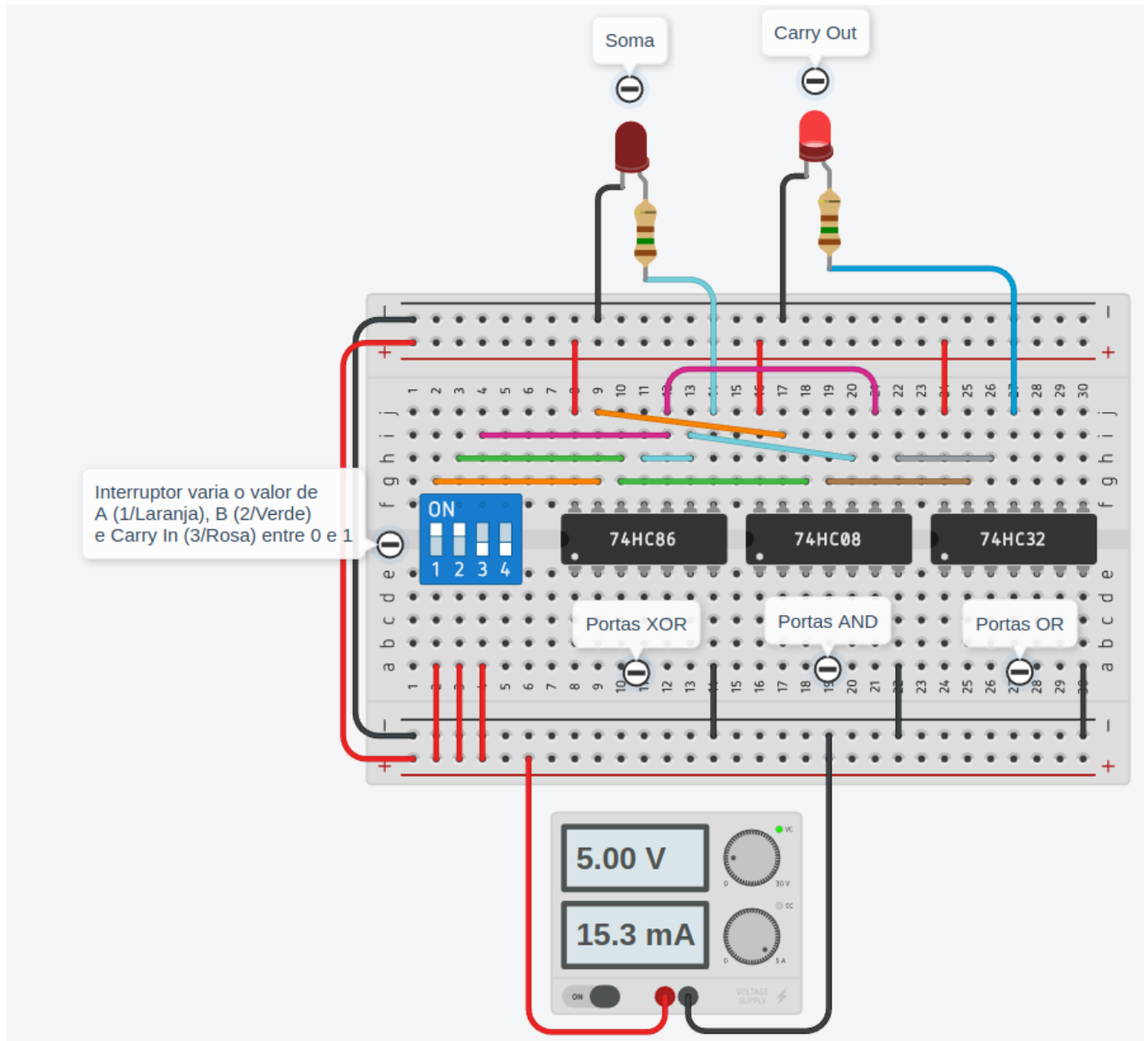
Carry in = 1



A = 1

B = 1

Carry in = 0



A = 1

B = 1

Carry in = 1

