

Exercício Prático 1

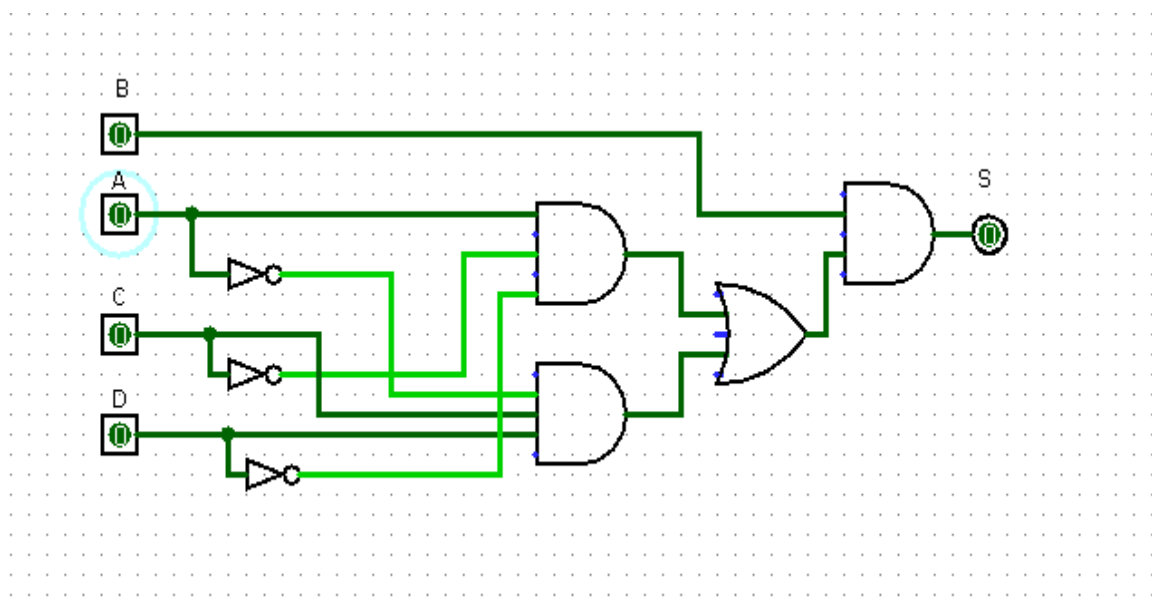
QUESTÃO 1:

| TABELA VERDADE | | | | |
|----------------|---|---|---|---|
| A | B | C | D | S |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1 | 0 |
| 0 | 0 | 1 | 0 | 0 |
| 0 | 0 | 1 | 1 | 0 |
| 0 | 1 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 1 | 1 | 1 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 1 | 0 |
| 1 | 0 | 1 | 0 | 0 |
| 1 | 0 | 1 | 1 | 0 |
| 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 |
| 1 | 1 | 1 | 0 | 0 |
| 1 | 1 | 1 | 1 | 0 |

Expressão:

$$S = B(AC'D' + A'CD)$$

Circuito:



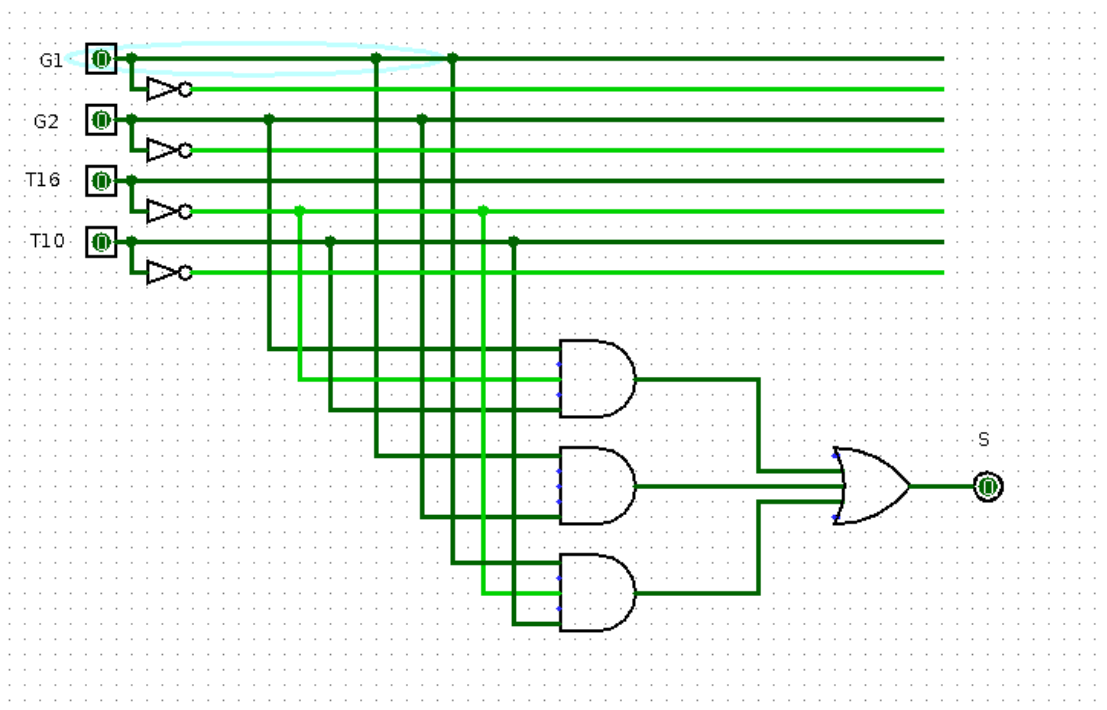
QUESTÃO 2:

| TABELA VERDADE | | | | |
|----------------|----|-----|-----|---------------|
| G1 | G2 | T16 | T10 | S(Cofre abre) |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1 | 0 |
| 0 | 0 | 1 | 0 | X |
| 0 | 0 | 1 | 1 | 0 |
| 0 | 1 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 1 |
| 0 | 1 | 1 | 0 | X |
| 0 | 1 | 1 | 1 | 0 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 1 | 1 |
| 1 | 0 | 1 | 0 | X |
| 1 | 0 | 1 | 1 | 0 |
| 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 0 | X |
| 1 | 1 | 1 | 1 | 1 |

Expressão:

$$S = (G2.T16'.T10 + G1.G2 + G1.T16'.T10)$$

CIRCUITO:



QUESTÃO 3:

| TABELA VERDADE | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---------|
| A | B | C | D | S | a | b | c | d | e | f | g | DISPLAY |
| 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |
| 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 2 |
| 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 3 |
| 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 4 |
| 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 5 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 6 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 7 |
| 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 |
| 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 9 |
| 1 | 0 | 1 | 0 | x | x | x | x | x | x | x | x | x |
| 1 | 0 | 1 | 1 | x | x | x | x | x | x | x | x | x |
| 1 | 1 | 0 | 0 | x | x | x | x | x | x | x | x | x |
| 1 | 1 | 0 | 1 | x | x | x | x | x | x | x | x | x |
| 1 | 1 | 1 | 0 | x | x | x | x | x | x | x | x | x |
| 1 | 1 | 1 | 1 | x | x | x | x | x | x | x | x | x |

Expressão:
 $S = A + BC$

CIRCUITO:

