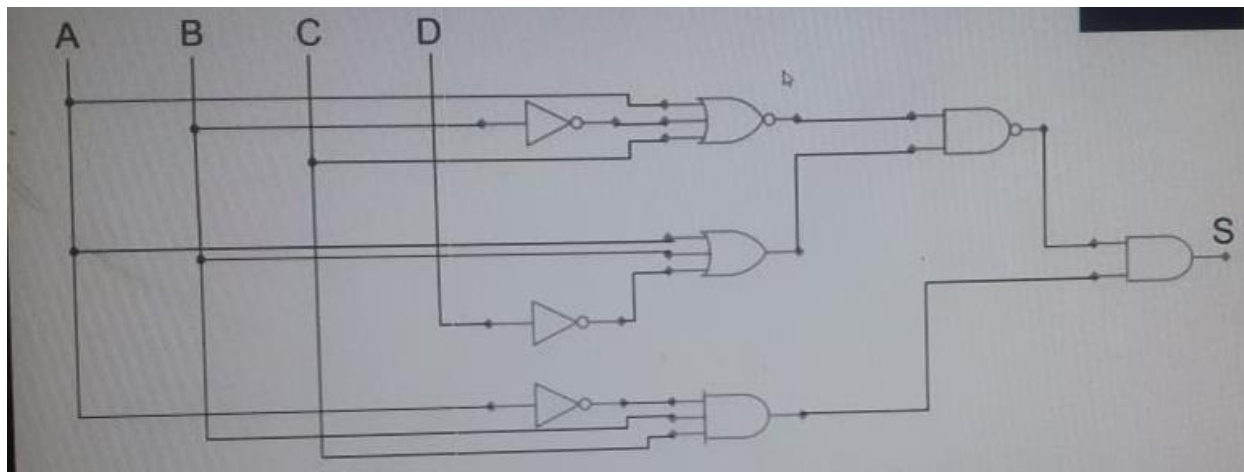**Nome:** Diego Reis de Magalhães   **RA:** N596058   **Turma:** CC2A40

EXPRESSÃO LÓGICA

$$((A+B'+C)'.(A+B+D'))'*(A'.B.C)$$

TABELA VERDADE

$$((A+B'+C)'.(A+B+D'))'*(A'.B.C)$$

A	B	C	D	A'	B'	D'	(A'.B.C)	(A+B'+C) X	(X)'	(A+B+D') Y	(X)'.Y Z	(Z)'	(Z)'.(A'.B.C)
0	0	0	0	1	1	1	0	1	0	1	0	1	0
0	0	0	1	1	1	0	0	1	0	0	0	1	0
0	0	1	0	1	1	1	0	1	0	1	0	1	0
0	0	1	1	1	1	0	0	1	0	0	0	1	0
0	1	0	0	1	0	1	0	0	1	1	1	0	0
0	1	0	1	1	0	0	0	0	1	1	1	0	0
0	1	1	0	1	0	1	1	1	0	1	0	1	1
0	1	1	1	1	0	0	1	1	0	1	0	1	1
1	0	0	0	0	1	1	0	1	0	1	0	1	0
1	0	0	1	0	1	0	0	1	0	1	0	1	0
1	0	1	0	0	1	1	0	1	0	1	0	1	0
1	0	1	1	0	1	0	0	1	0	1	0	1	0
1	1	0	0	0	0	1	0	1	0	1	0	1	0
1	1	0	1	0	0	0	0	1	0	1	0	1	0
1	1	1	0	0	0	1	0	1	0	1	0	1	0
1	1	1	1	0	0	0	0	1	0	1	0	1	0

A'.B.C

A	B	C	D	A'	A'.B.C
0	0	0	0	1	0
0	0	0	1	1	0
0	0	1	0	1	0
0	0	1	1	1	0
0	1	0	0	1	0
0	1	0	1	1	0
0	1	1	0	1	1
0	1	1	1	1	1
1	0	0	0	0	0
1	0	0	1	0	0
1	0	1	0	0	0
1	0	1	1	0	0
1	1	0	0	0	0
1	1	0	1	0	0
1	1	1	0	0	0
1	1	1	1	0	0

SIMPLIFICAÇÃO

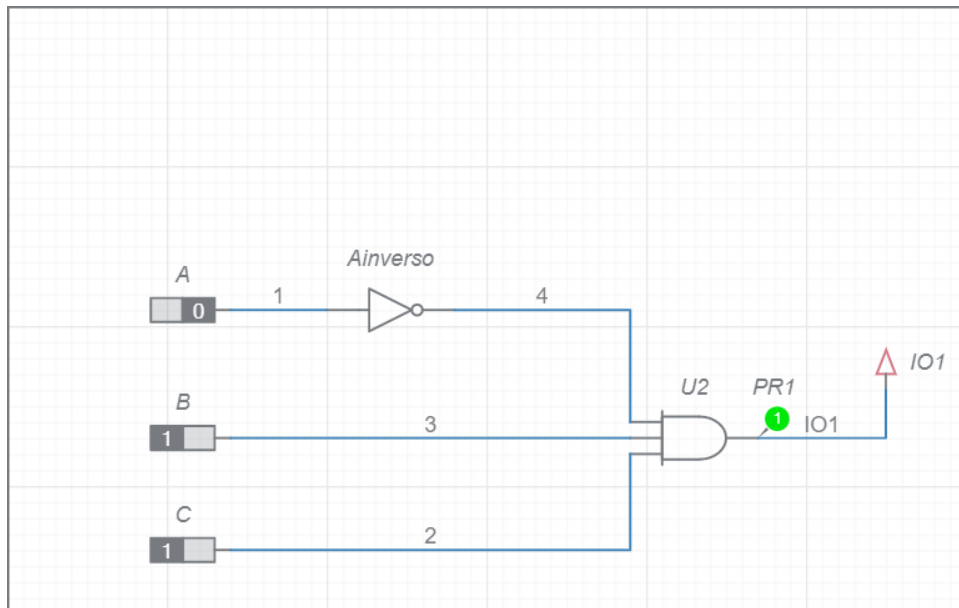((A+B'+C)'.(A+B+D'))'.(A'.B.C) -> Expressão original

((A'.B.C').(A+B+D'))'.(A'.B.C) -> Morgan realizado

(A+B'+C+A'.B'.D).(A'.B.C) -> Morgan realizado

A.A'.B.C+C.A'.B.C+B'.A'.B.C+A'.B'.D.A'.B.C -> Distributiva realizada

0.B.C+A'.B.C+0.A'.C+A'.0.C.D -> Postulados realizados

A'.B.C -> Retirada de todos os 0, obtendo assim a simplificação final

CIRCUITO SIMPLIFICADO

A'.B.C