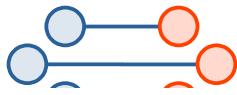


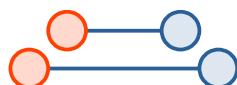
Em sala de aula, partimos daqui.

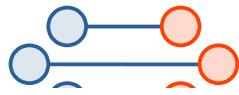
A	B	C	s
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	1
1	1	0	0
1	1	1	1



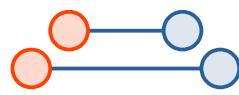
$$S = \bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \bar{B} \bar{C} + A \bar{B} \bar{C} + A \bar{B} C + A B C$$

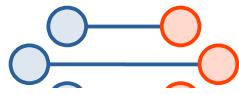
A	B	C	S
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	1
1	1	0	0
1	1	1	1





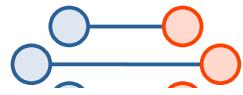
$$S = [\bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \bar{B} \bar{C}] + A \bar{B} \bar{C} + A \bar{B} C + A B C$$





$$S = [\bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \bar{B} \bar{C}] + A \bar{B} \bar{C} + A \bar{B} C + A B C$$
$$S = \bar{A} \cdot \bar{C} (\bar{B} + \bar{B}) + A \bar{B} \bar{C} + A C (\bar{B} + \bar{B})$$

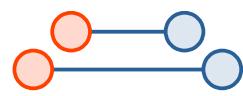


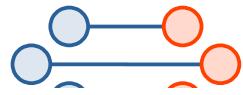


$$S = [\bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \bar{B} \bar{C}] + A \bar{B} \bar{C} + A \bar{B} C + A B C$$

$$S = \bar{A} \cdot \bar{C} (\cancel{\bar{B} + \bar{B}}) + A \bar{B} \bar{C} + A C (\cancel{\bar{B} + \bar{B}})$$

$$S = \bar{A} \cdot \bar{C} + A \bar{B} \bar{C} + A C$$



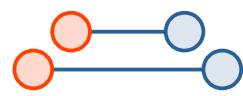


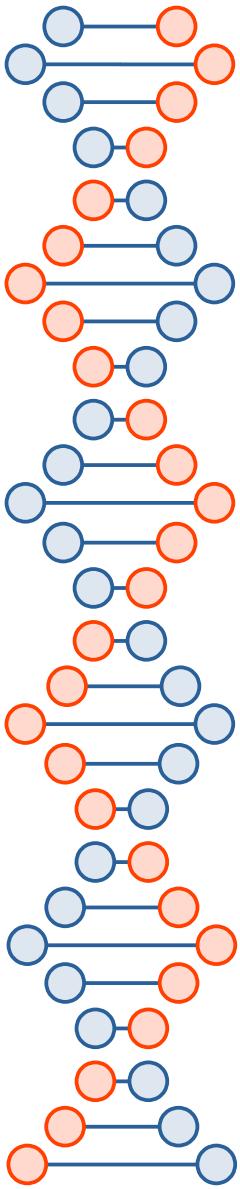
$$S = [\bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \bar{B} \bar{C}] + A \bar{B} \bar{C} + A \bar{B} C + A B C$$

$$S = \bar{A} \cdot \bar{C} (\cancel{\bar{B} + B}) + A \bar{B} \bar{C} + A C (\cancel{\bar{B} + B})$$

$$S = \bar{A} \cdot \bar{C} + A \bar{B} \bar{C} + A C$$

$$S = \bar{C} (\bar{A} + A \cdot \bar{B}) + A \cdot C$$





Usando as propriedades enviadas...

Postulações:

Multiplicação:

$$A \cdot 0 = 0$$

$$A \cdot 1 = A$$

$$A \cdot \bar{A} = 0$$

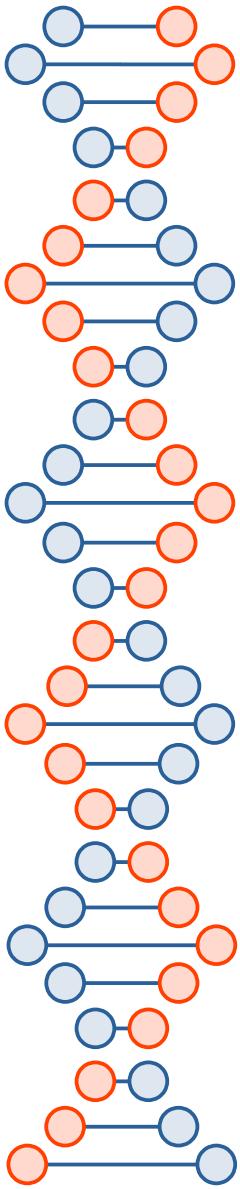
Soma

$$A + 0 = A$$

$$A + A = A$$

$$A + \bar{A} = 1$$

$$A + \bar{A} = 0$$



E mais essas propriedades enviadas...

Propriedades Importantes

$$(A + AB) = A(1 + B) = A$$

$$(A + \bar{A}B) = A + B$$

$$(\bar{A} + AB) = \bar{A} + B$$

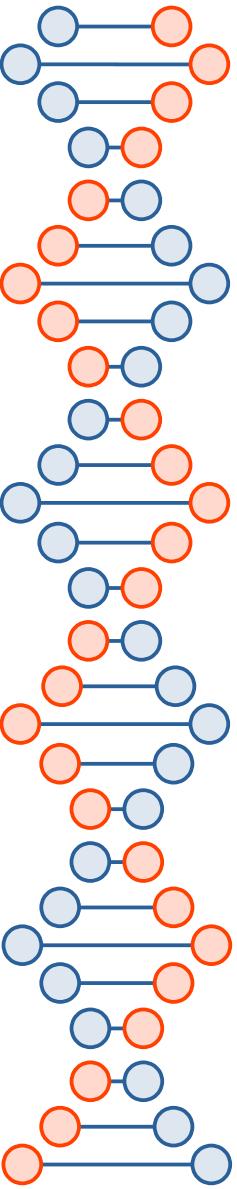
$$(\bar{A} + \bar{A}B) = \bar{A}(1 + B) = \bar{A}$$

$$A + A\bar{B} = A(1 + \bar{B}) = A$$

$$A + \bar{A}\bar{B} = A + \bar{B}$$

$$\bar{A} + A\bar{B} = \bar{A} + \bar{B}$$

$$\bar{A} + \bar{A}\bar{B} = \bar{A}(1 + \bar{B}) = \bar{A}$$



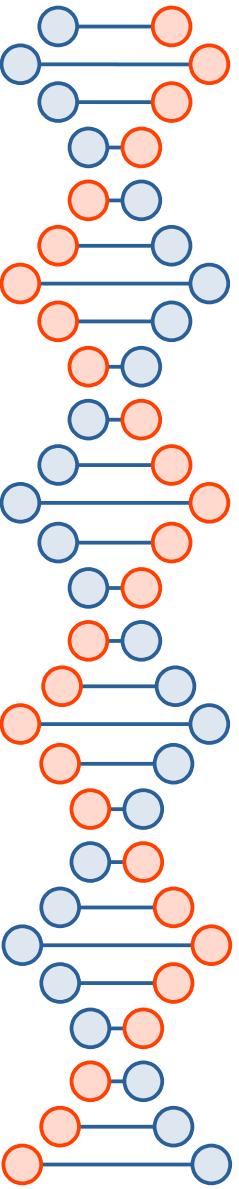
É pra decorar ?

Propriedades Importantes

$$(A + AB) = A(\cancel{1+B}) = A$$
$$(A + \bar{A}B) = A + B$$
$$(\bar{A} + AB) = \bar{A} + B$$
$$(\bar{A} + \bar{A}B) = \bar{A}(1+\cancel{B}) = \bar{A}$$

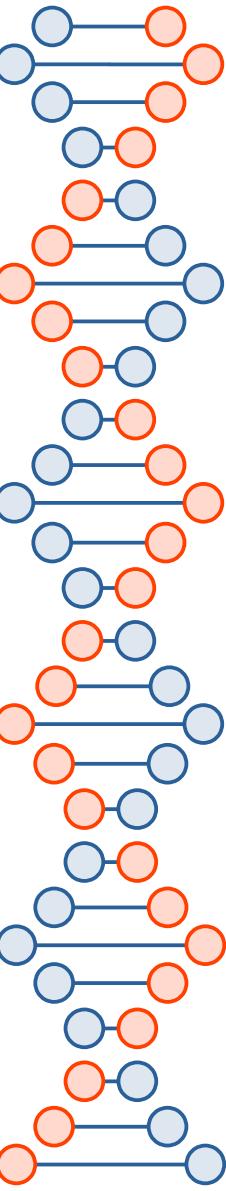
NÃO ! ! !

$$A + A\bar{B} = A(\cancel{1+B}) = A$$
$$A + \bar{A}\bar{B} = A + \bar{B}$$
$$\bar{A} + A\bar{B} = \bar{A} + \bar{B}$$
$$\bar{A} + \bar{A}\bar{B} = A(\cancel{1+B}) = \bar{A}$$



Então, como faz?

Raciocine e
entenda!



... Que resumindo...

Observe, por conseguinte, as relações a seguir

$$(A + AB) \equiv (A + A\bar{B}) \equiv A$$

$$(\bar{A} + \bar{A}B) \equiv (\bar{A} + \bar{A}\bar{B}) \equiv \bar{A}$$

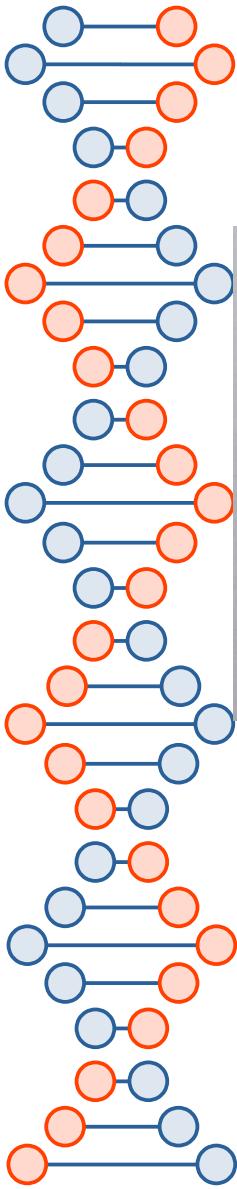
E reordenando os restantes

$$\bar{A} + A\bar{B} = \bar{A} + \bar{B}$$

$$\bar{A} + AB = \bar{A} + B$$

$$A + \bar{A}\bar{B} = A + \bar{B}$$

$$A + \bar{A}B = A + B$$



Então, depois da recordação da última aula...

$$S = \overline{C} \left(\overline{A} + \overline{A} \overline{B} \right) + AC$$

Das propriedades importantes

$$\overline{A} + \overline{B}$$

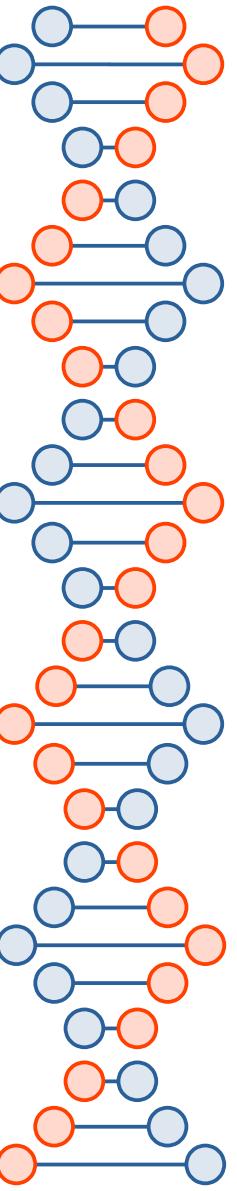
$$S = \overline{C} (\overline{A} \cdot \overline{B}) + AC \quad \text{ou}$$

$$S = \overline{A} \cdot \overline{B} \cdot \overline{C} + AC$$

Logo

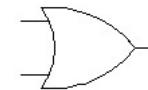
$$S = \overline{C} (\overline{A} + \overline{B}) + AC$$

por D'Morgan

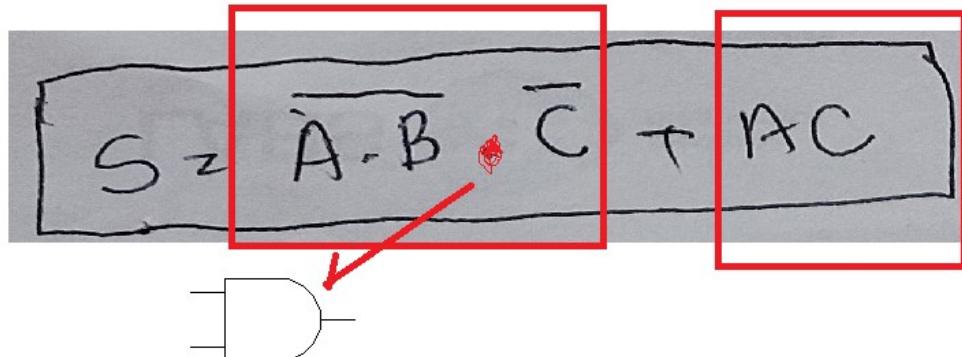


Como é a cara deste circuito?

$$S = \overline{A} \cdot \overline{B} \cdot \overline{C} + AC$$

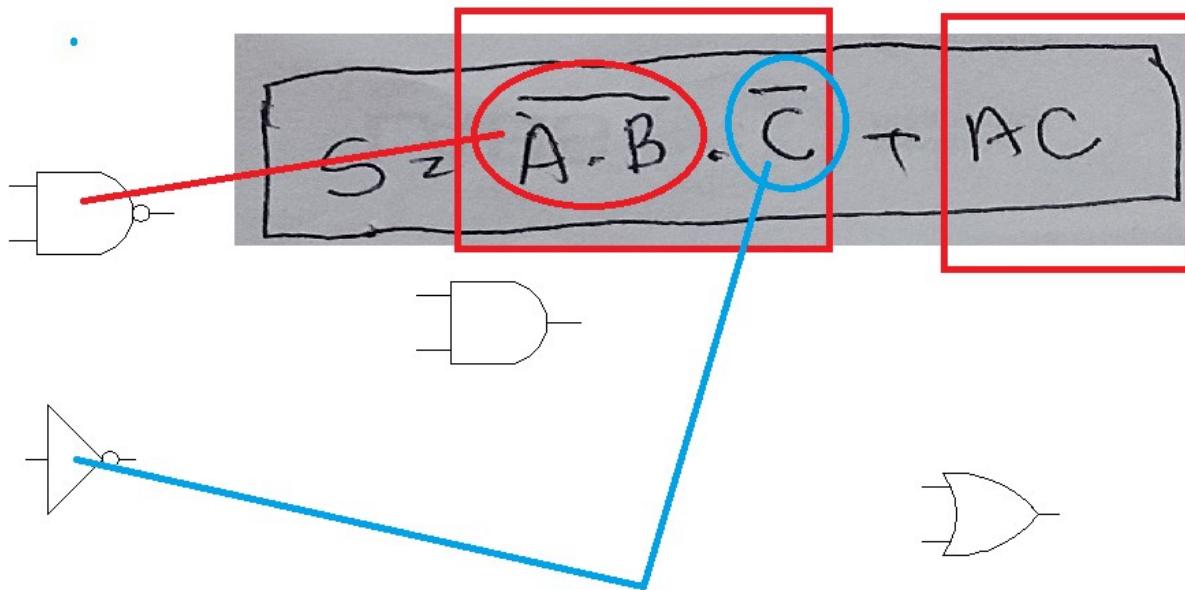


Continuando...

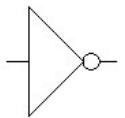
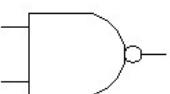
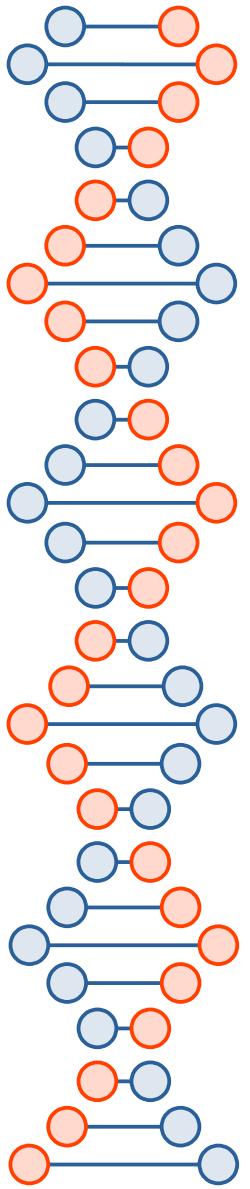
$$S = \overline{A} \cdot \overline{B} \cdot \overline{C} + AC$$


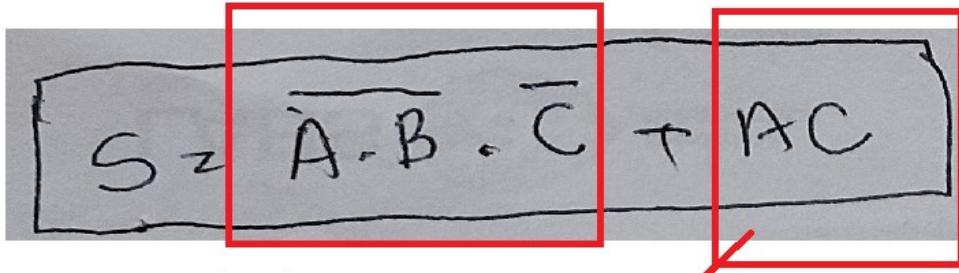
The image shows a handwritten logic equation $S = \overline{A} \cdot \overline{B} \cdot \overline{C} + AC$ on a grey background. Two red boxes are drawn around the terms $\overline{A} \cdot \overline{B} \cdot \overline{C}$ and AC . A red arrow points from the term $\overline{A} \cdot \overline{B} \cdot \overline{C}$ to a logic AND gate symbol below it. To the right of the AND gate is a logic OR gate symbol.

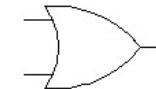
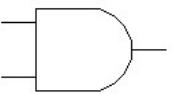
Continuando...

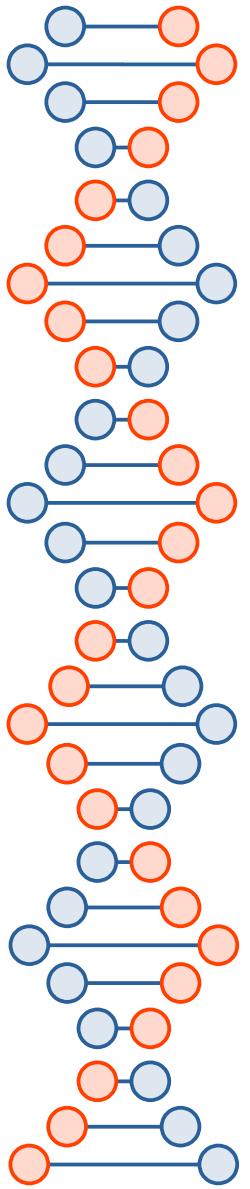


Continuando...



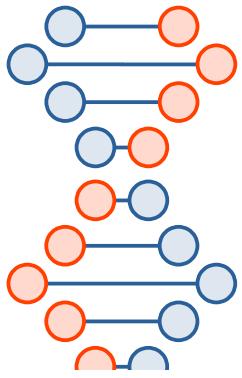

$$S = \overline{A} \cdot \overline{B} \cdot \overline{C} + AC$$





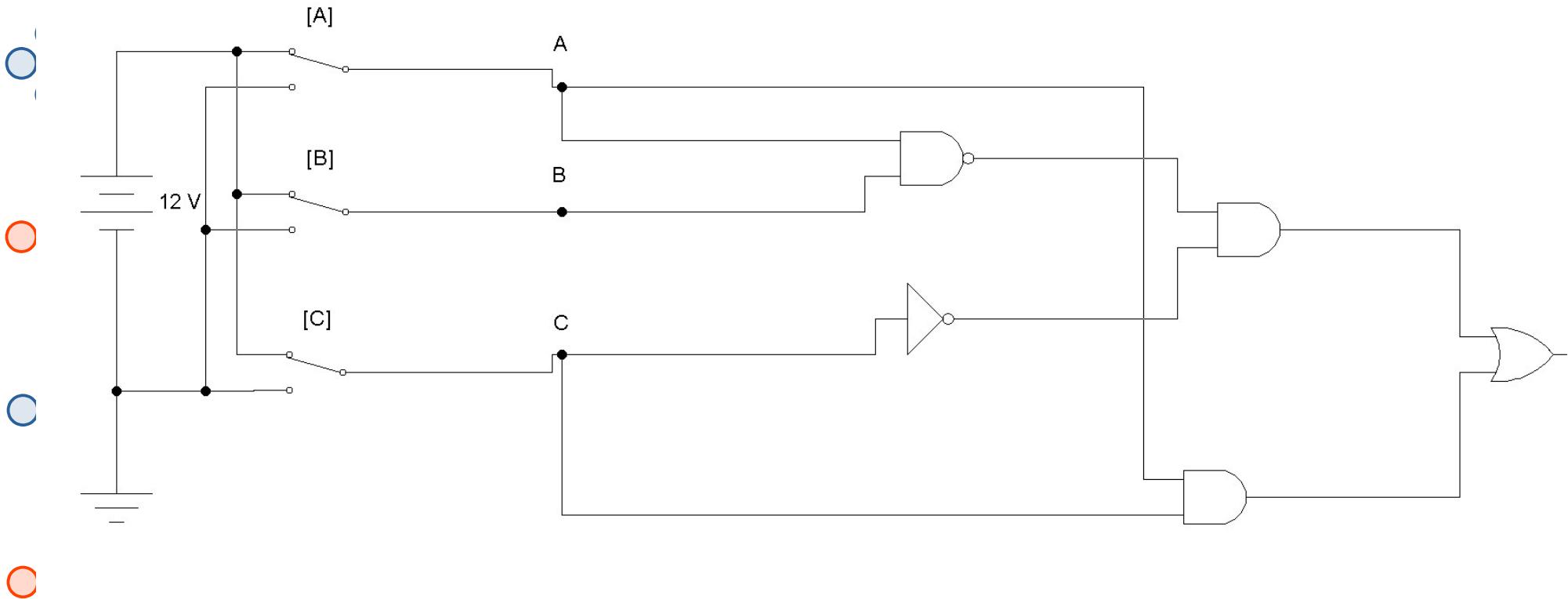
Agora, é só ligar.

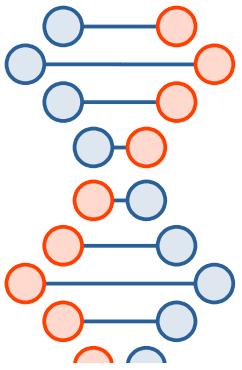
Acompanhe a montagem da
Função de Transferência



Agora, é só ligar.

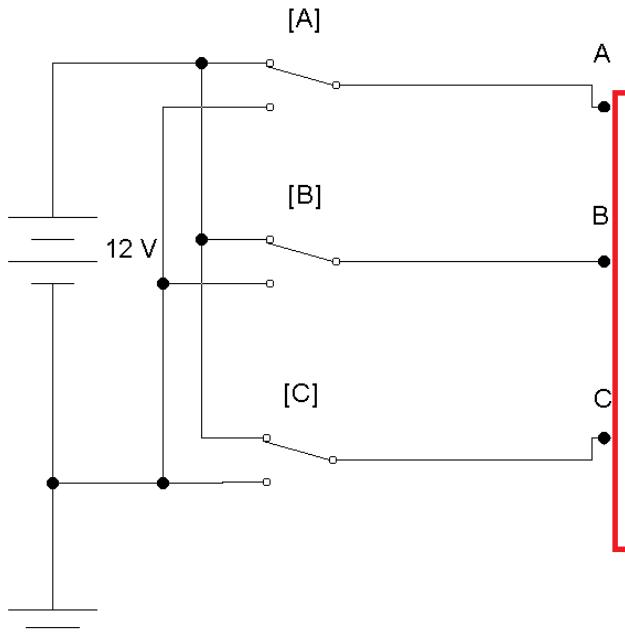
$$S = \overline{A} \cdot \overline{B} \cdot \overline{C} + AC$$





Por fim...

$$S = \overline{A} \cdot \overline{B} \cdot \overline{C} + AC$$



Função de
Transferência

s