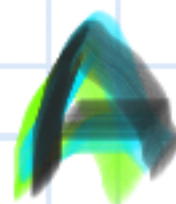
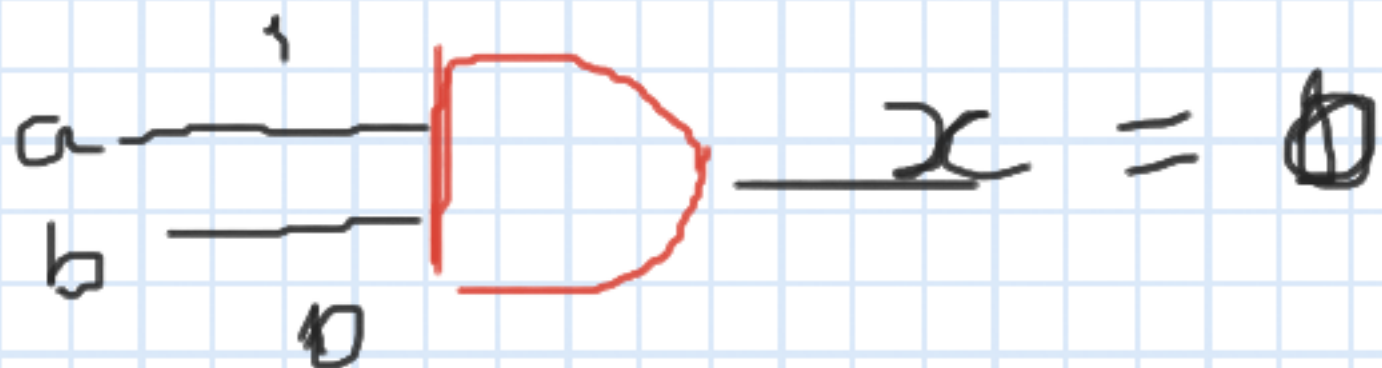


$x = a \cdot b$  porta E (AND)



$$a = 1$$

$$b = 1$$

$$a = 1$$

$$b = 0$$

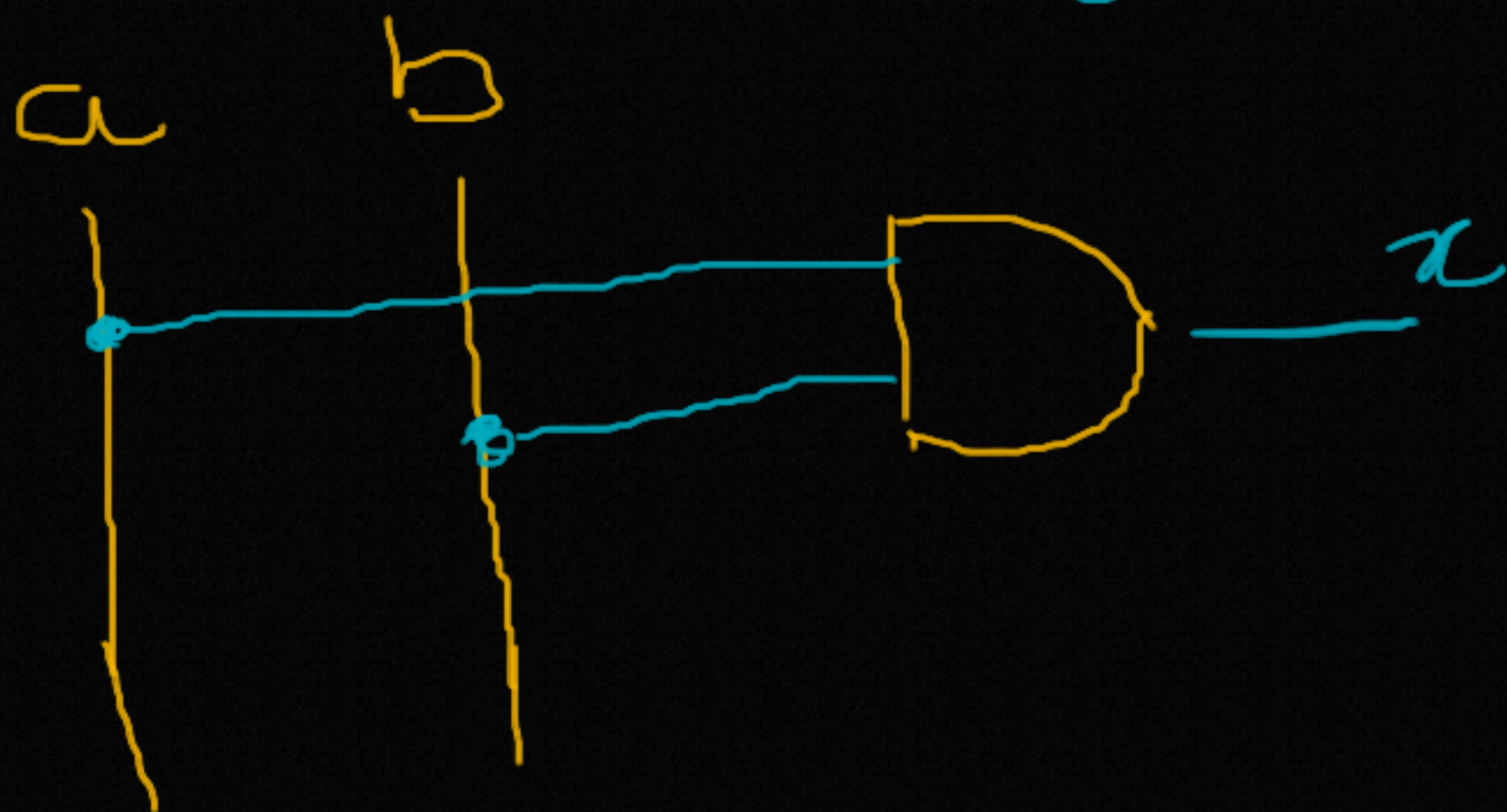
$$x = a \cdot b$$

0

1

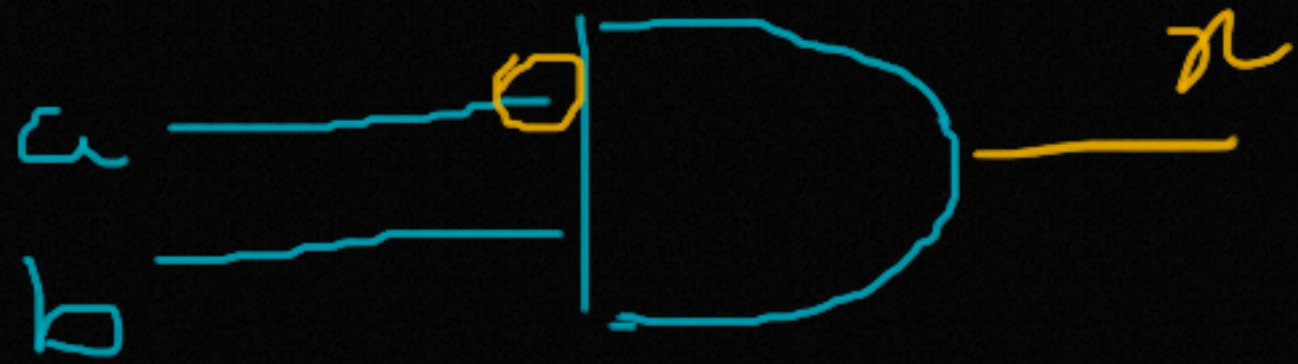
D

L

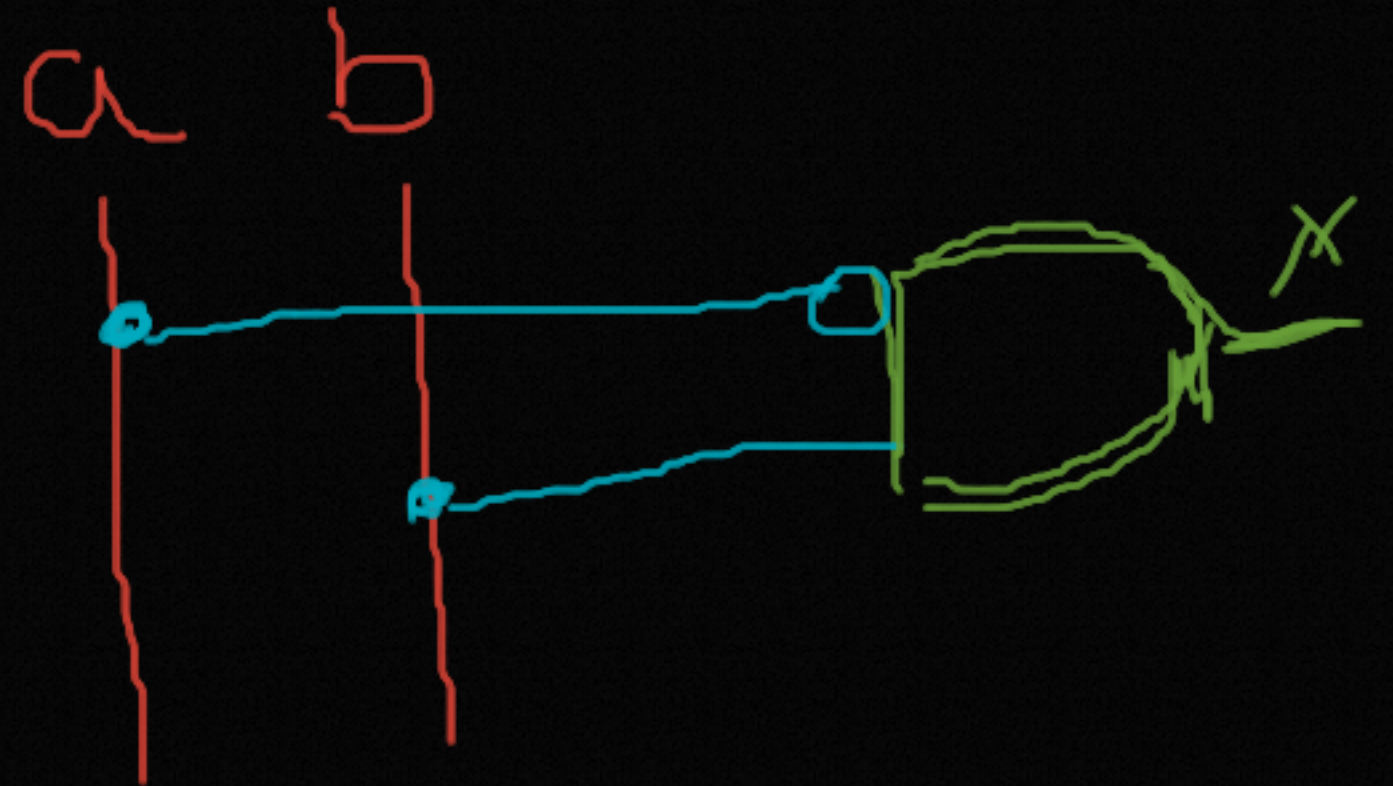




$$x = a' \cdot b$$



$$\overline{a} \cdot b$$



$$a' \cdot b$$

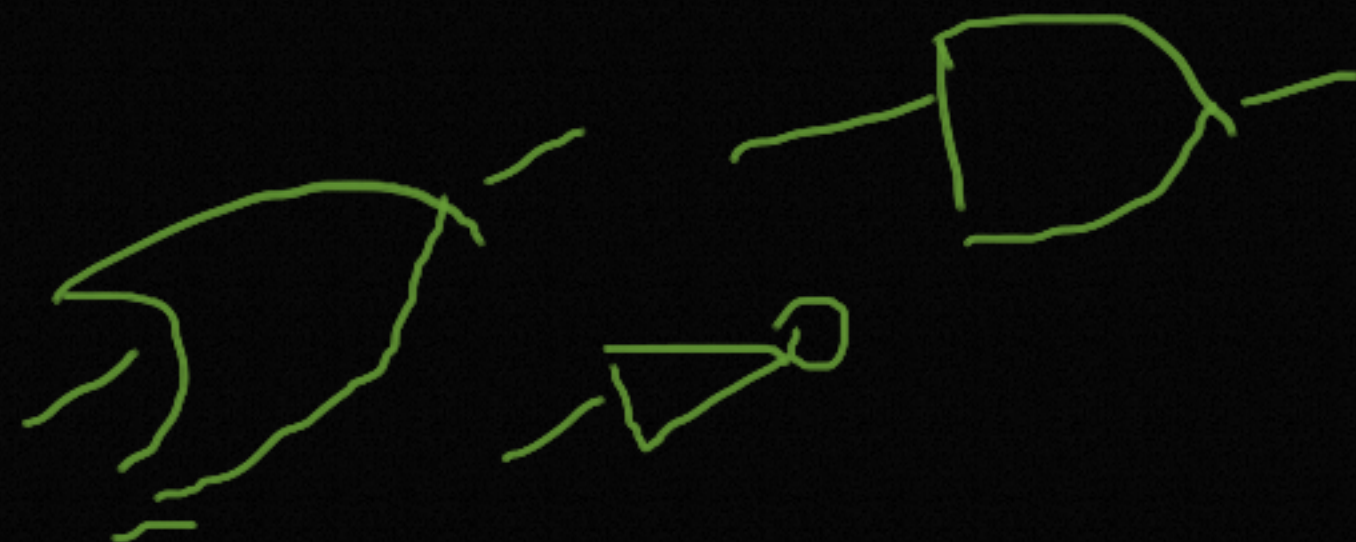
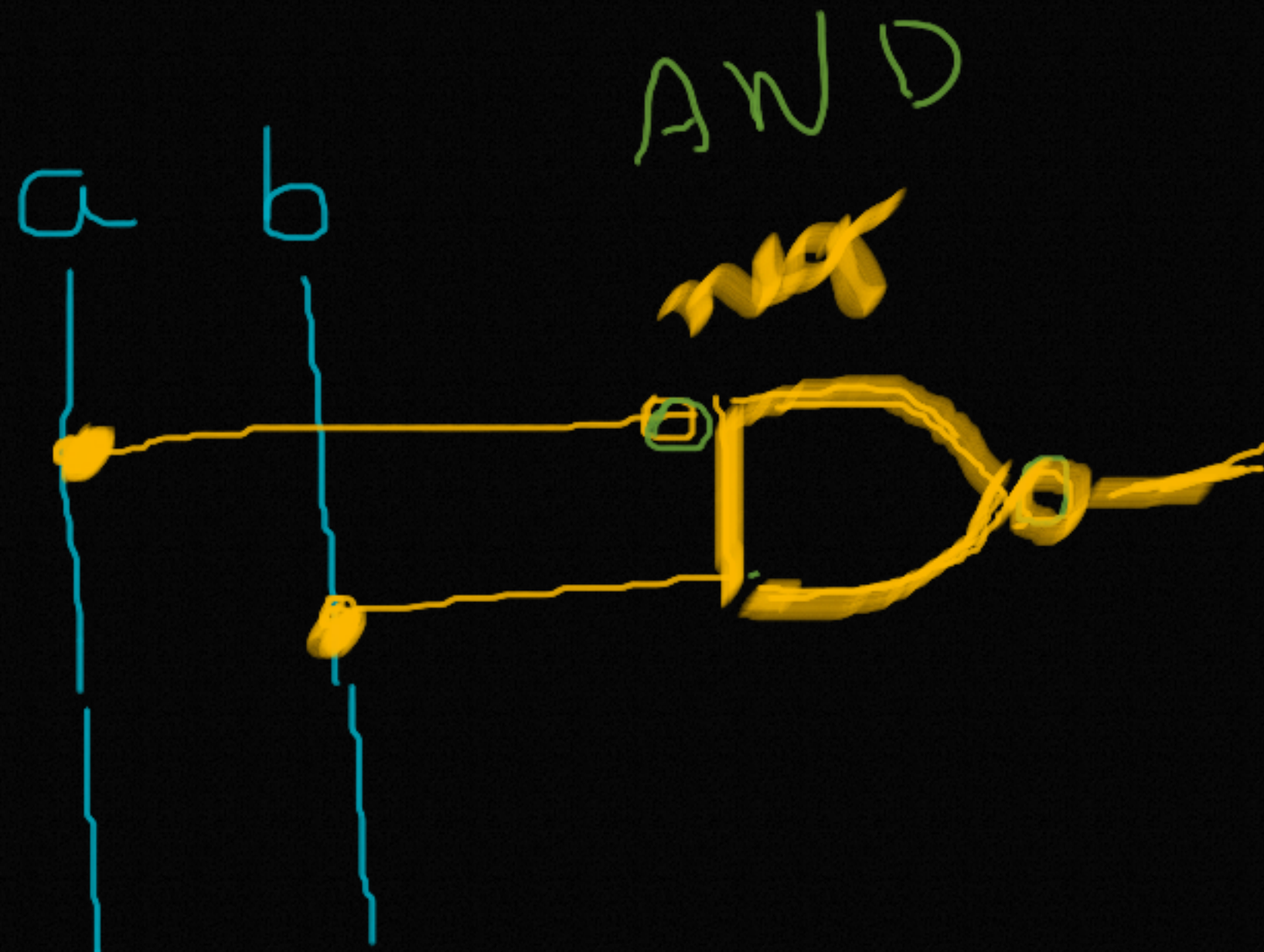
$$\overline{a} \cdot b$$



$$x = (\bar{a}, b)$$

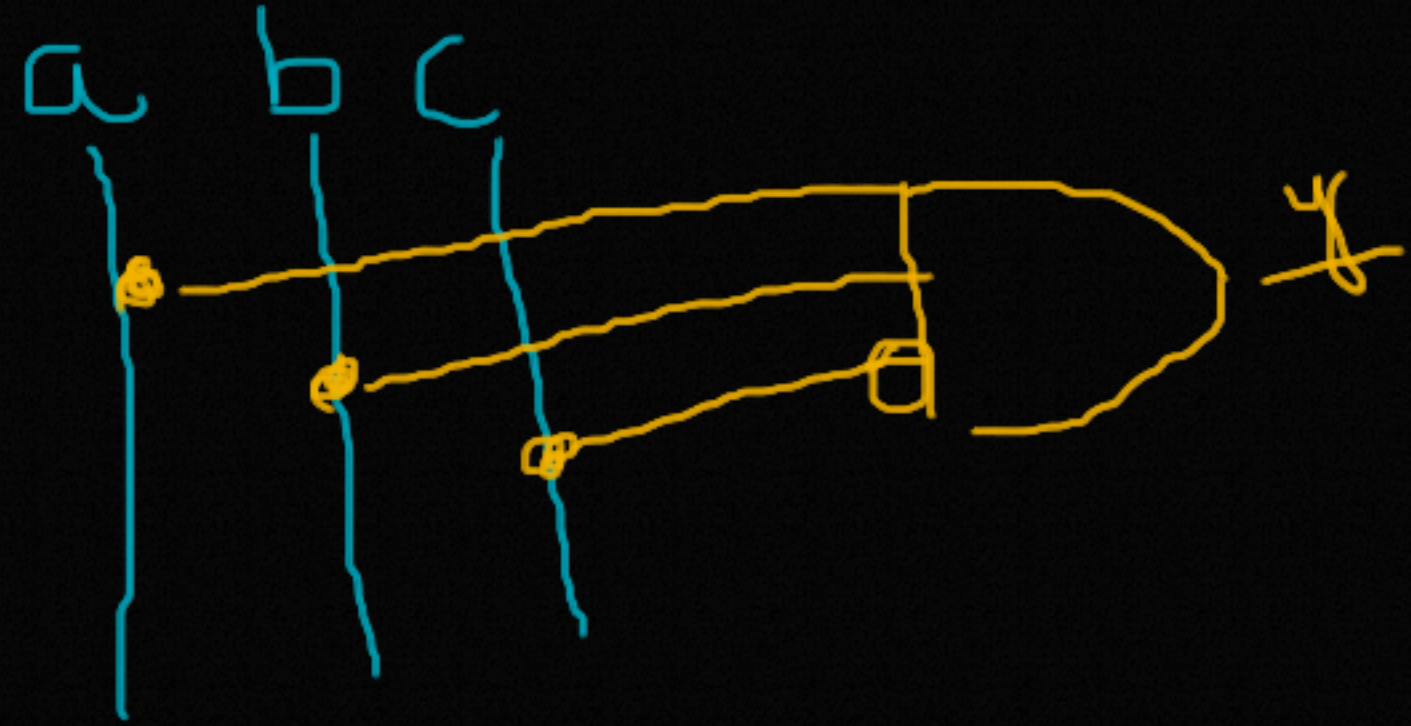
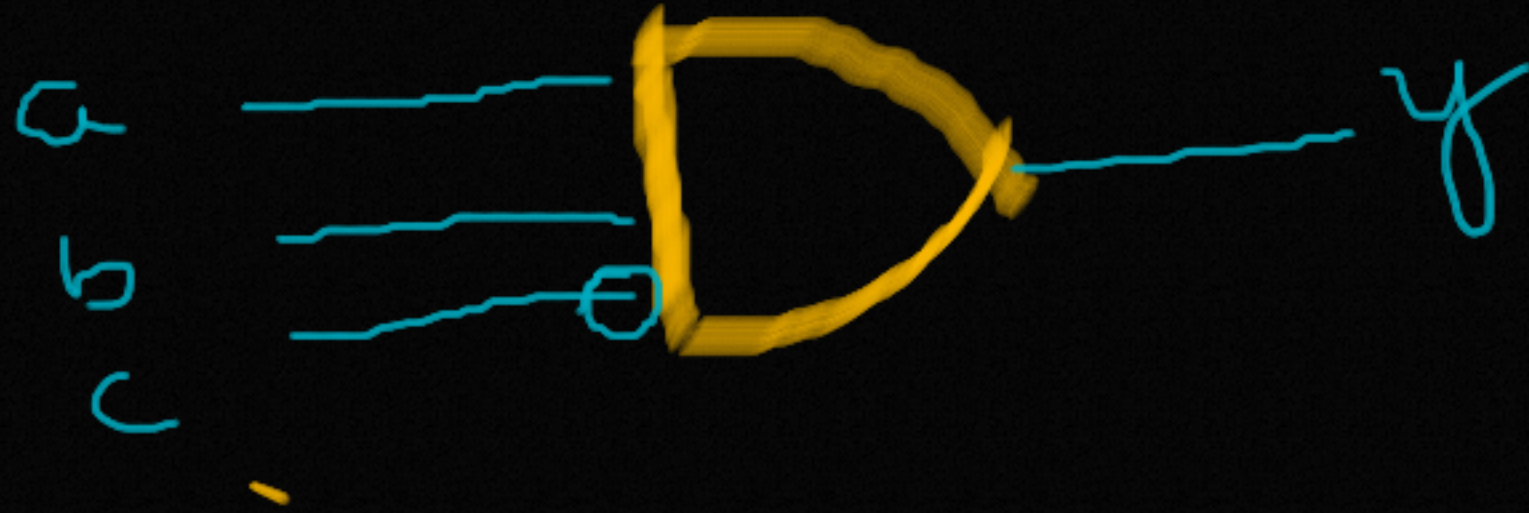


$$(a', b)'$$





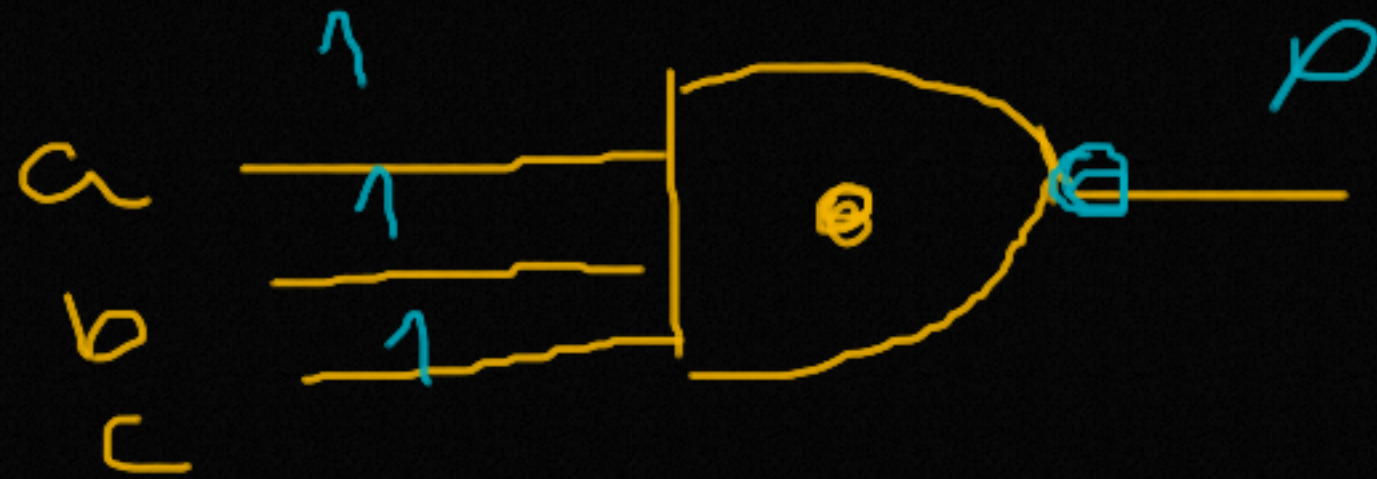
$$y = a \cdot b \cdot \bar{c}$$



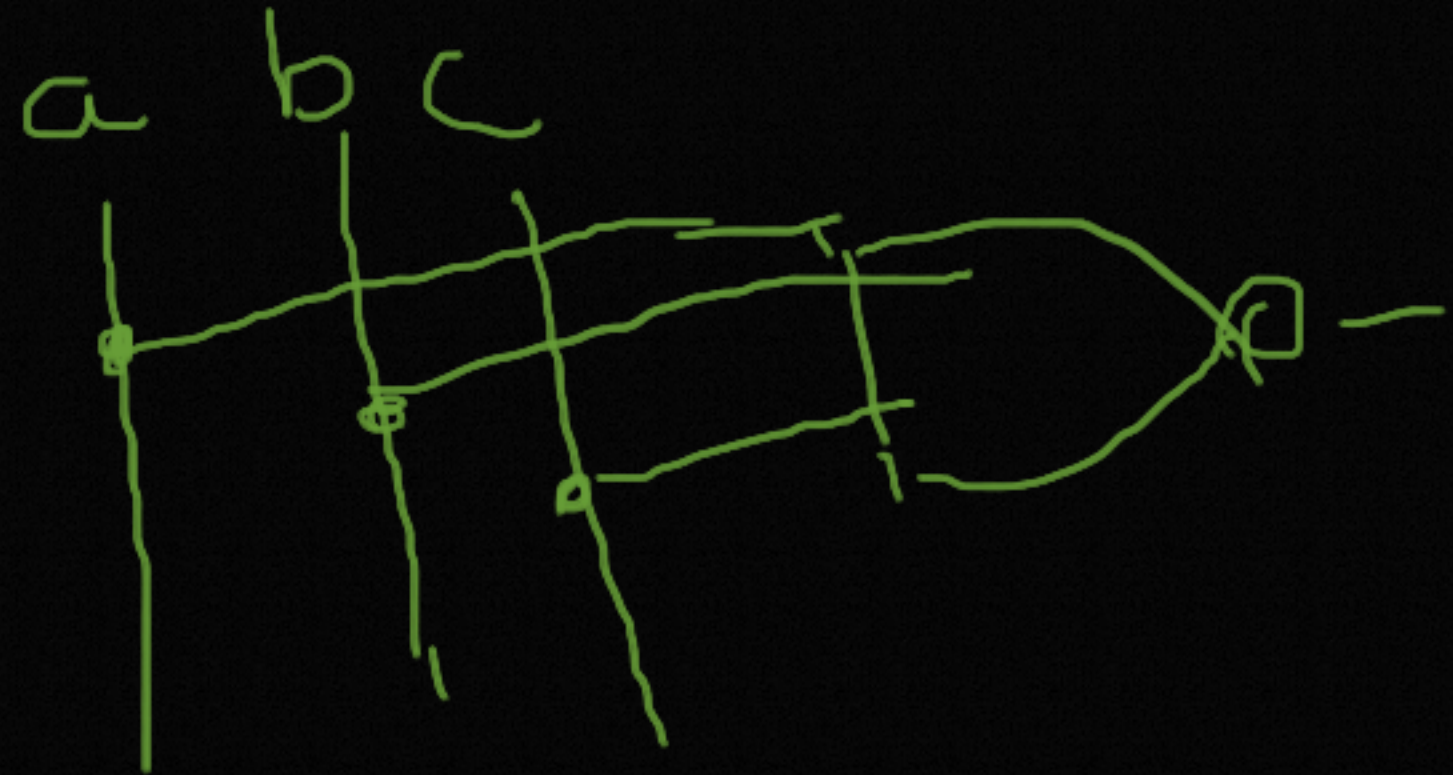


$$y = (a \cdot b \cdot c)'$$

$$\overline{(abc)} \quad \text{"e"}$$



$$(1 \cdot 1 \cdot 1)' = 1' = 0$$





Porta OU OR +



$$x = a + b$$

$$x = 0 + 1$$



por exemplo

$$a = 0$$

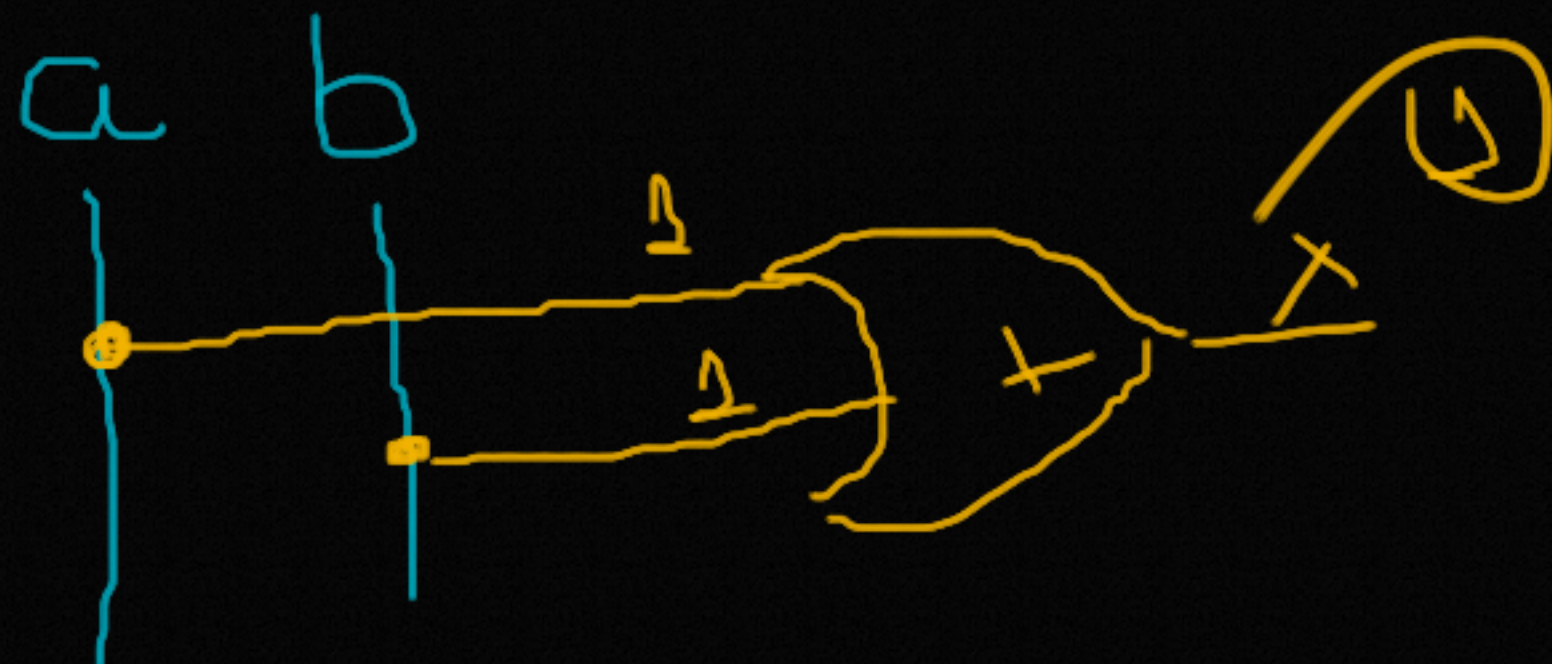
$$b = 1$$

$$0 + 0 = 0$$

$$0 + 1 = 1$$

$$1 + 0 = 1$$

$$1 + 1 = 1$$



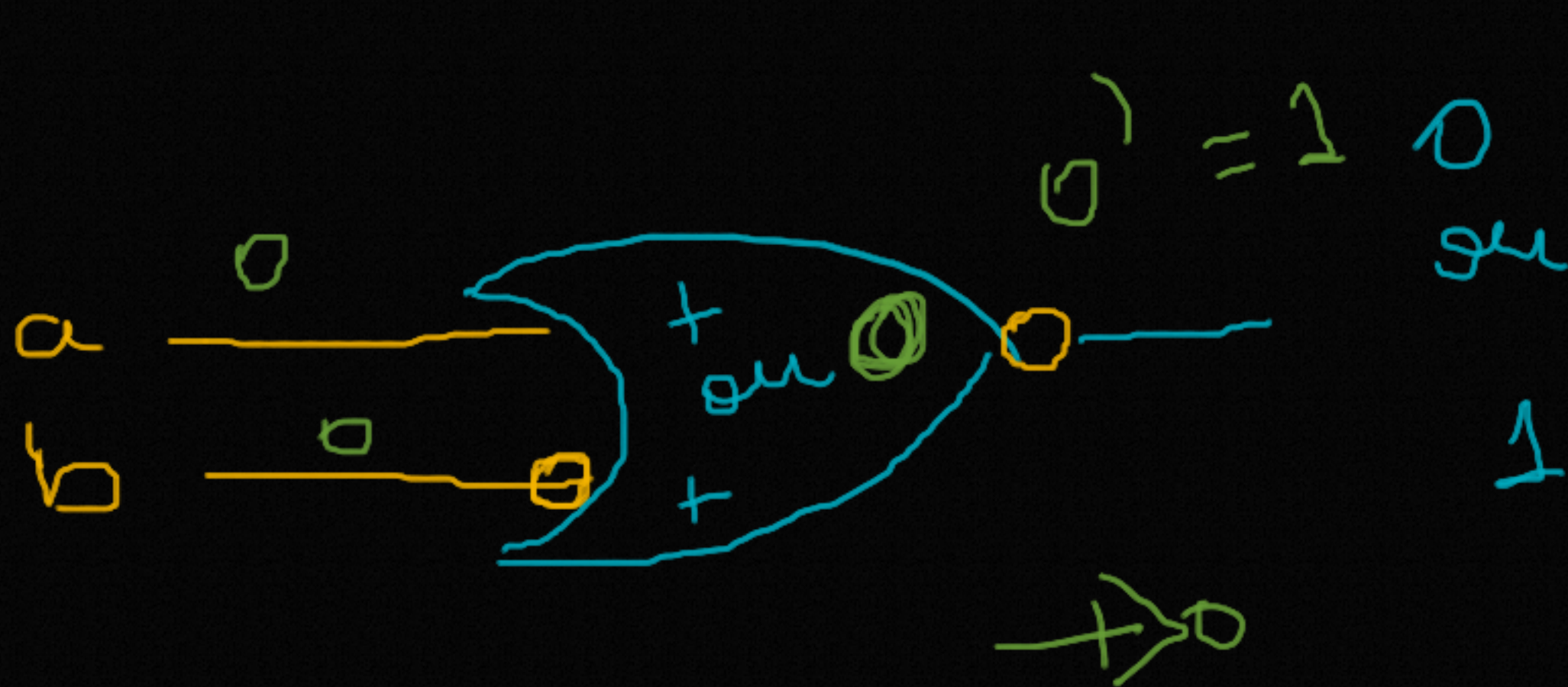
$$a + b$$

$$a = 1$$

$$b = 1$$



$$\underline{x = (a + \bar{b}) \Leftrightarrow (a + b')' = (0 + 0)' = (0)'} \quad \begin{matrix} 1 \\ 1 \end{matrix}$$



$$a = 0$$

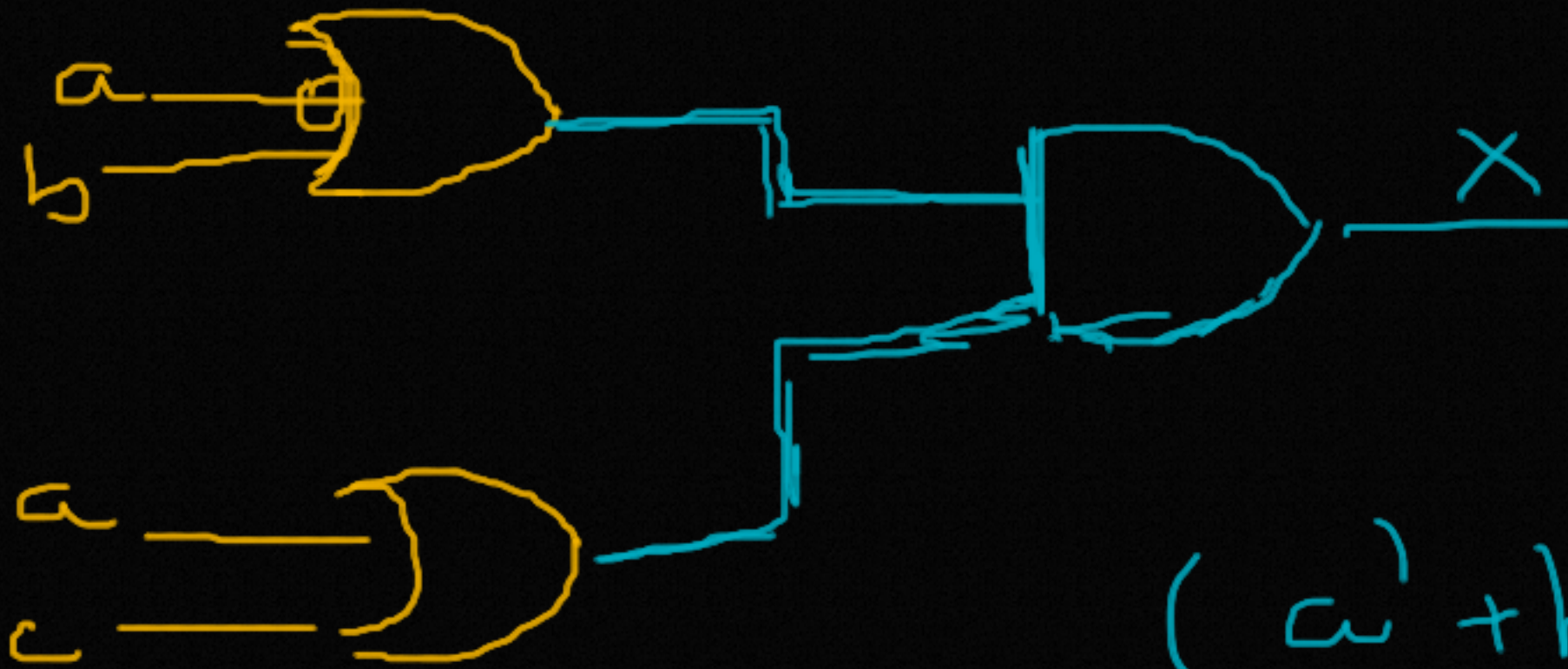
$$b = 1 \quad b' = 0$$





$$x = (a' + b) \cdot (a + c)$$

AND + OR



$$(a' + b) \cdot (a + c)$$



$$x = (a' + b) \cdot (a + c)$$

