

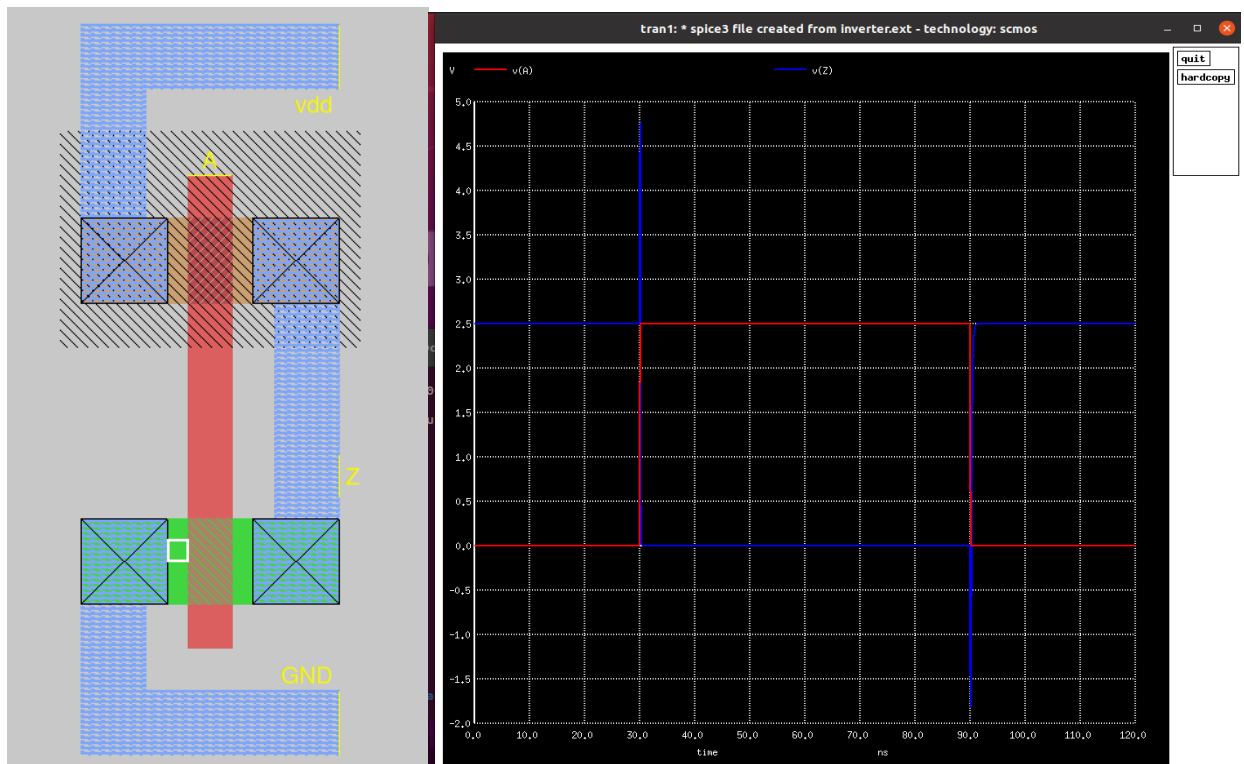
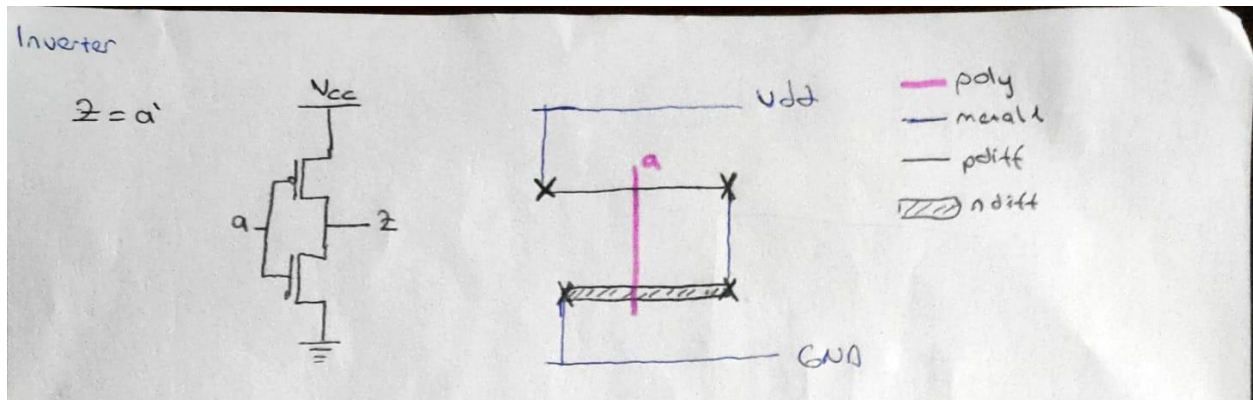
Fall 2021 CSE 436/536

DIGITAL INTEGRATED CIRCUITS

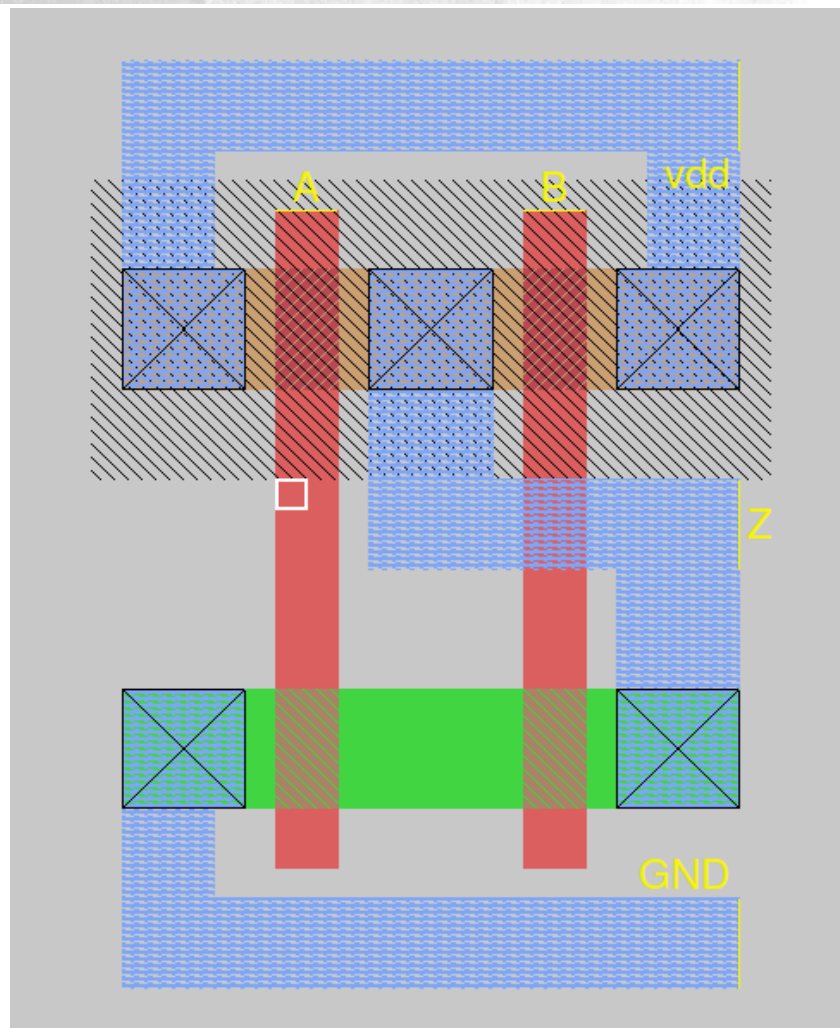
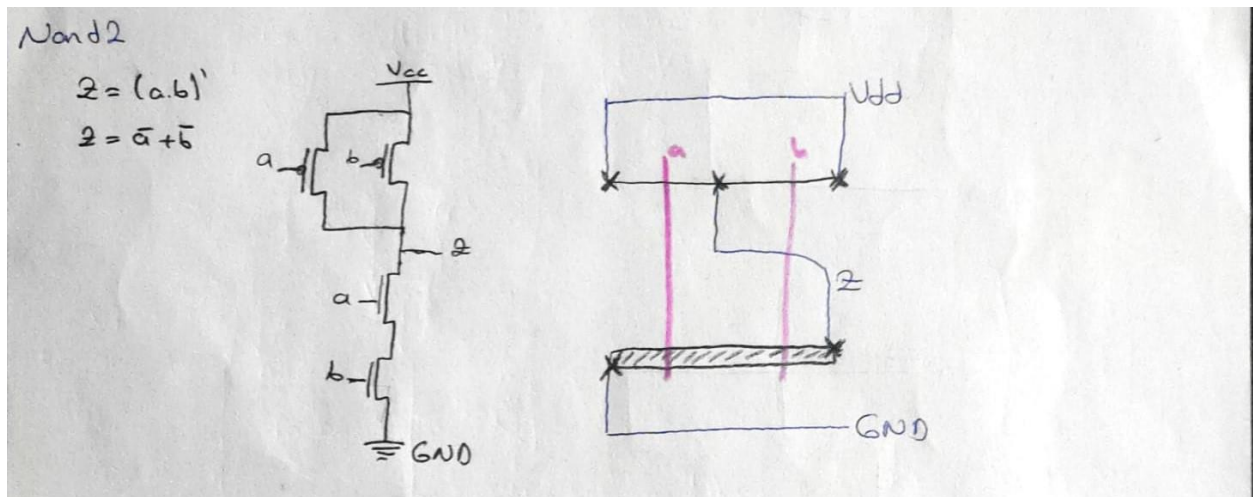
1801042103

OZAN GEÇKİN

## 1. Inverter



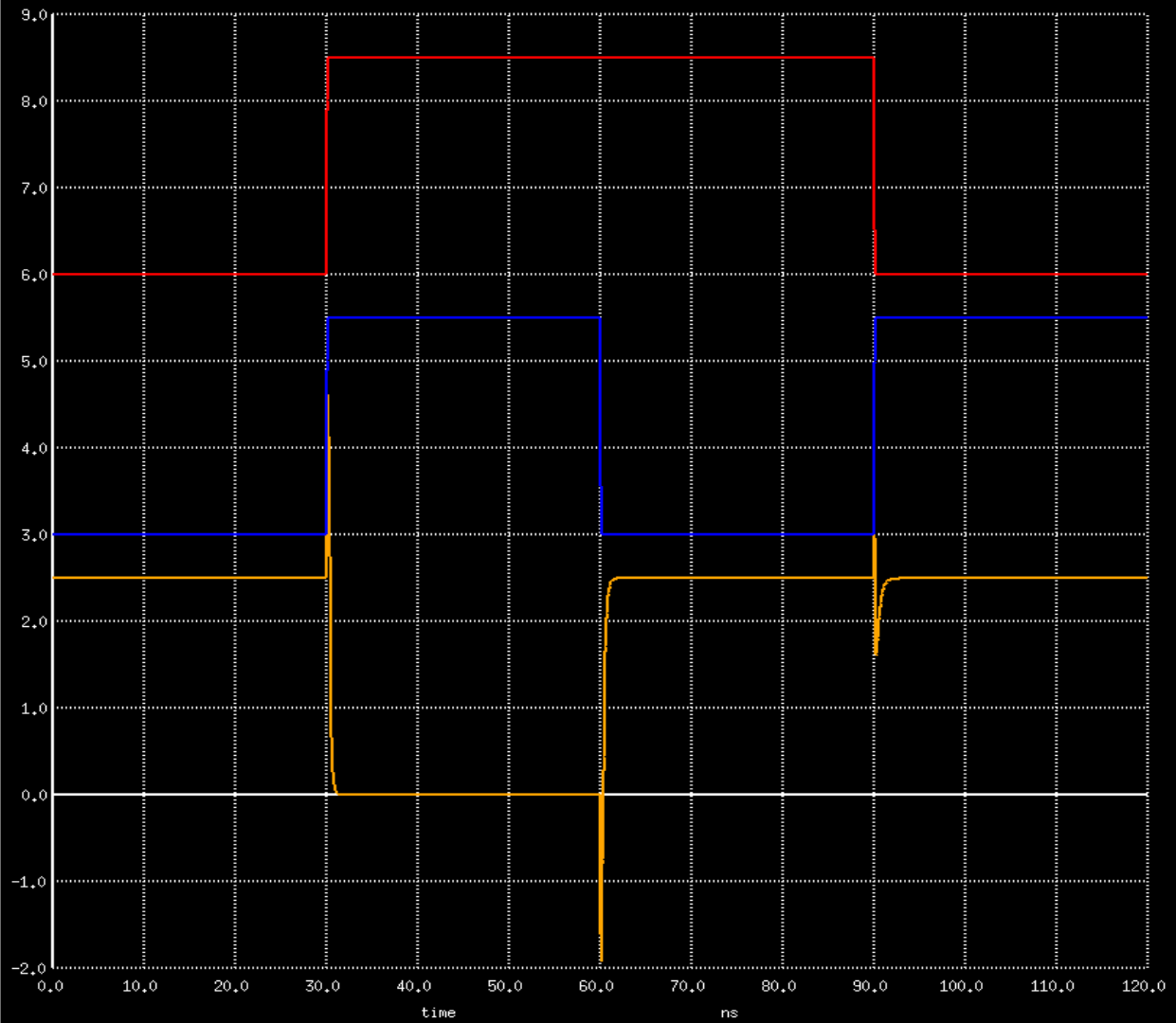
## 2.NAND2



tran1: \* spice3 file created from nand2.ext - technology: scmos

Units —  $v(B)+3$

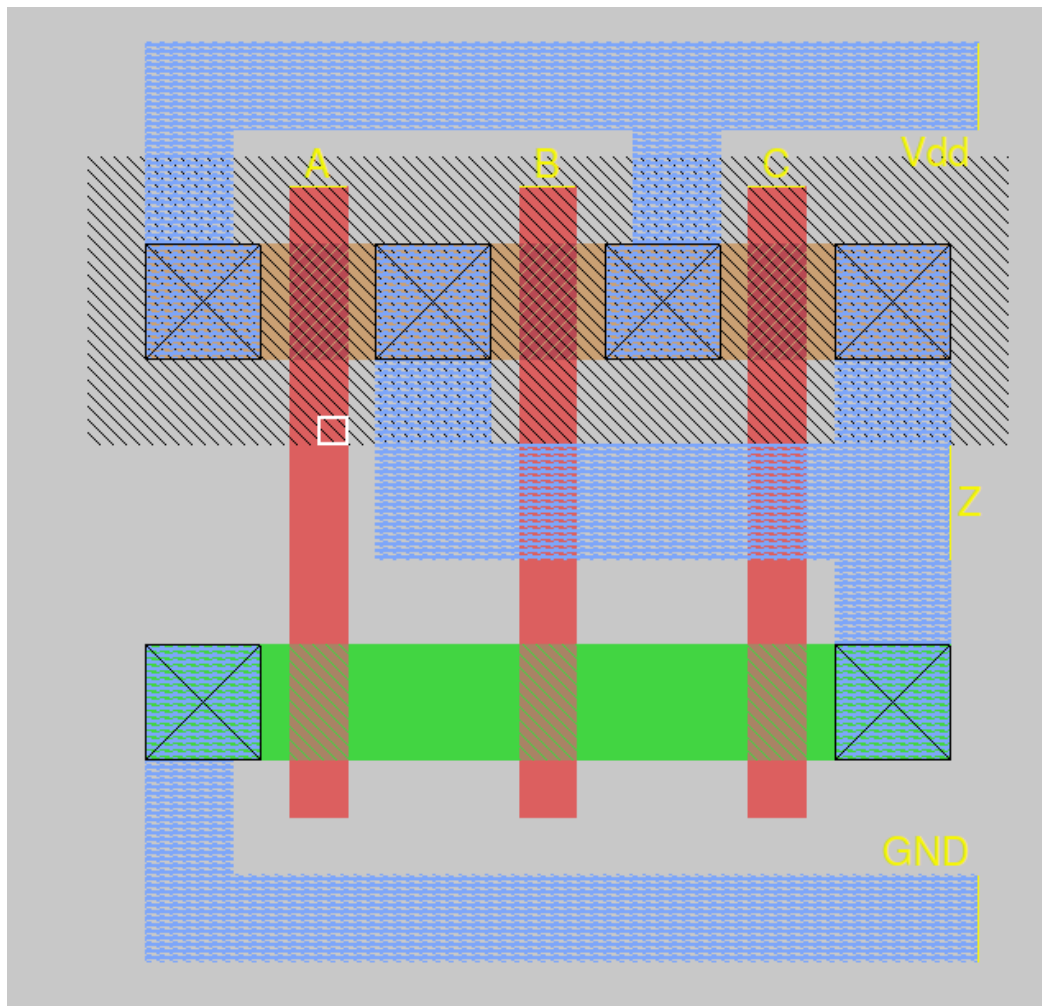
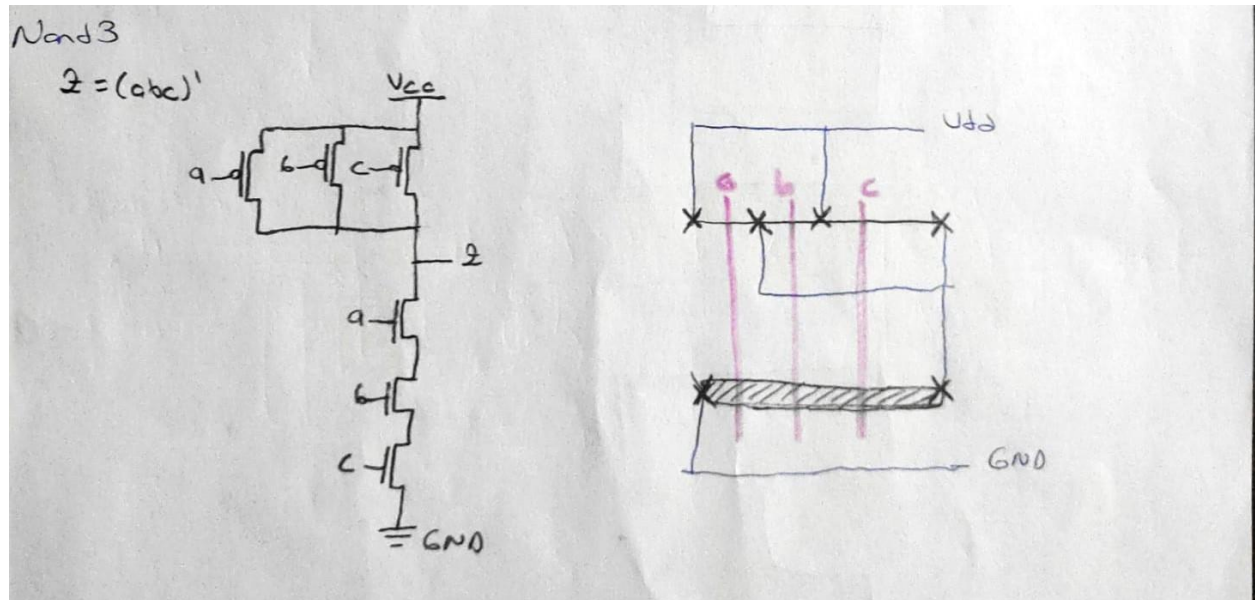
$v(z)$   
 $v(A)+6$

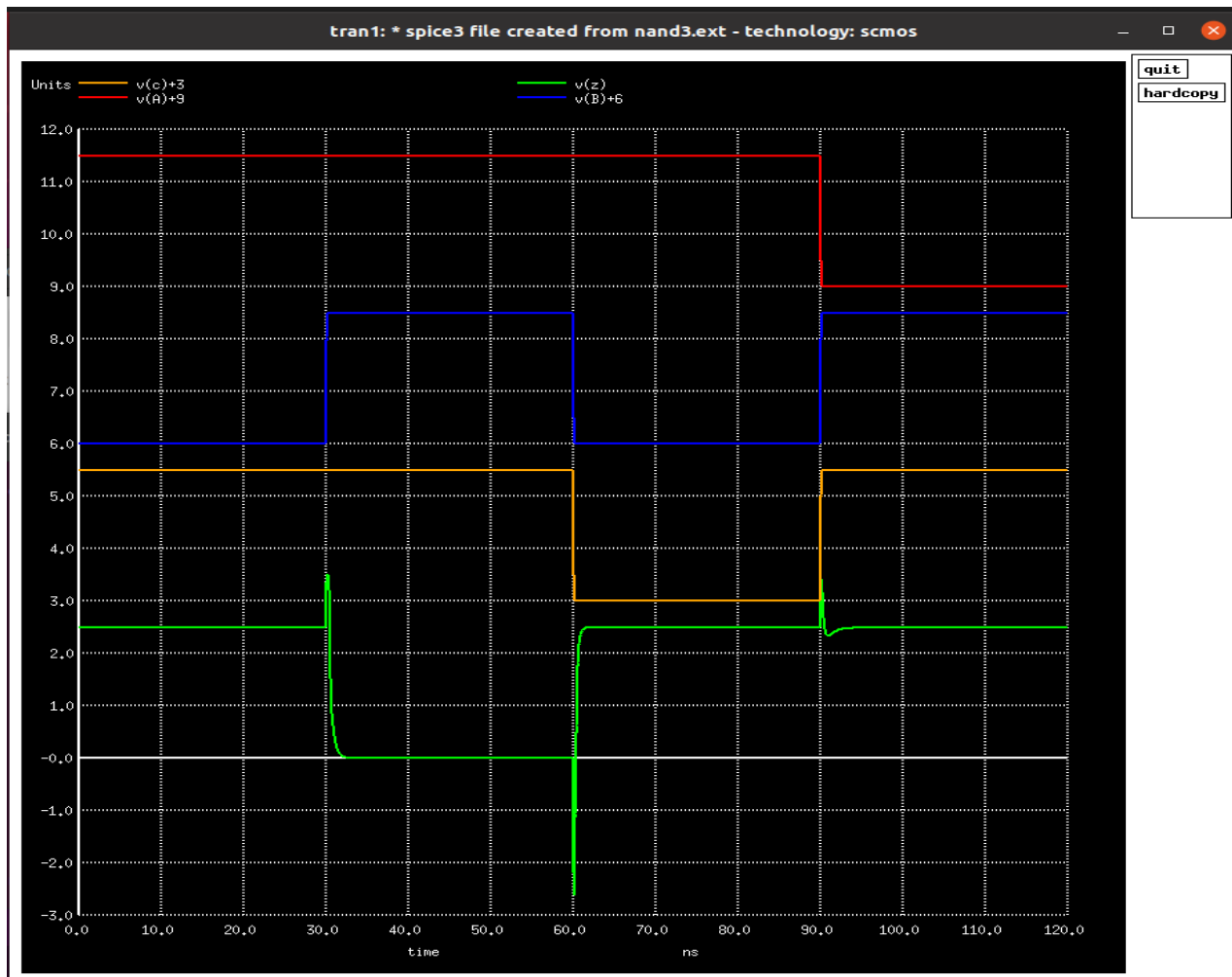


quit

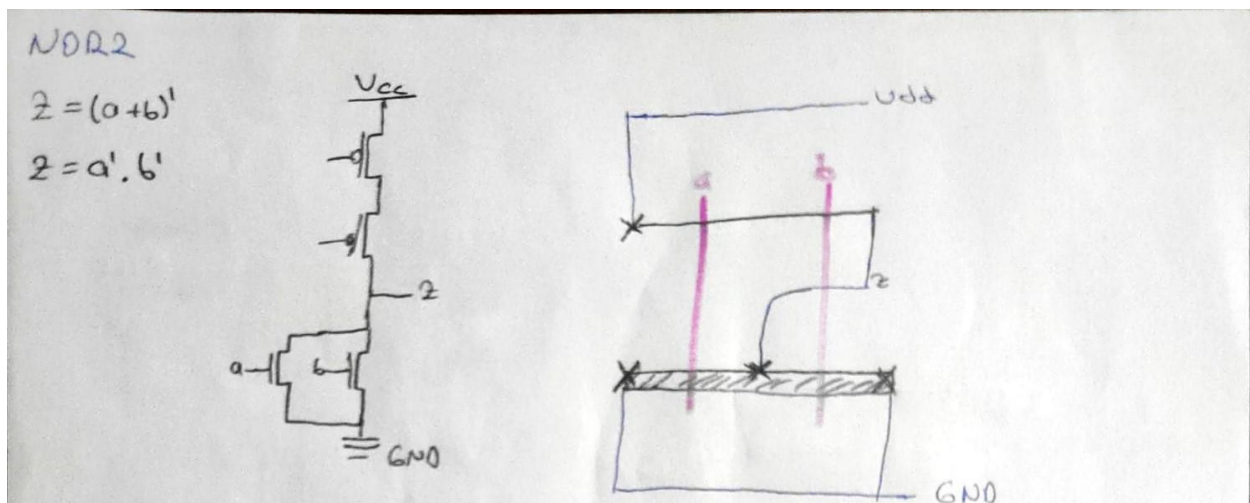
hardcopy

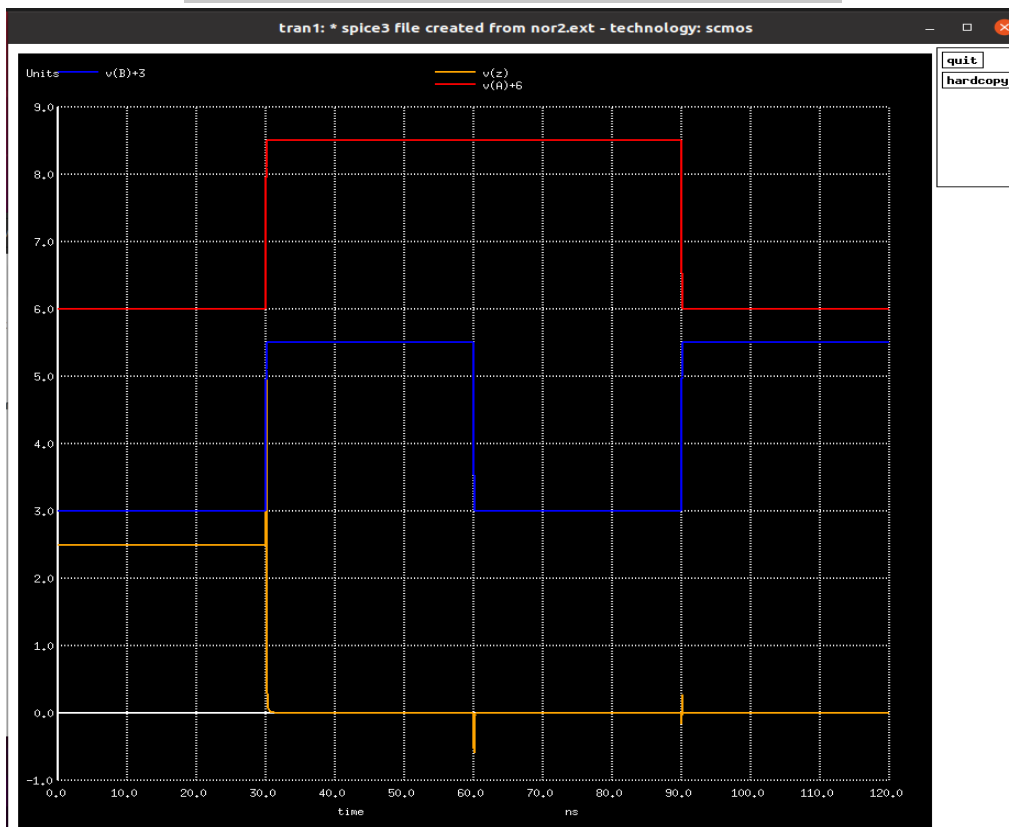
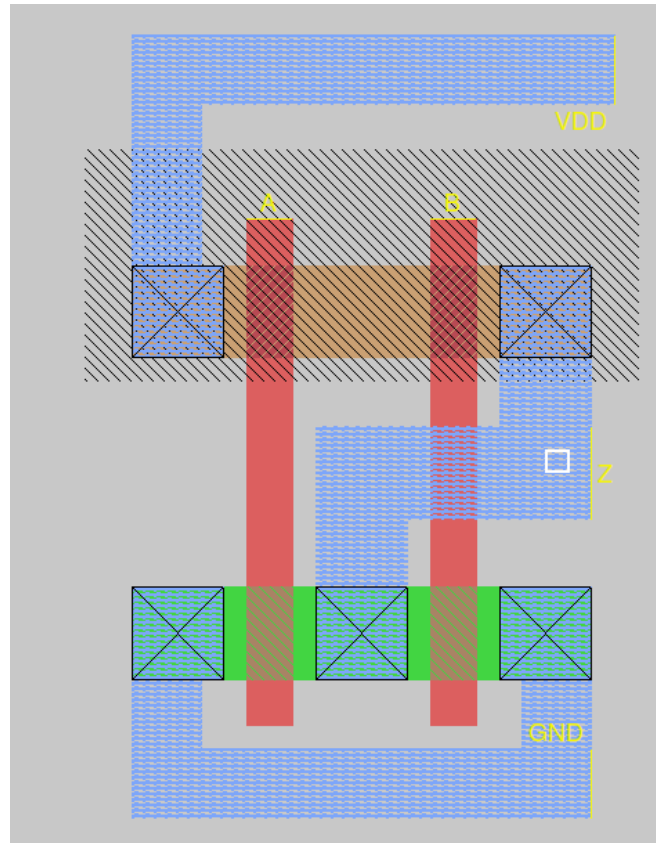
### 3.NAND3





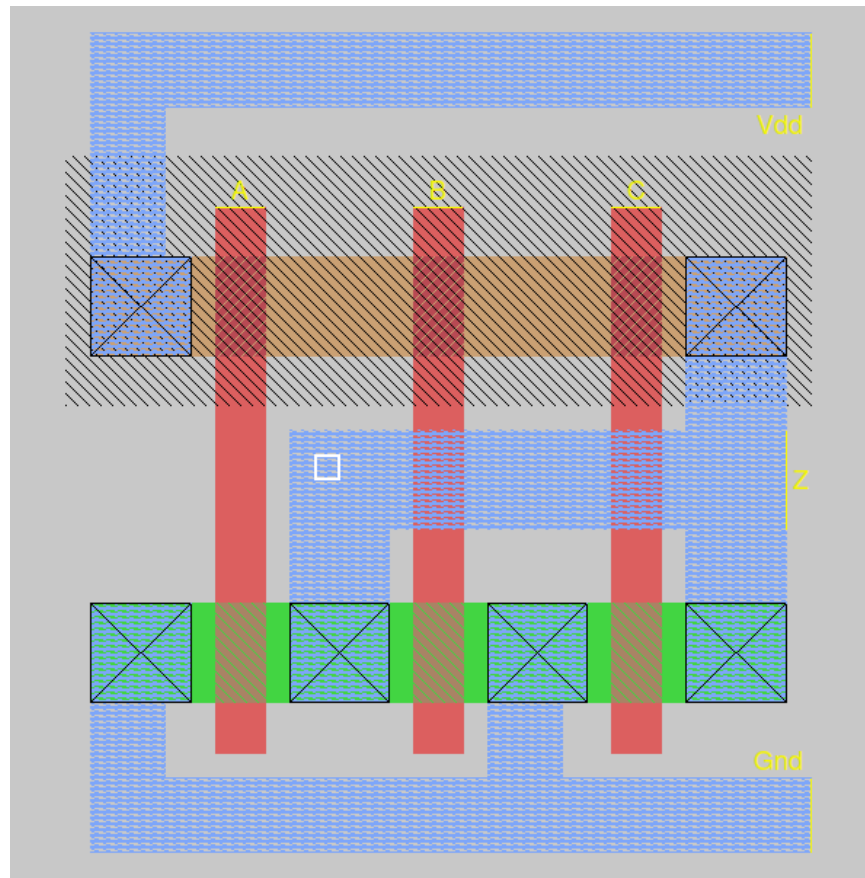
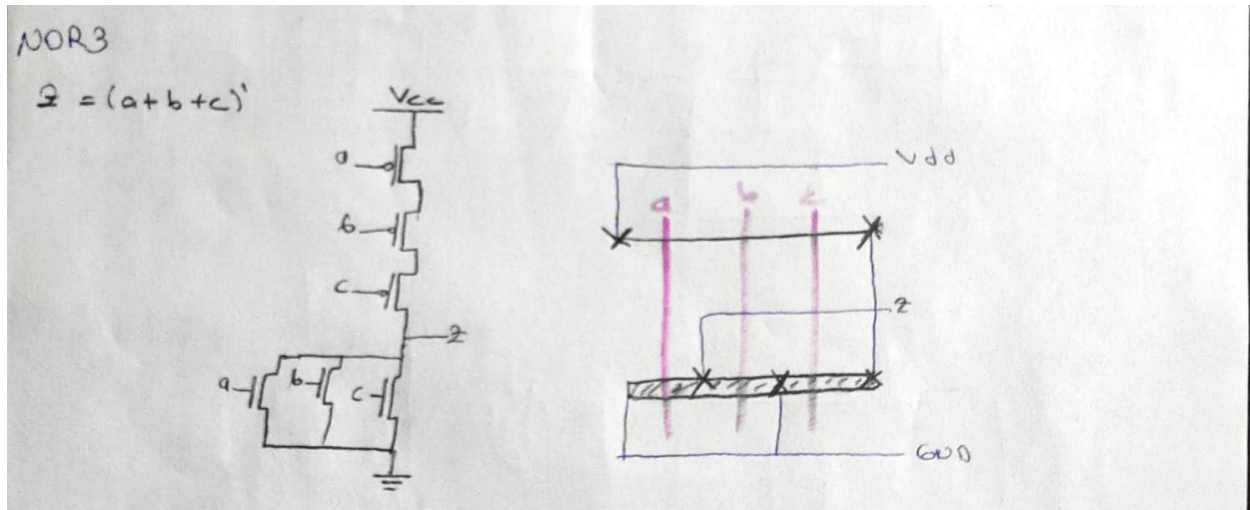
## 4.NOR2

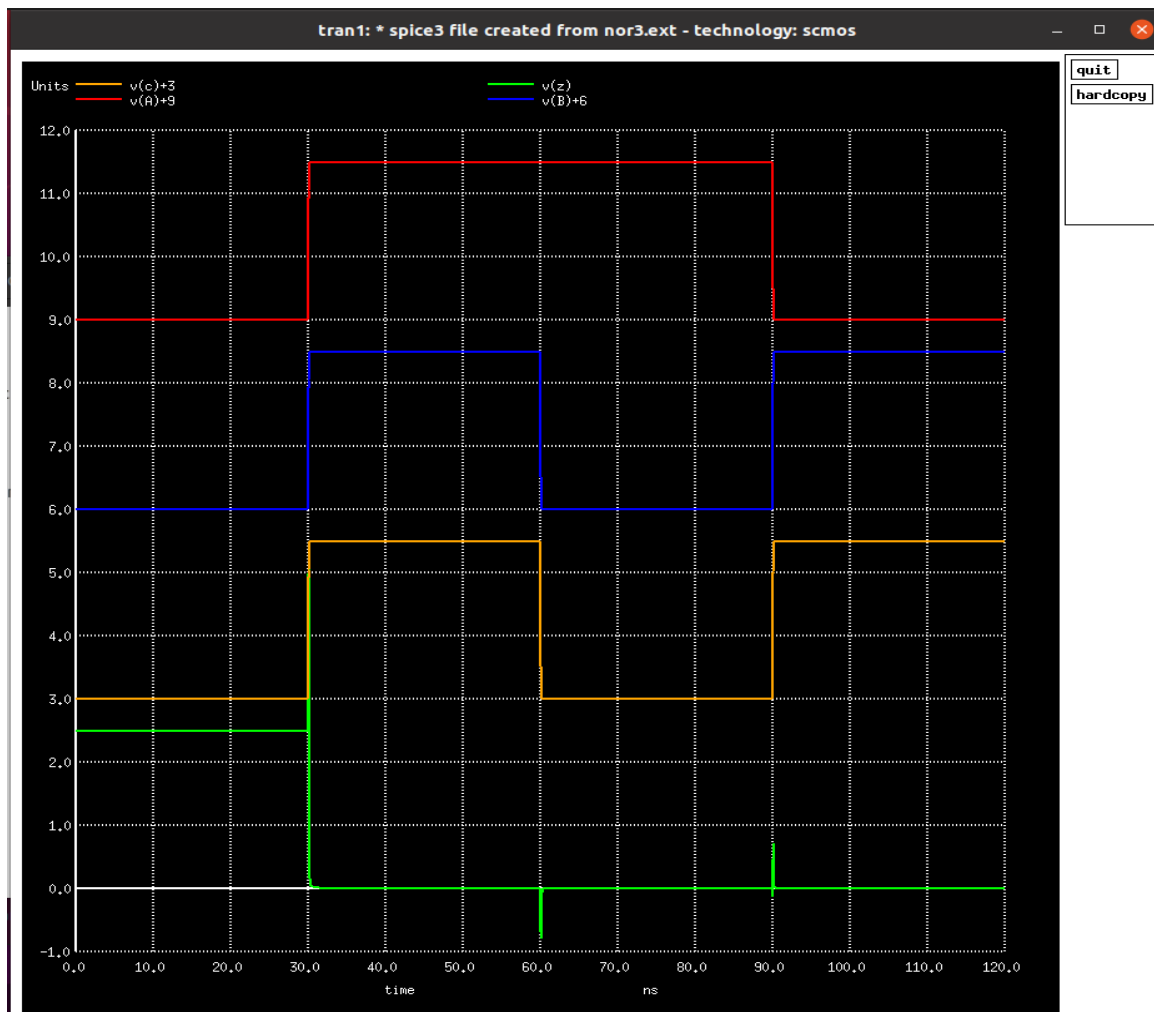




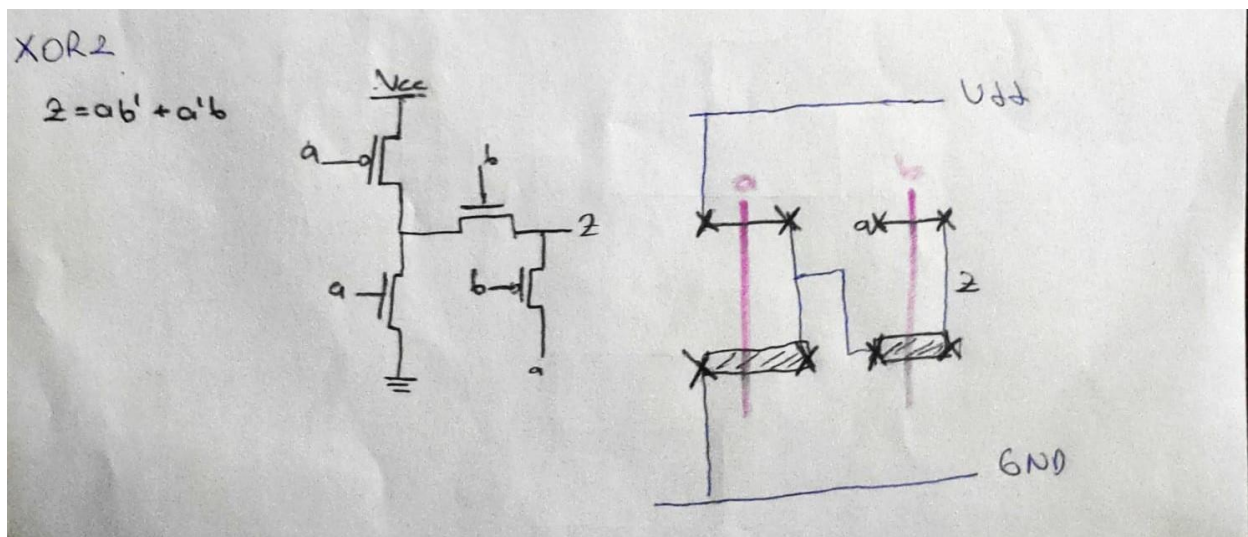


## 5.NOR3

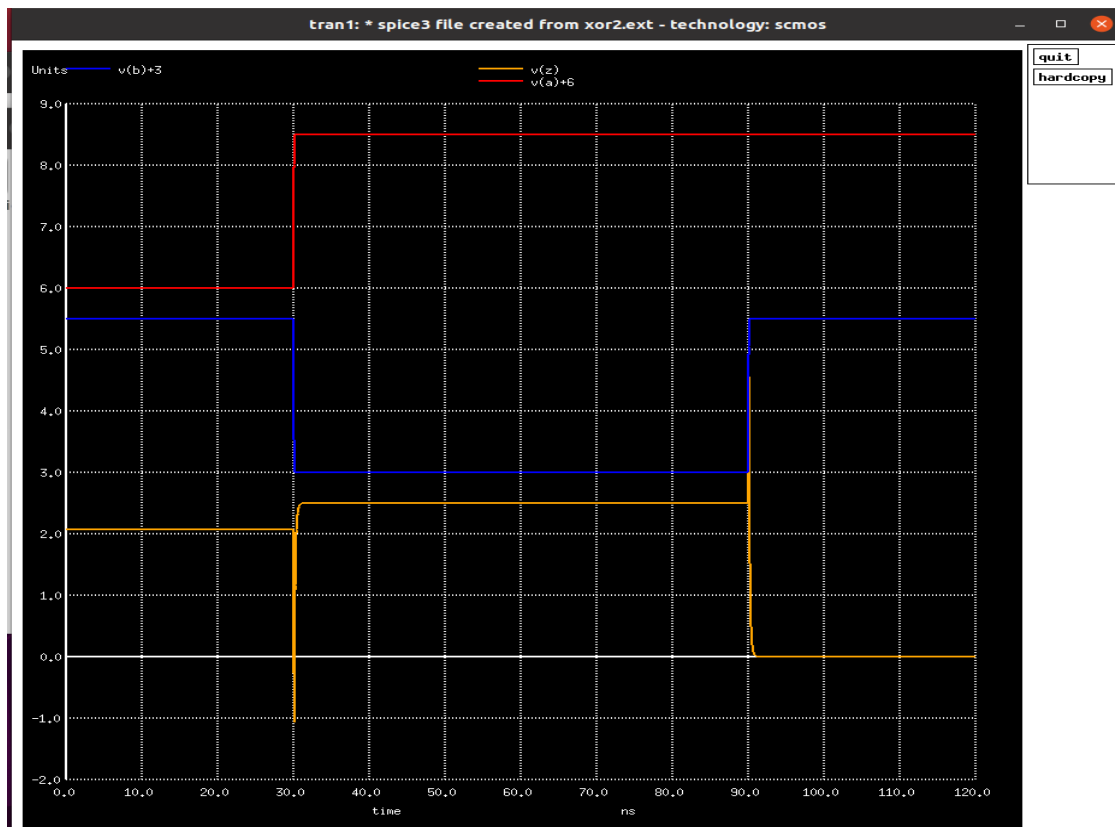
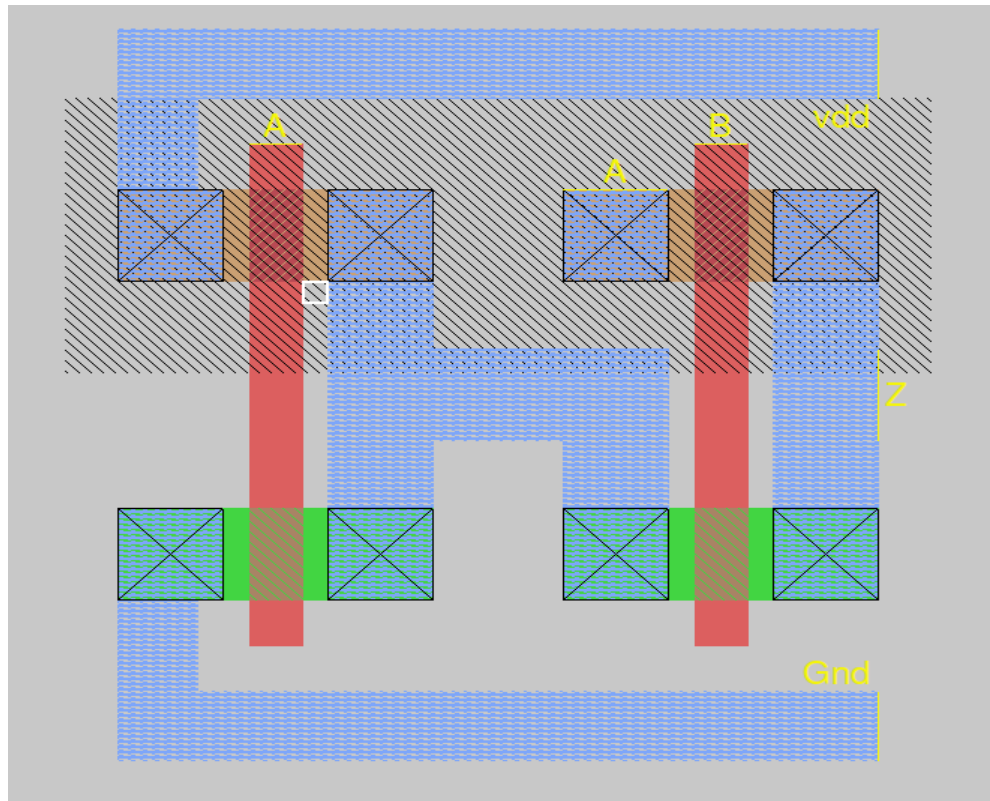




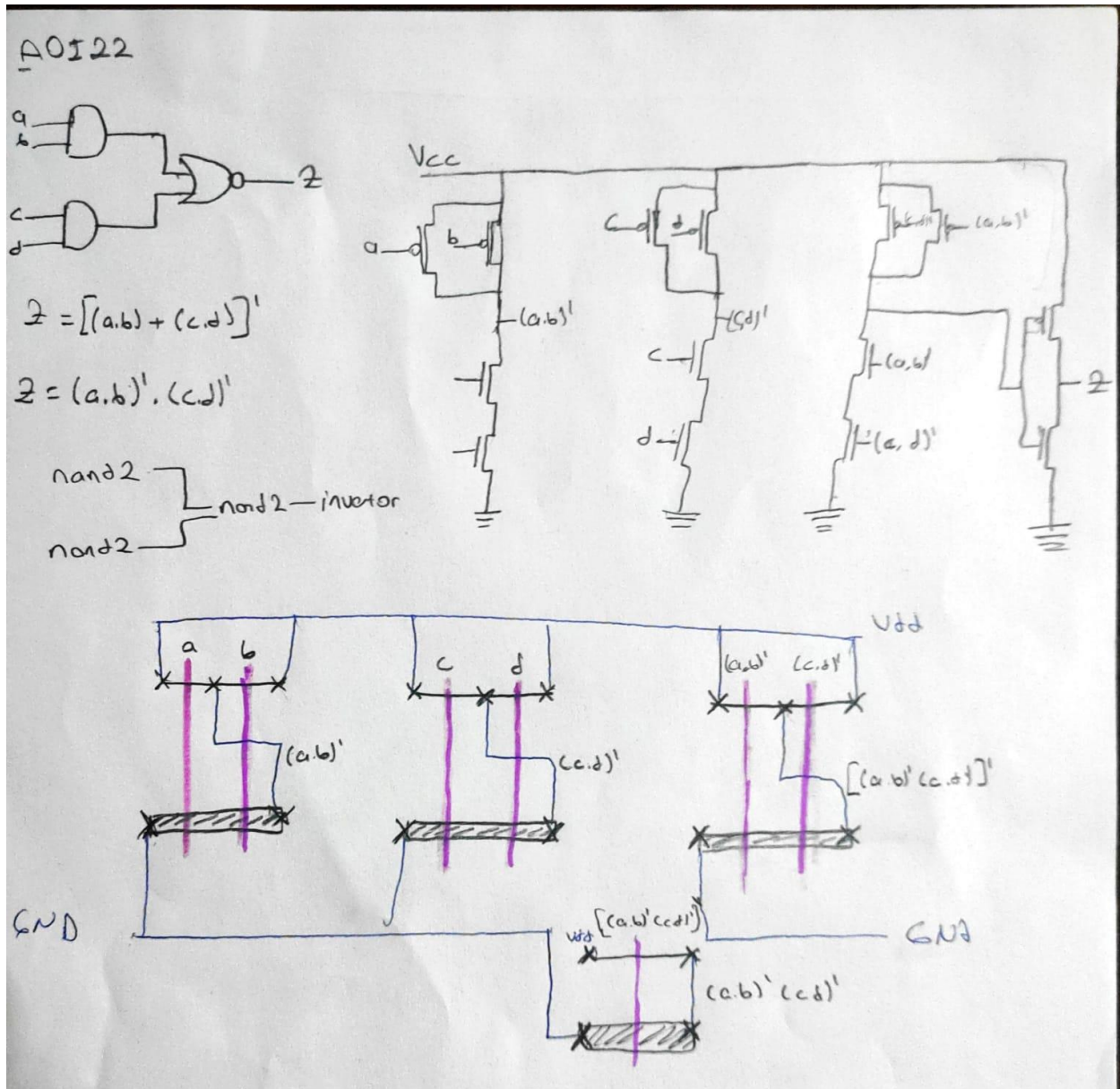
## 6.XOR2





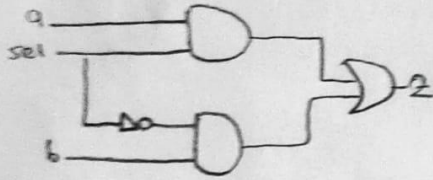


## 7.AOI22



## 8.MUX2x1

MUX 2x1



$$(a \cdot sel) + (sel' \cdot b) = z$$

$$[(a \cdot sel)' \cdot (sel' \cdot b)']' = z$$

