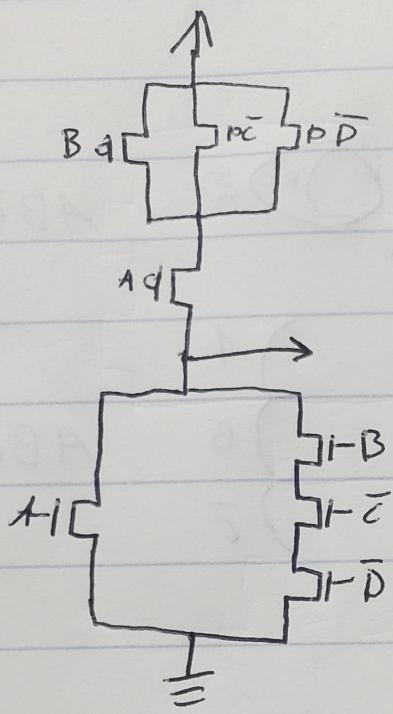


$$4. f = \overline{A + (\overline{B} + CD)} \rightarrow \overline{A + \overline{B}\overline{C}\overline{D}} \rightarrow \overline{\overline{A} + B\overline{C}\overline{D}}$$

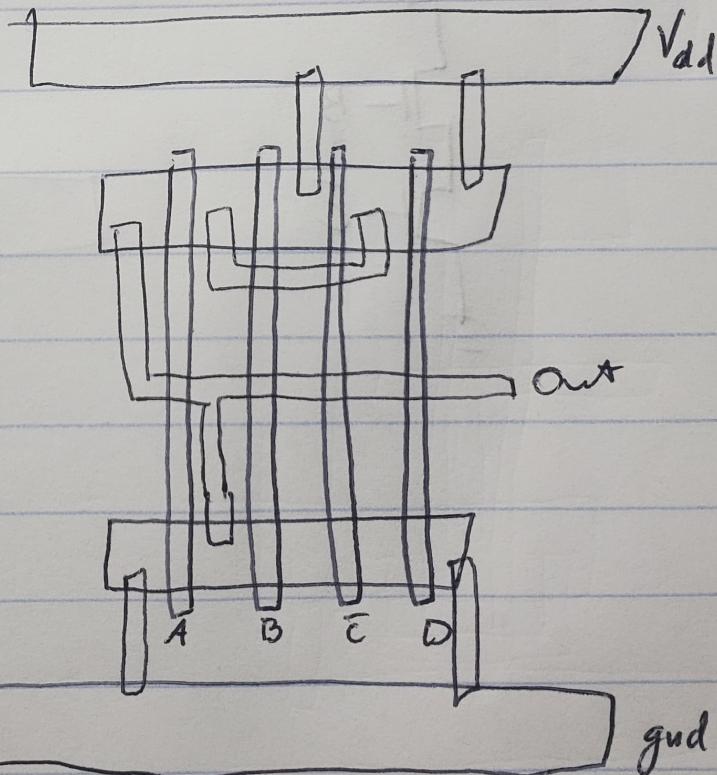


$$\overline{B} + \overline{C}\overline{D}$$

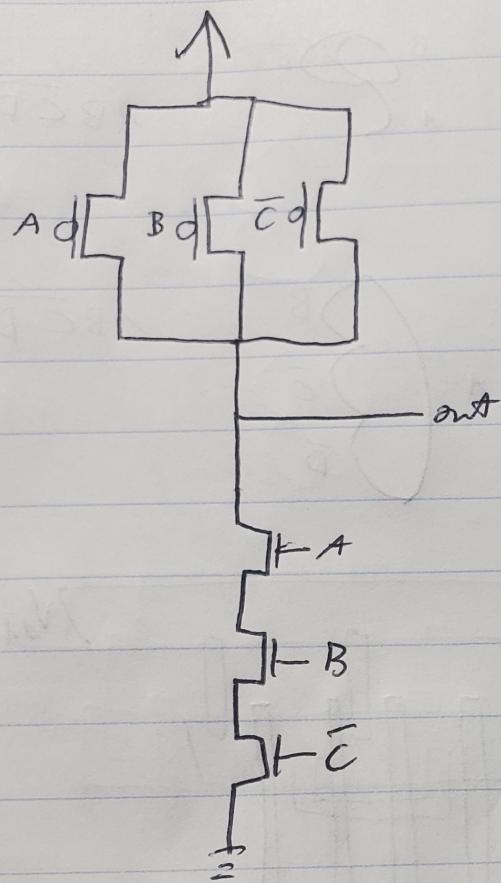
$$AB\overline{C}\overline{D}$$

$$\overline{B}$$

$$AB\overline{C}\overline{D}$$

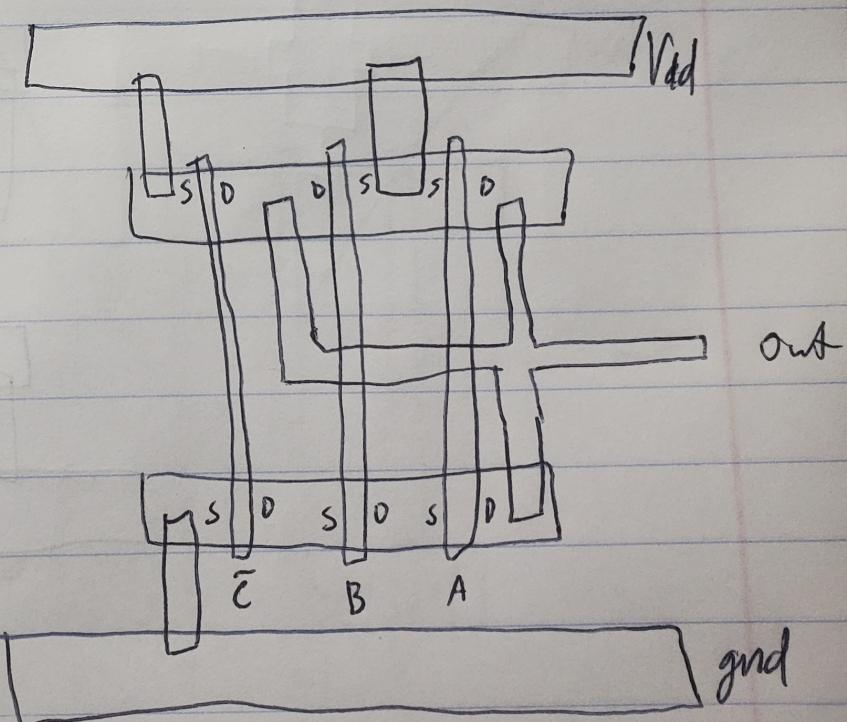


$$S. f = (\overline{A} + \overline{B}C) \rightarrow \overline{\overline{A} + \overline{B}C} \rightarrow \overline{\overline{A}\overline{B}\overline{C}} \rightarrow \overline{ABC}$$

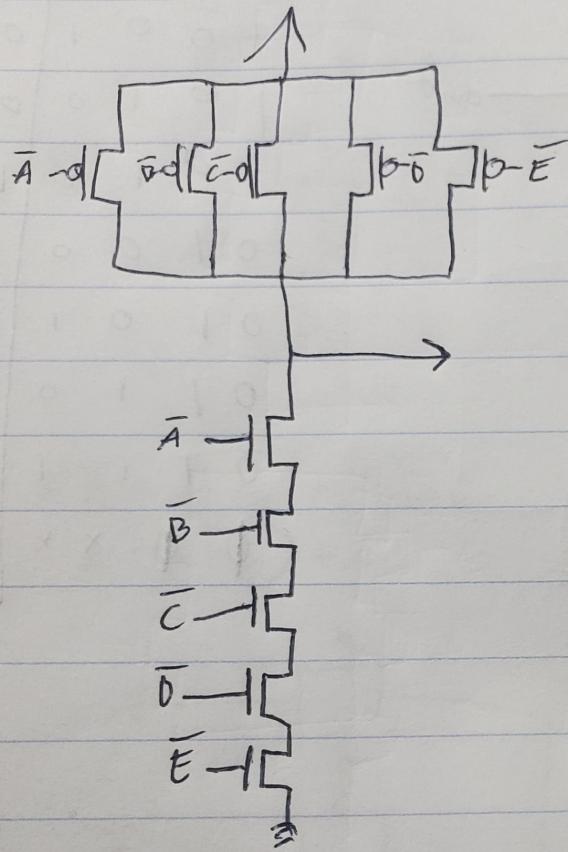


$$A \text{ } \textcircled{B} \text{ } \in \text{ } ABC$$

$$\begin{cases} A \\ B \\ \bar{C} \end{cases} \quad ABC$$



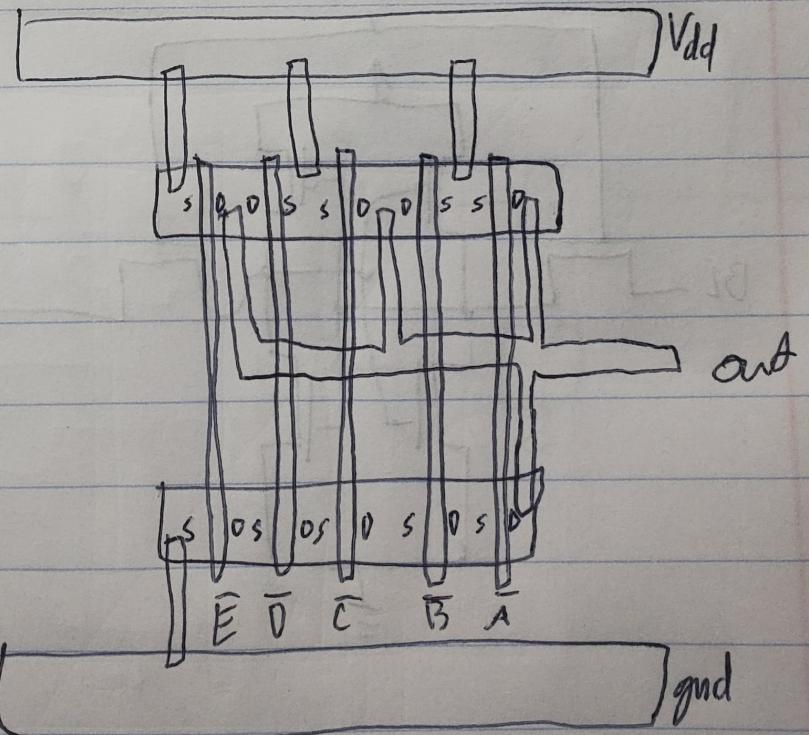
$$1. \quad f = A(B+D)(C+E) \rightarrow \overline{A} \overline{(B+D)}(C+E) \rightarrow \overline{\overline{A}} \overline{B} \overline{D} C \overline{E}$$



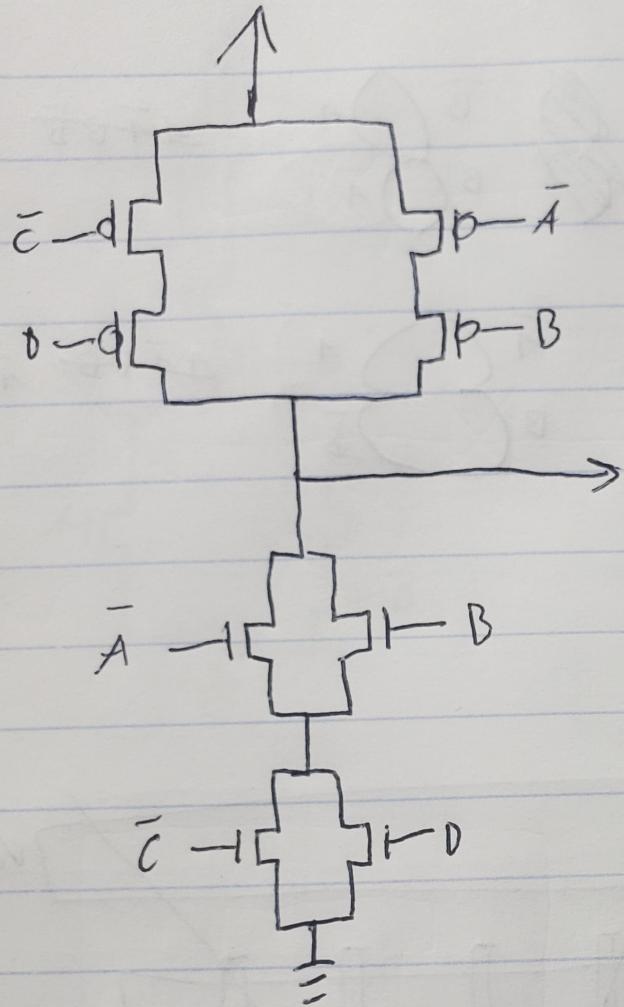
$$4 \quad \textcircled{B} \textcircled{D} \bar{E} \quad \bar{A} \bar{B} \bar{C} \bar{D} \bar{E}$$

$\bar{A}$   
 $\bar{B}$   
 $\bar{C}$   
 $\bar{D}$   
 $\bar{E}$

$$\bar{A} \bar{B} \bar{C} \bar{D} \bar{E}$$

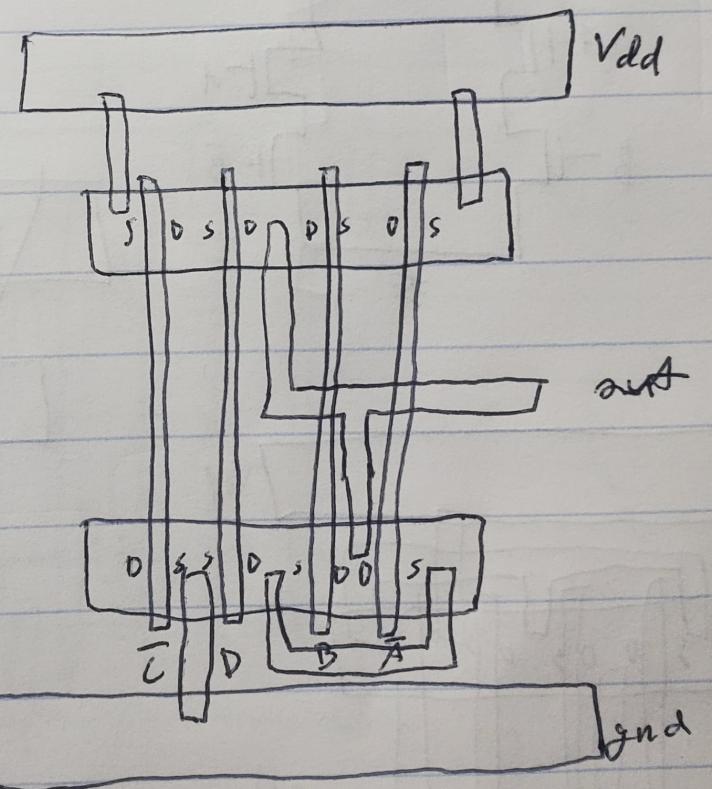


$$f = \overline{(\bar{A} + B)(\bar{C} + D)}$$



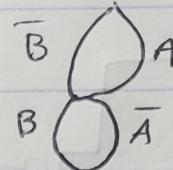
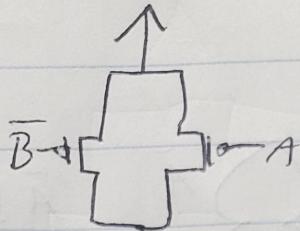
$$\begin{matrix} \bar{C} \\ 0 \end{matrix} \otimes \begin{matrix} \bar{A} \\ B \end{matrix} = \bar{A}B$$

$$\begin{matrix} \bar{C} \\ 0 \end{matrix} \otimes \begin{matrix} \bar{A} \\ B \end{matrix} = \bar{A}B\bar{D}\bar{C}$$

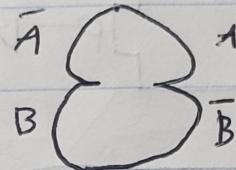
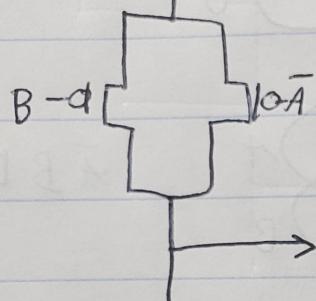


$$3. f = \bar{A}B + A\bar{B} \rightarrow \cancel{\bar{A}B + A\bar{B}} \quad \bar{A}B + A\bar{B} \rightarrow \overline{\bar{A}B} + \overline{A\bar{B}}$$

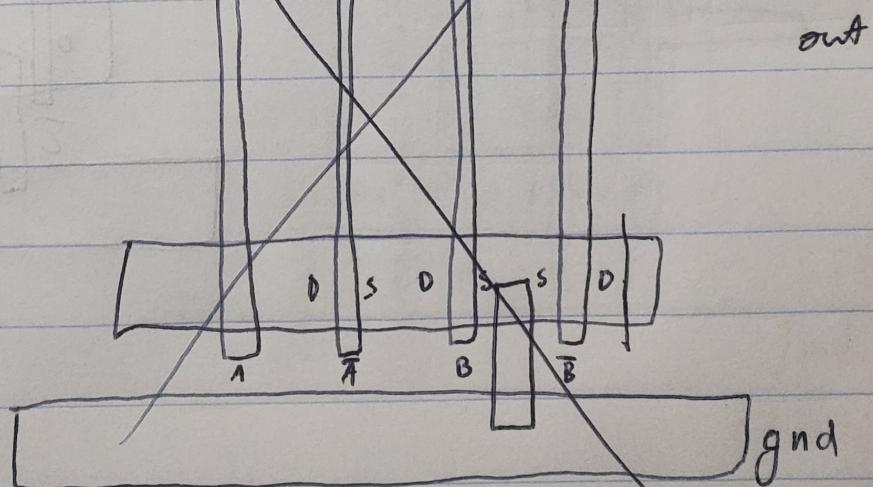
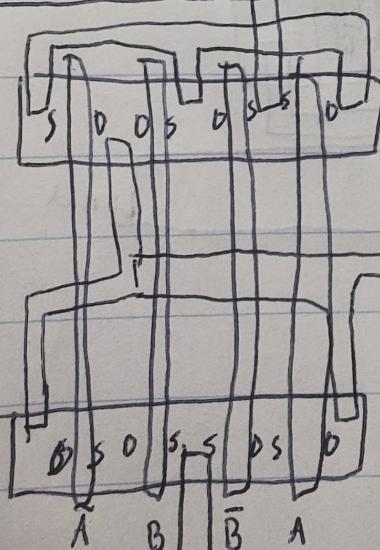
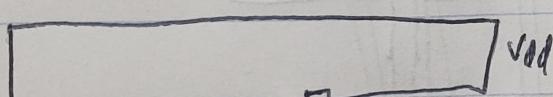
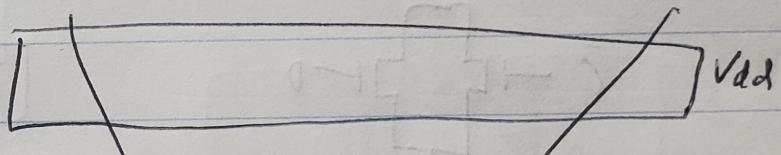
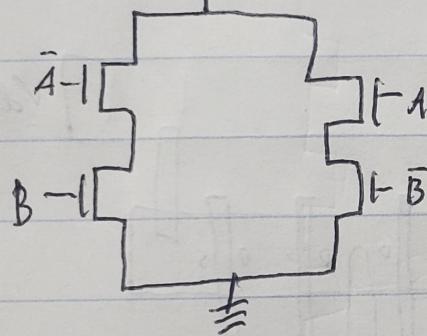
$$\Rightarrow \overline{AB} + \overline{A}\overline{B}$$



$A\bar{A}B\bar{B}$   $\bar{A}B\bar{B}1$



$\bar{A}\bar{A}B\bar{B}$   $\bar{A}B\bar{B}1$



gnd

gnd

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