

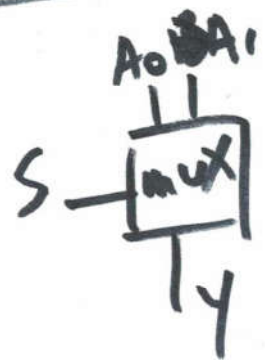
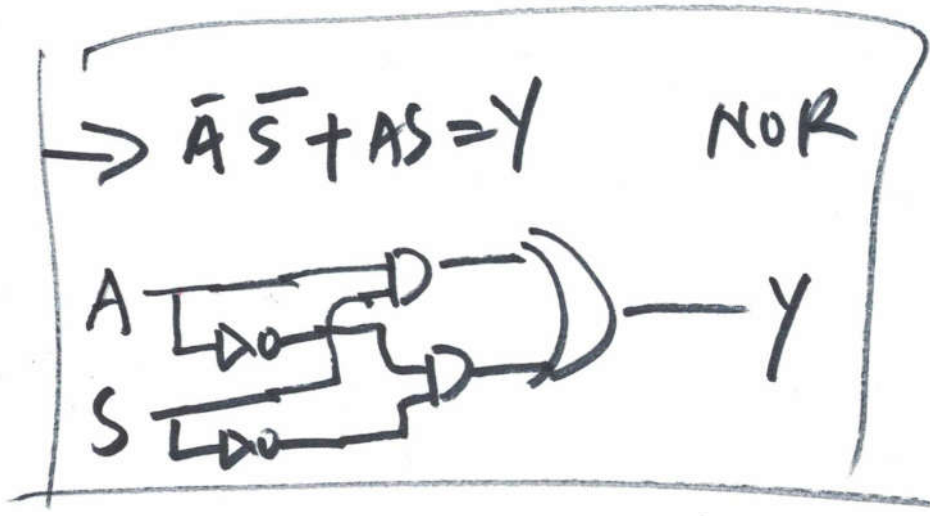
$A, B$  MUX  
 $S$   $\rightarrow$   $\oplus$   
 $\oplus$  2-1 MUX

①

$S=0, \bar{A}$   
 $S=1, \bar{A}$

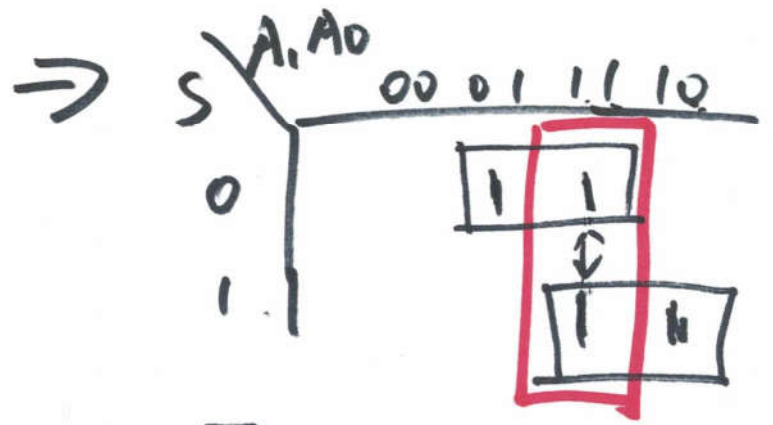
A	S	Y
0	0	0
0	1	1
1	0	0
1	1	1

$\bar{A}S + A\bar{S} = Y$

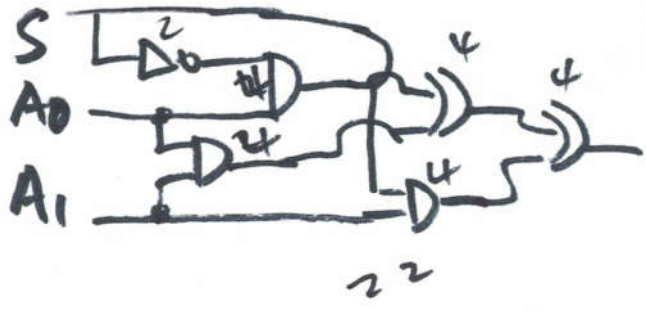


S	A <sub>0</sub>	A <sub>1</sub>	Y
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	1
1	1	1	1

K-map



$Y = \bar{S}A_0 + SA_1 + A_1A_0$

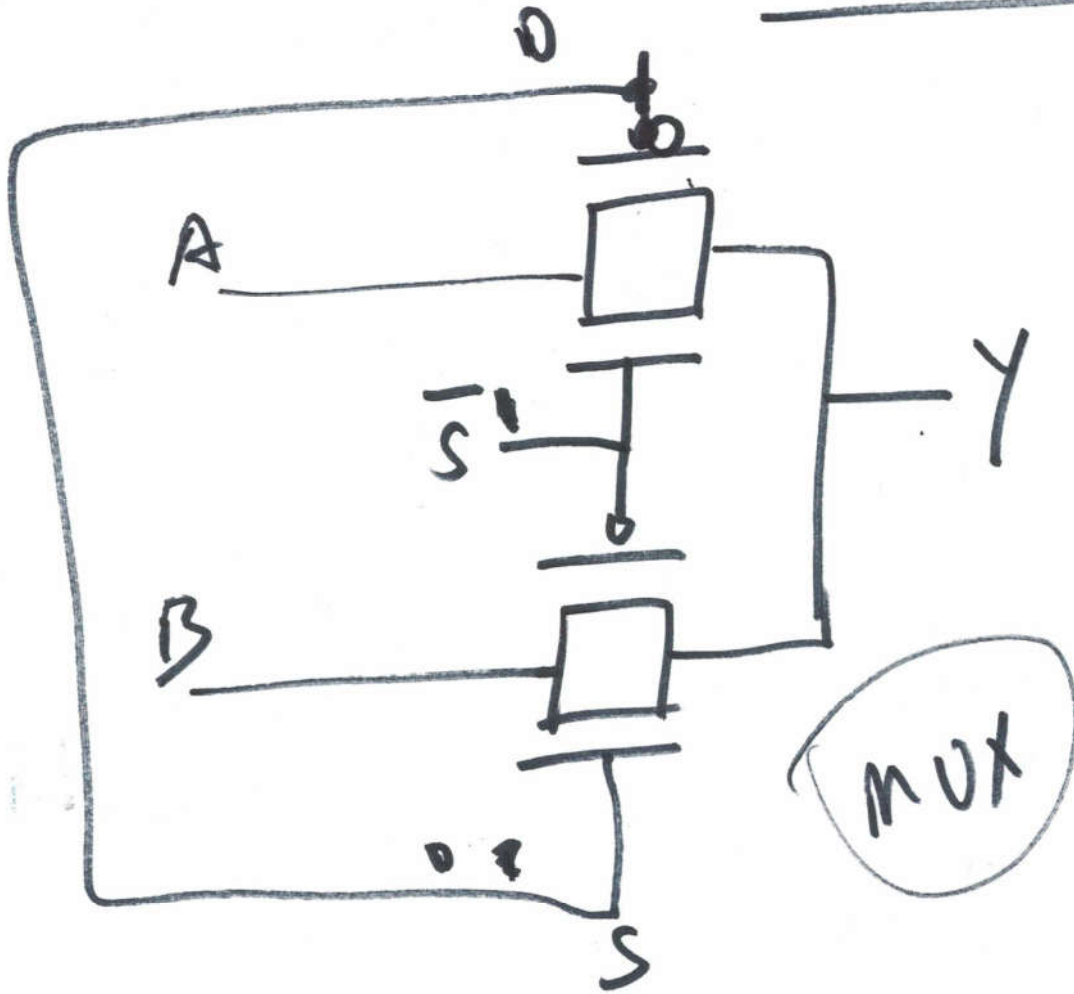


(2)

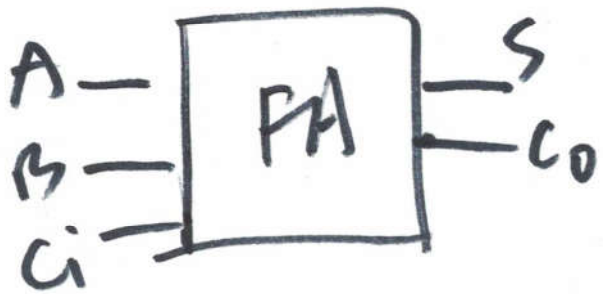
# MUX using TG (Transmission Gates)

4 Transistors

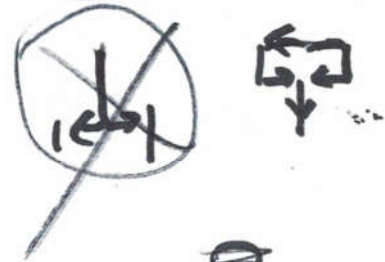
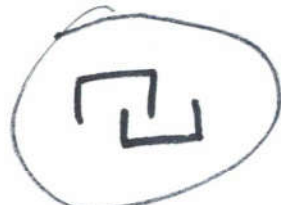
Pass Gates



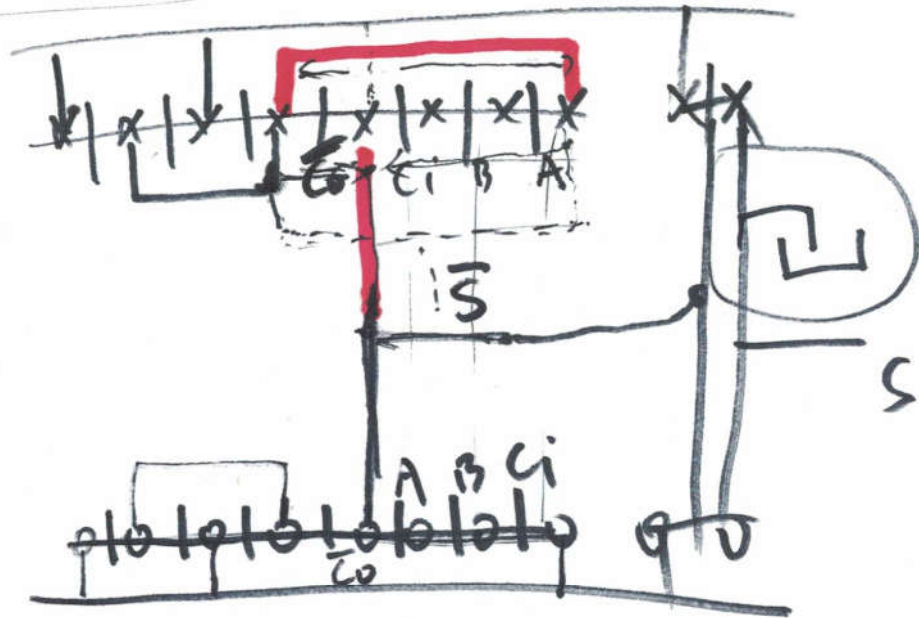
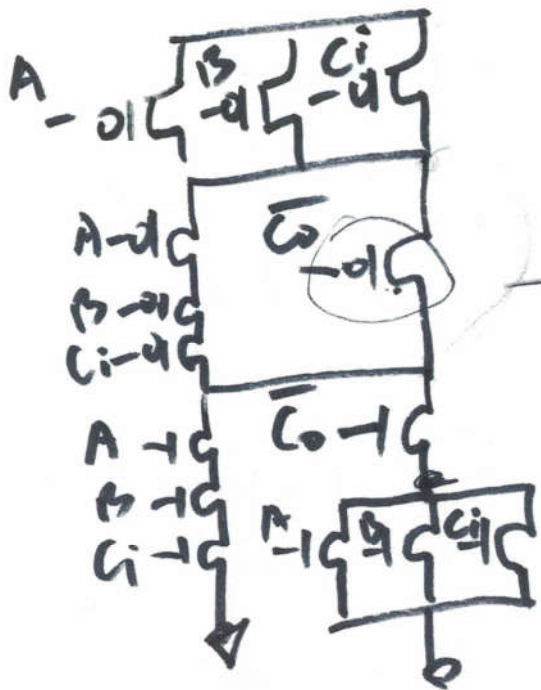
# High Speed PA

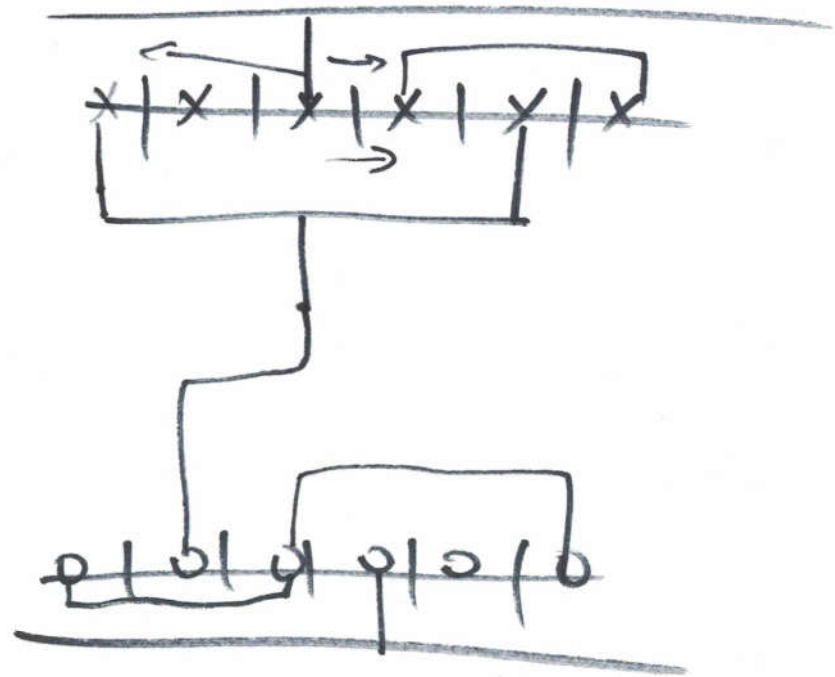
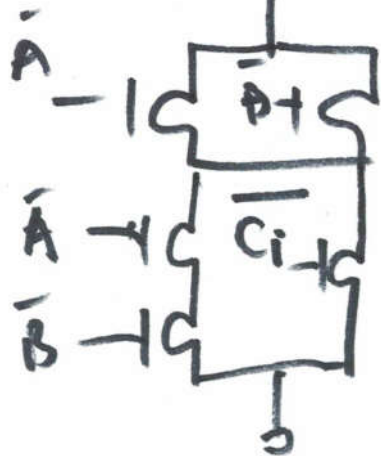
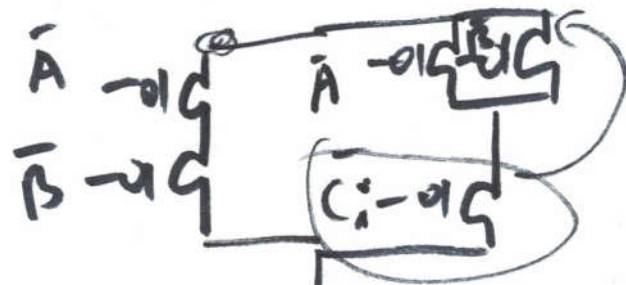


$$\begin{cases} S = A \oplus B \oplus C_i \\ C_o = (A+B)C_i + AB \end{cases}$$



$$\begin{cases} S = (A+B+C_i) \cdot \overline{C_o} + ABC_i \\ \overline{C_o} = (\overline{A+B}) \cdot (\overline{A \cdot B} + C_i) \end{cases}$$





~~5~~ 5