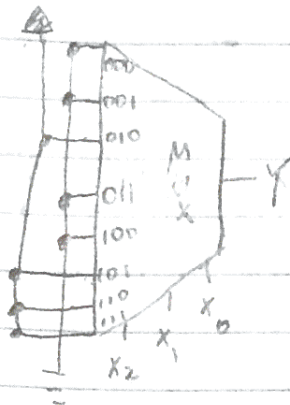
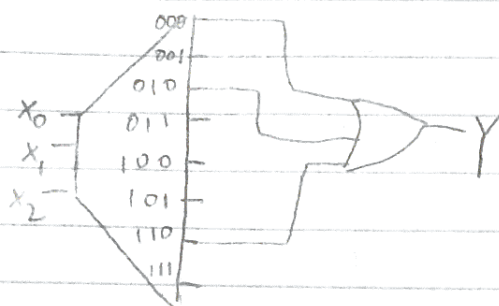


# Written HW #2

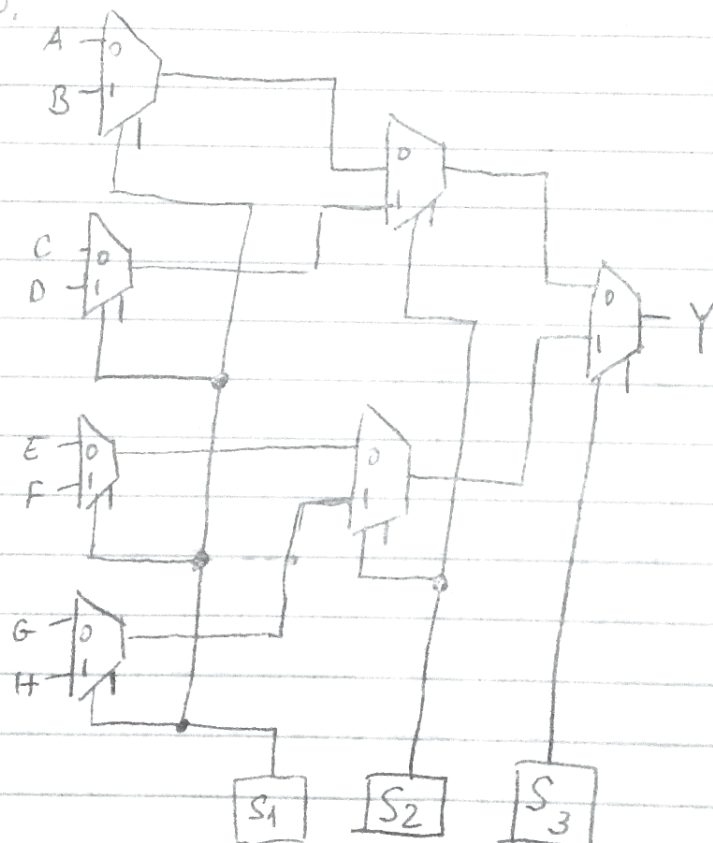
1.



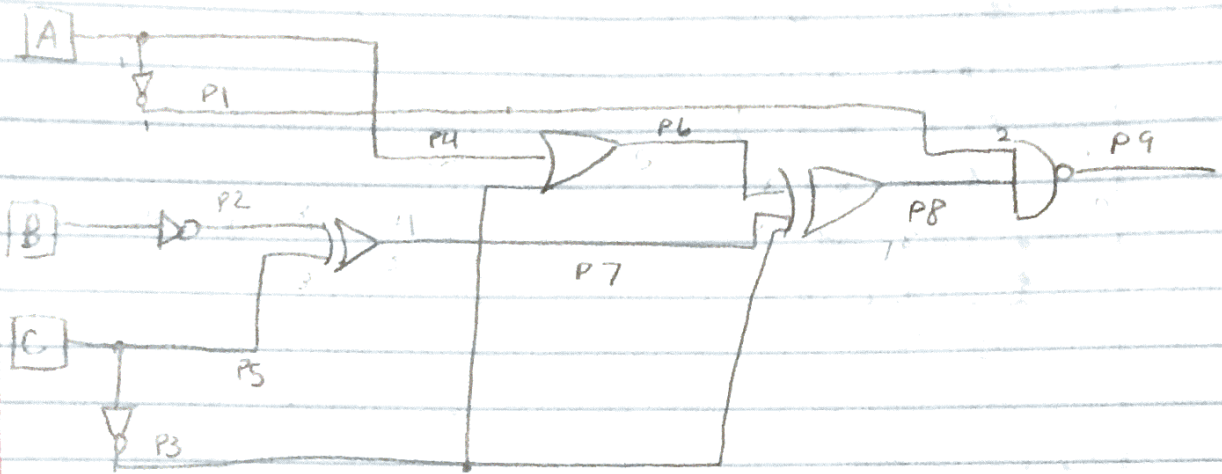
2.



3.



4.



$$P_1 = 1 \text{ ns} \quad P_2 = 1 \quad P_3 = 1 \quad P_4 = 0 \quad P_5 = 0 \quad P_6 = 6$$

$$P_7 = 4 \quad P_8 = 9 \quad P_9 = 11$$

$$5 \text{ XOR} = A \text{ ns}$$

$$\text{AND} = B \text{ ns} \rightarrow \text{worst case} = A + N(B+C)$$

$$\text{OR} = C \text{ ns}$$

ripple carry = chain of full adders

