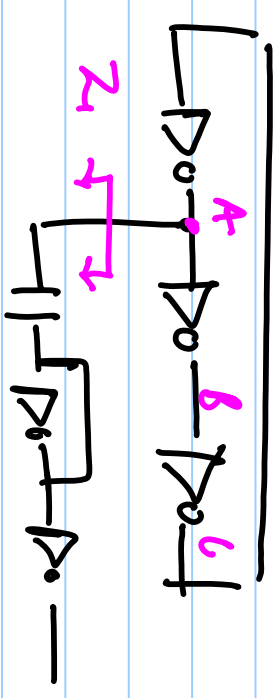
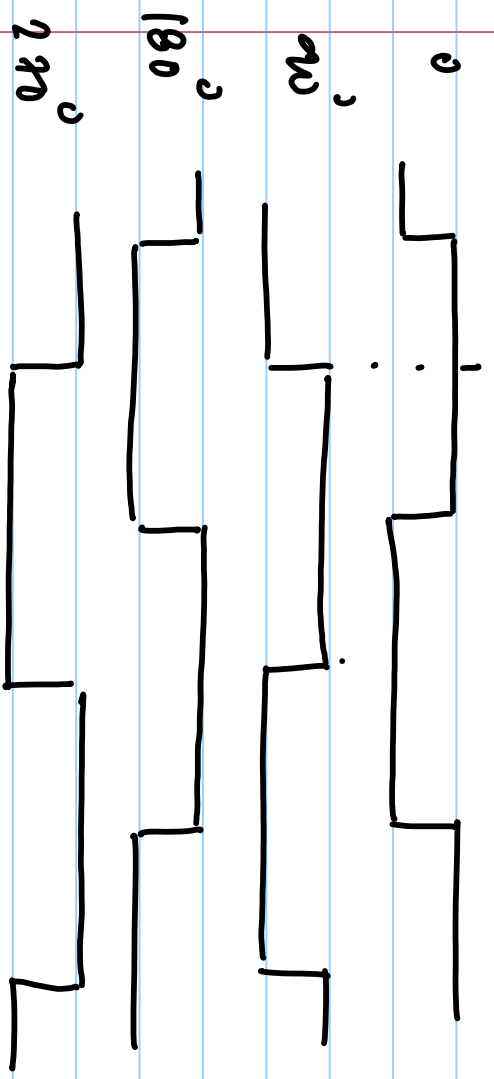
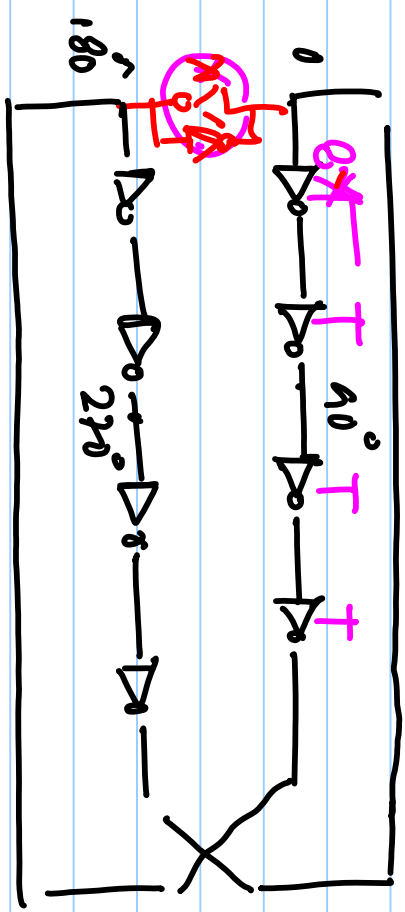


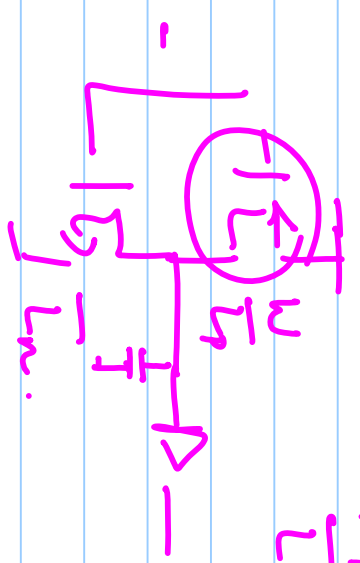
Lecture # 29

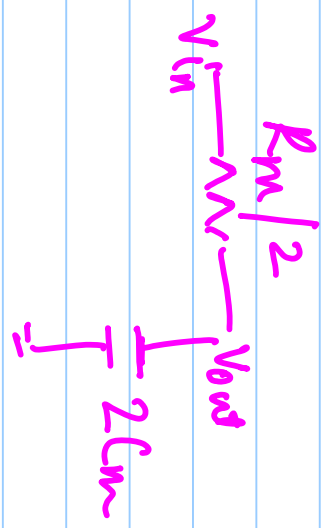
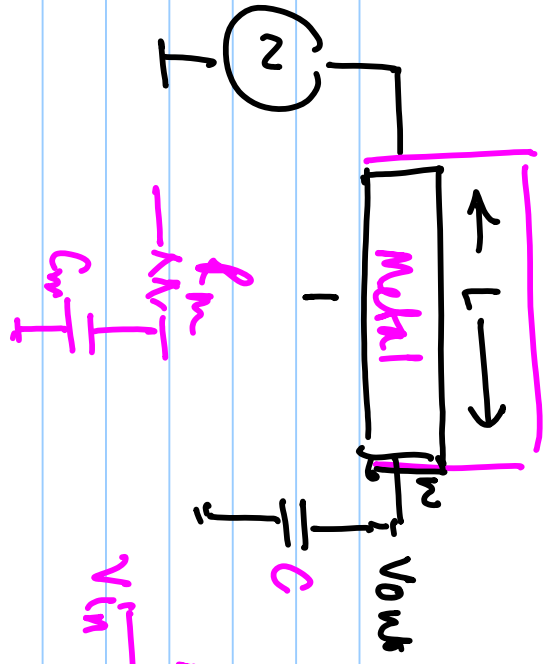


$t_{e-A} \neq t_{A-B}, t_{B-C}$

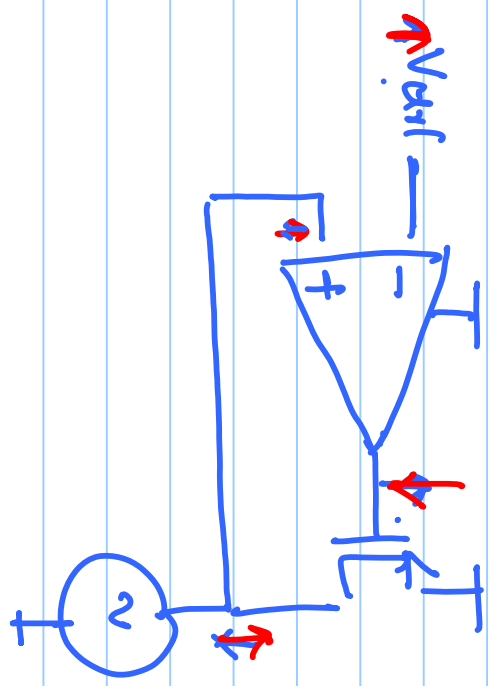
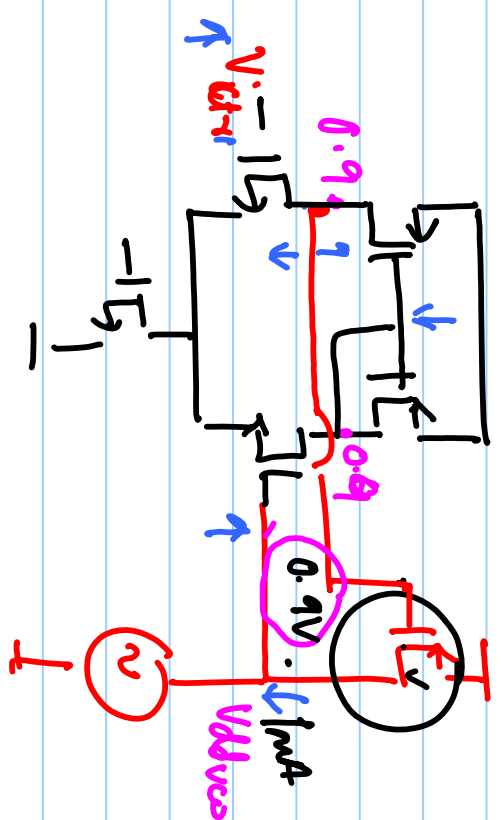
$2(t_{A-B} + t_{B-C} + t_{e-A}) = T$

Minim ↑: $i_{min} \uparrow$
 $\frac{V_{min}}{L_{min}}$

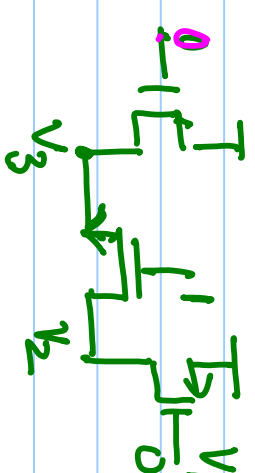
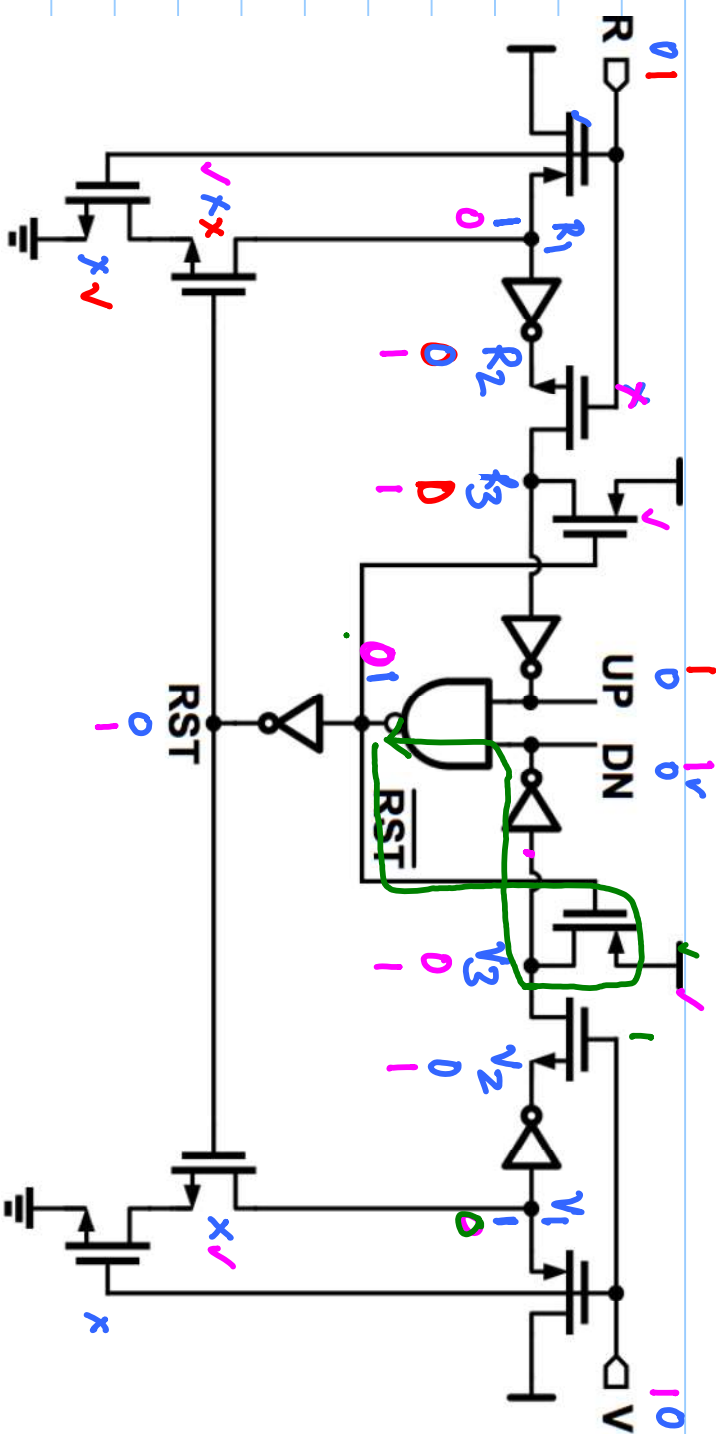




$$\frac{V_{da}}{(W_p/L_p)^2} = \frac{V_{da}}{(W_n/L_n)^2} \rightarrow \Delta \phi \rightarrow 2\phi$$

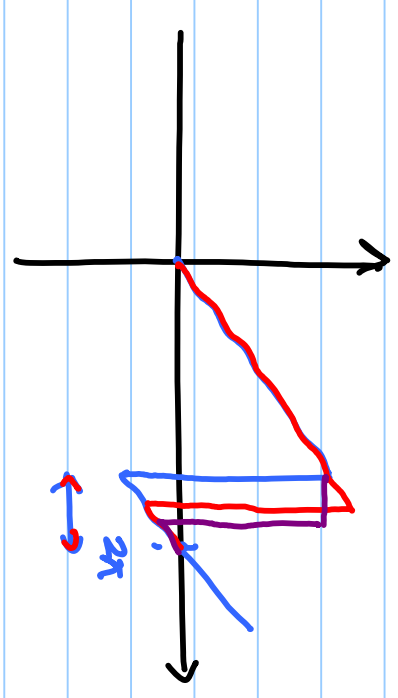


Phase Frequency Detectors (PFD)

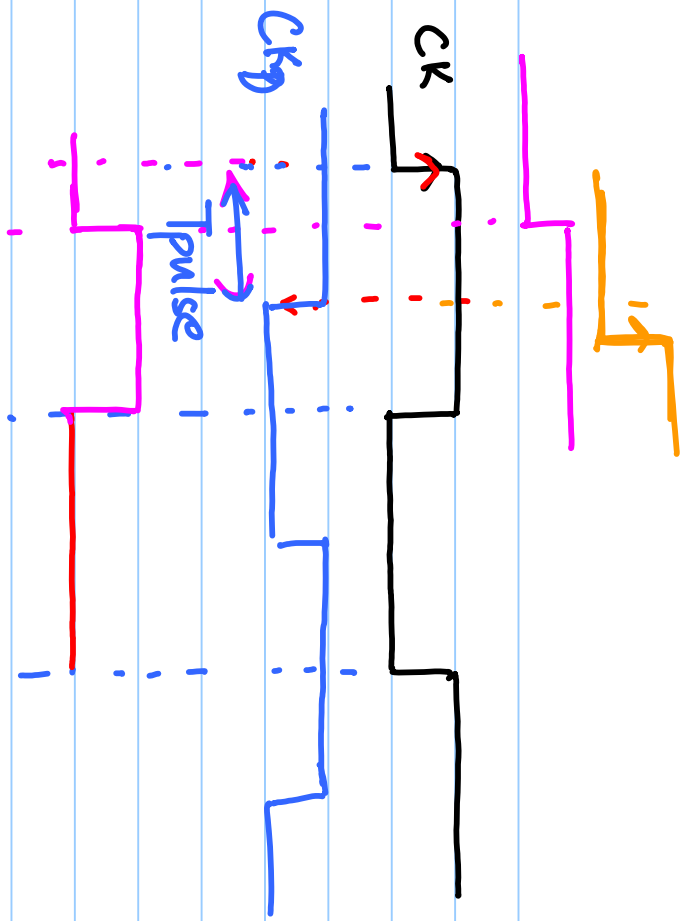
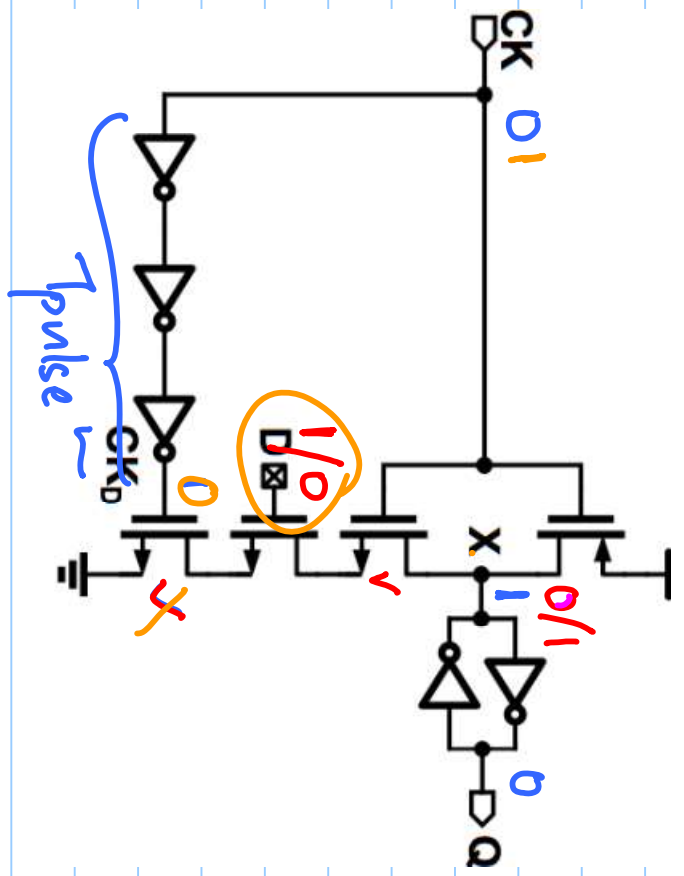


$$T_{RST} = 2T_{rand2} + T_{inv}$$

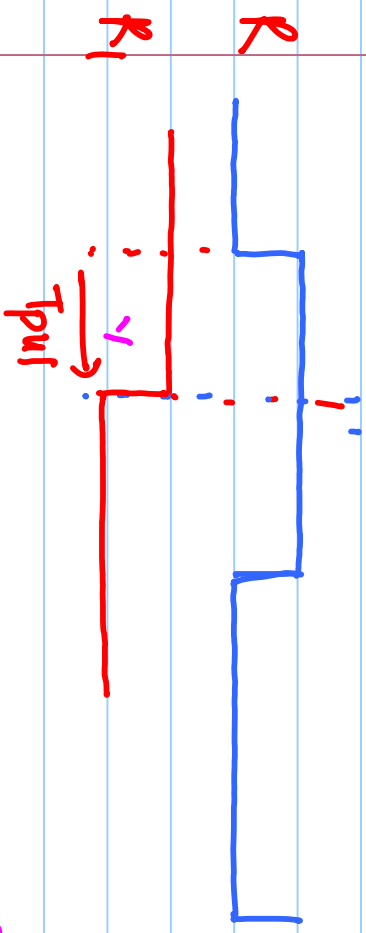
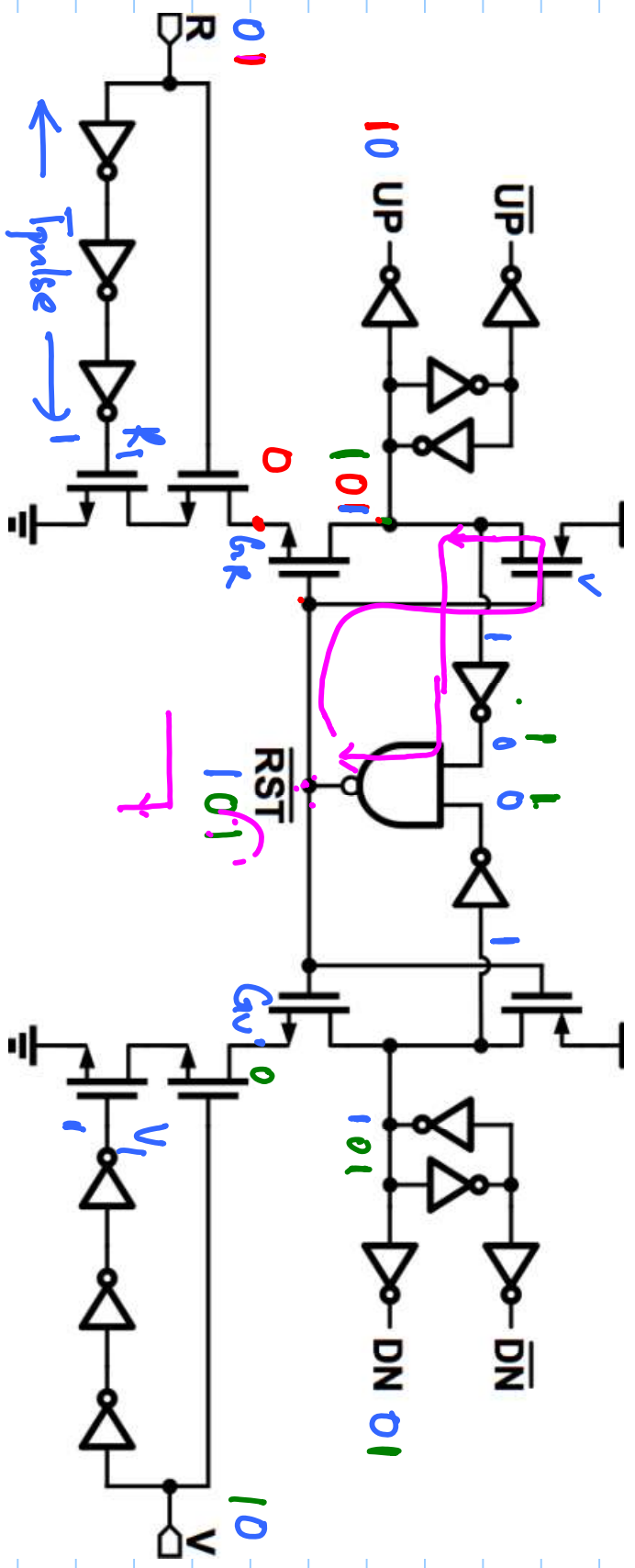
$$T_{RST} = 2T_{rand2} + T_{rand1}$$



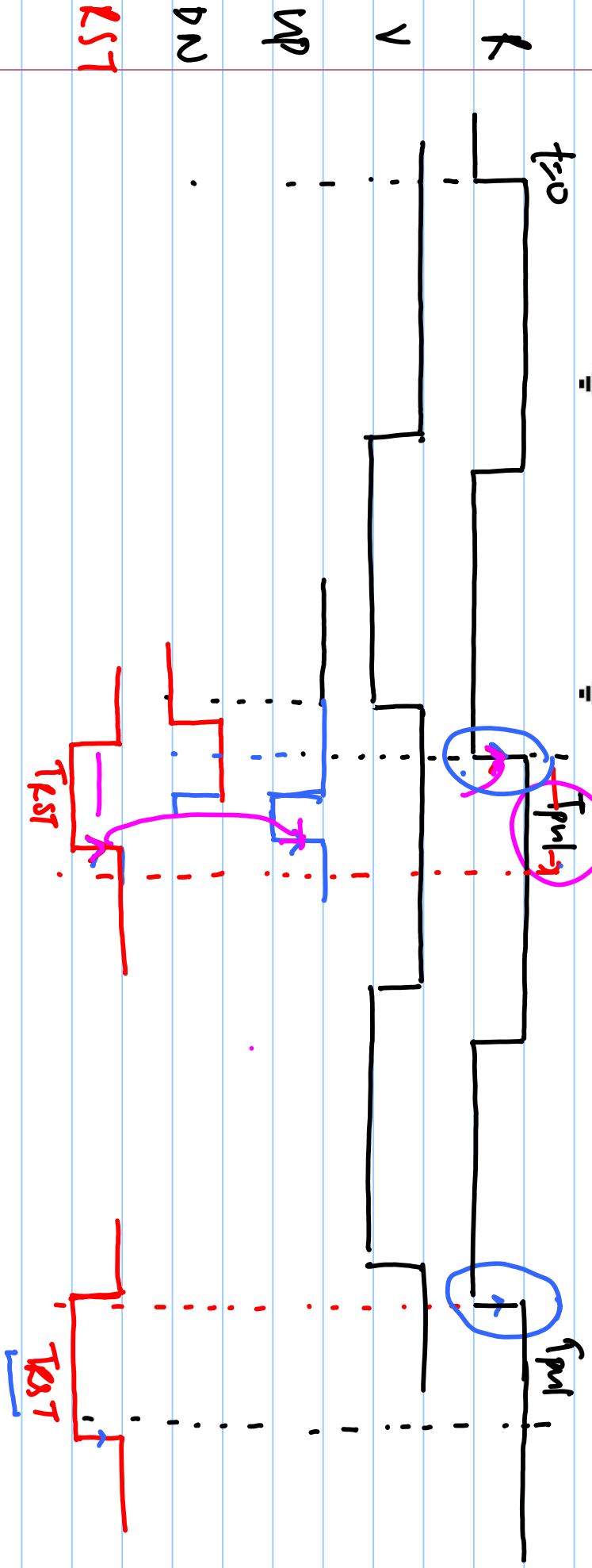
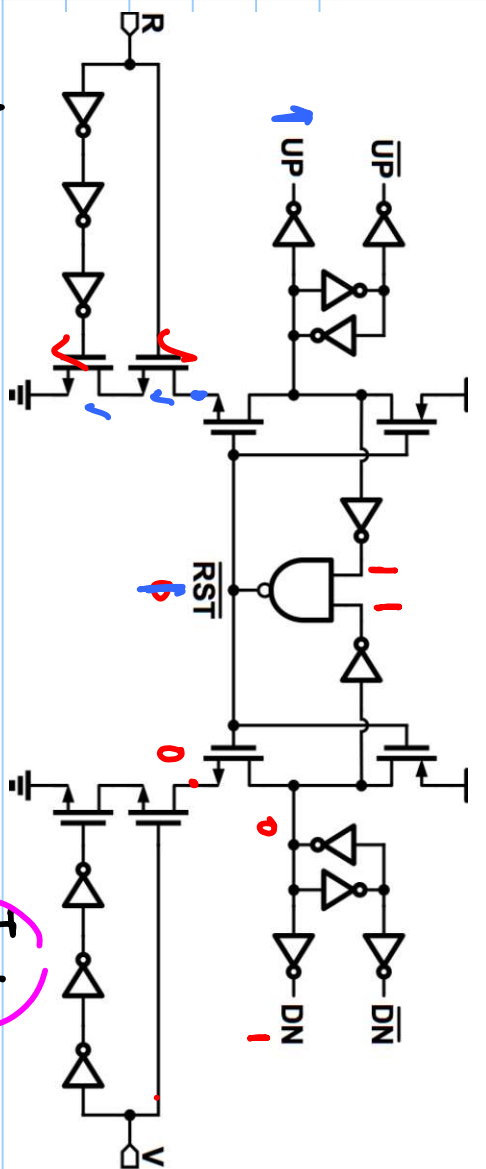
Glitch-Laden FF.



Glitch-latch PFD

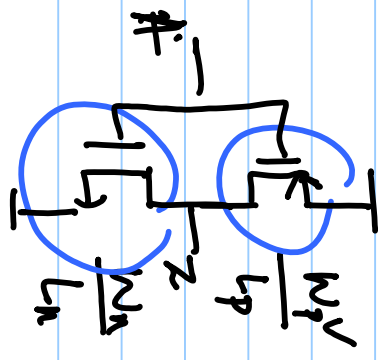
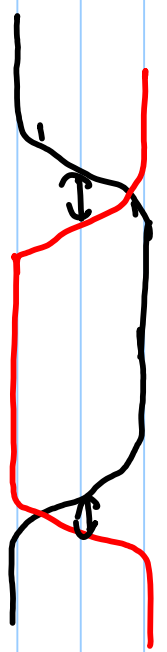


$$T_{rst} = 2T_{inv} + T_{randz}$$



Nov 2

x



$1 \text{ } \textcircled{0} / 0 \text{ } \textcircled{0}$ A $-1 \text{ } \textcircled{5}$ $\textcircled{1}$ $\textcircled{1}$ $\textcircled{1}$ } off
 $0 \text{ } \textcircled{0} / 1 \text{ } \textcircled{0}$ B $-1 \text{ } \textcircled{5}$ $\textcircled{1}$ $\textcircled{1}$ $\textcircled{1}$ } off

