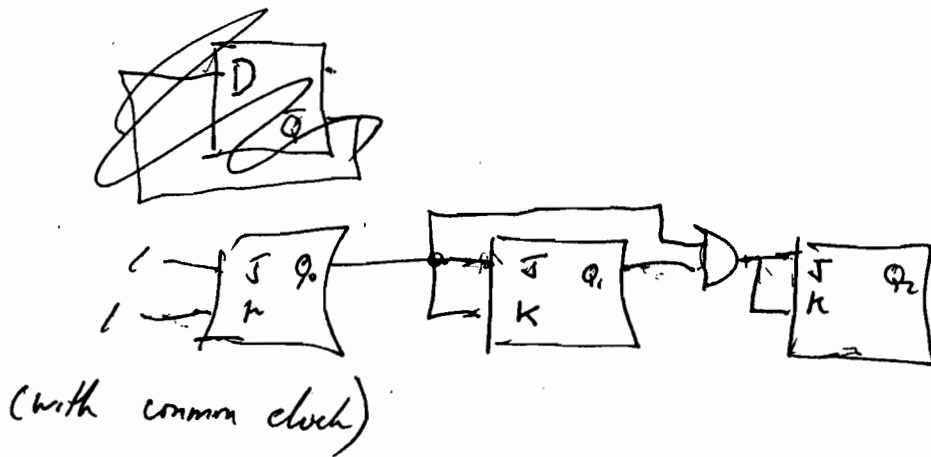
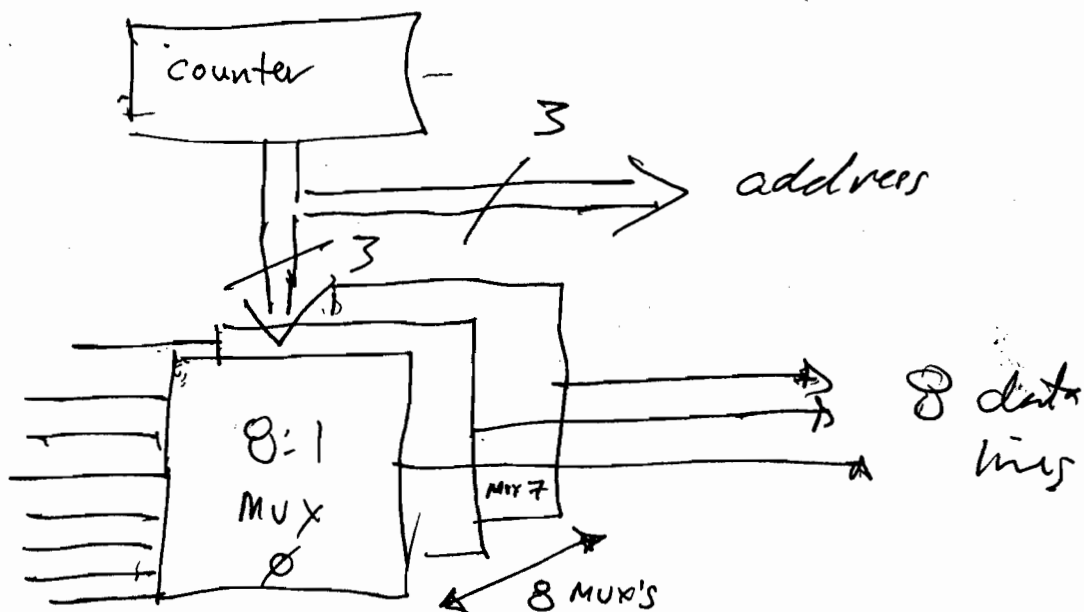


a)



b)
$$\text{output} = a_2 a_1 a_0 i_7 + a_2 a_1 \bar{a}_0 i_6 + \dots + \bar{a}_2 \bar{a}_1 \bar{a}_0 i_0$$

c)



d) Have a signal with a transition when count resets to zero. ~~Receiver end can count~~

Instead of sending address lines
 send clock and this signal. Receiver
 can count.