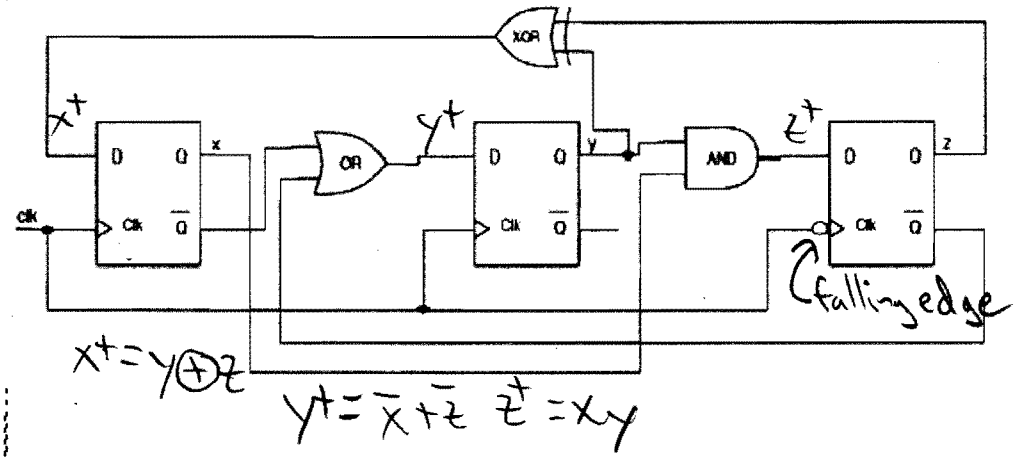
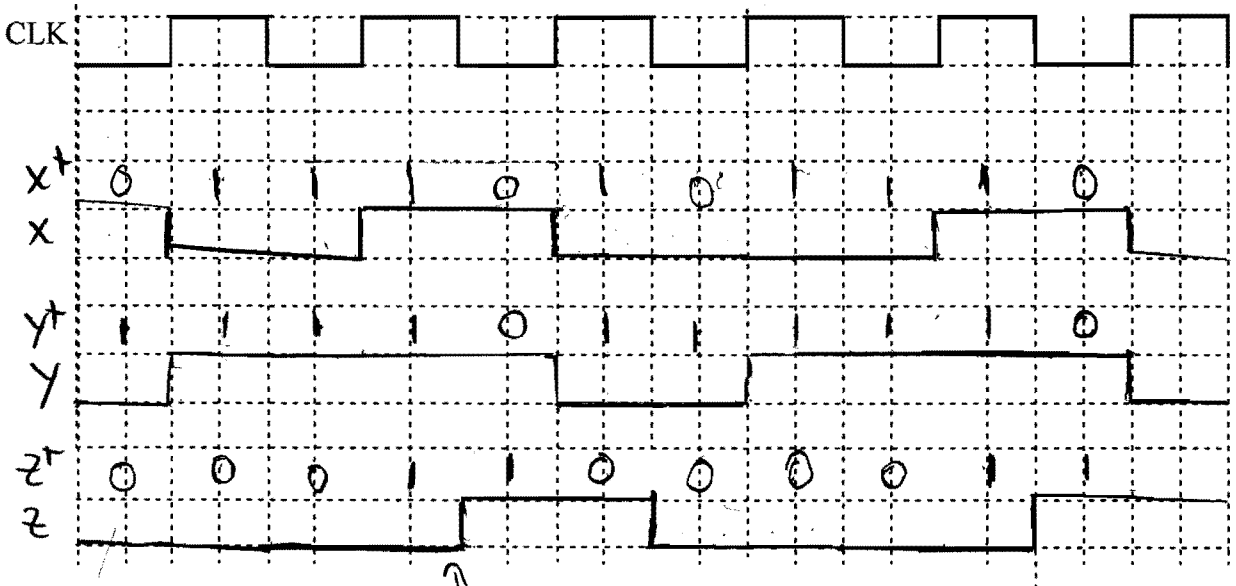
Initial $xyz = 100$

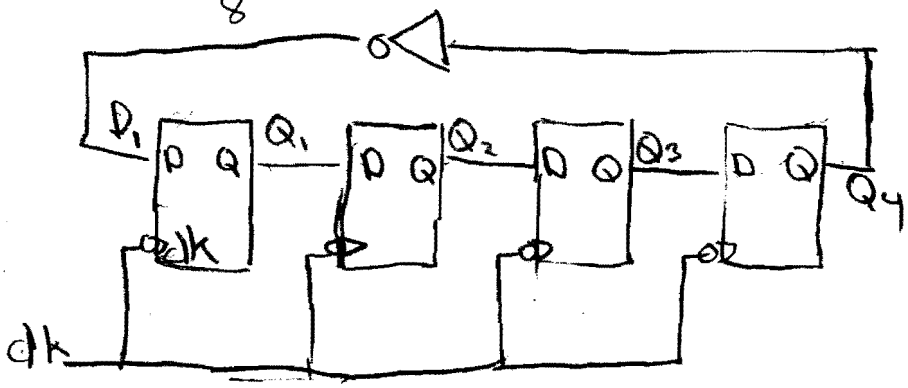


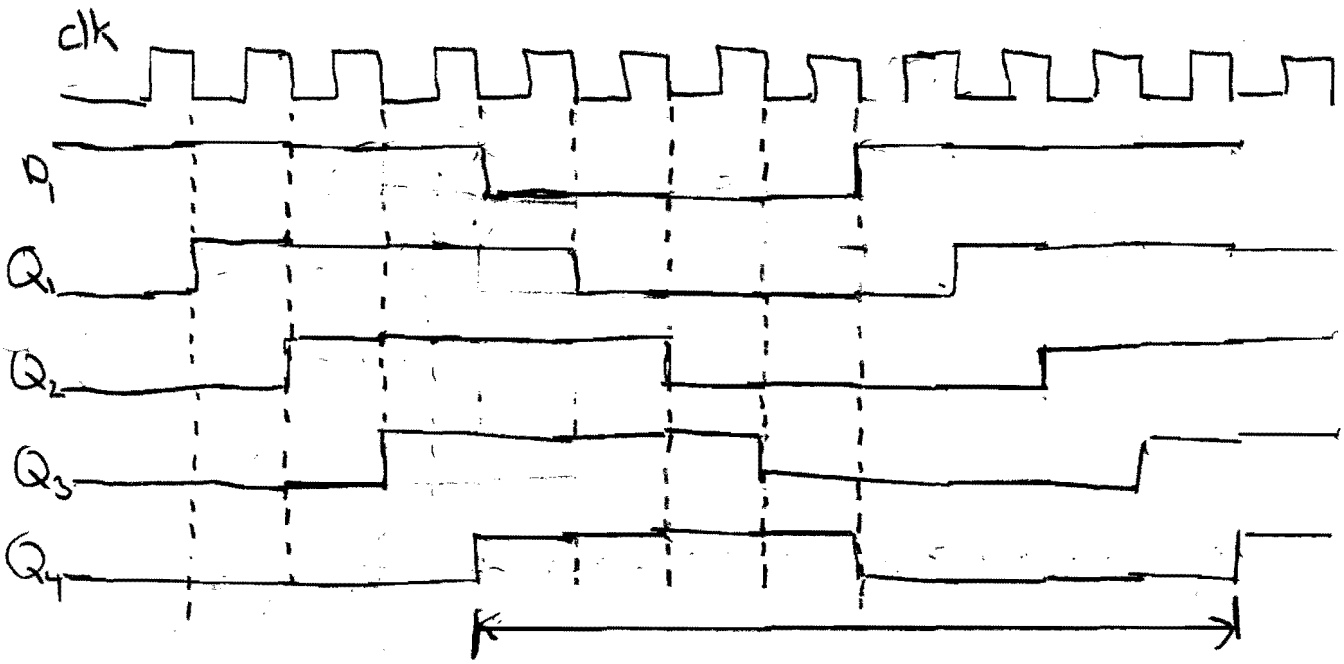
$x^+ = y \oplus z$ $\quad y^+ = \bar{x} + \bar{z}$ $\quad z^+ = xy$



z changes on falling edge

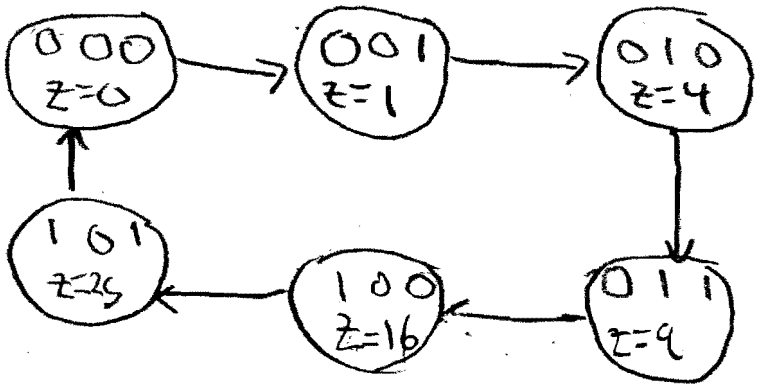
2. $f_{out} = \frac{f_{clk}}{8}$



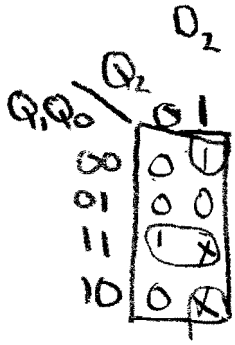


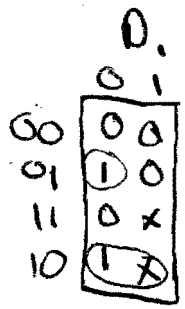
$f_{out} = \frac{f_{clk}}{8}$

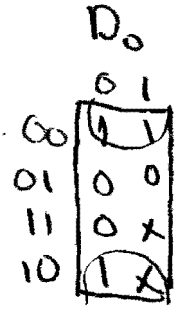
3. Moore Machine 6 states = 3 FF with 2 unused states



	state $Q_2Q_1Q_0$	next state $D_2D_1D_0$	output z $z_4z_3z_2z_1z_0$
	000	001	00000
	001	010	00001
⇨	010	011	00100
	011	100	01001
swap	100	101	10000
	101	000	11001
⇨	110	xxx	xxxxx
	111	xxx	xxxxx



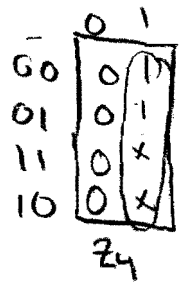


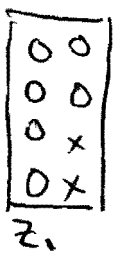


$D_2 = Q_1Q_0 + Q_2\bar{Q_0}$

$D_1 = \bar{Q_1}Q_0\bar{Q_2} + Q_1\bar{Q_0}$

$D_0 = \bar{Q_0}$





$z_4 = Q_2$

$z_3 = Q_1Q_0 + Q_0Q_2$

$z_2 = Q_1\bar{Q_0}$

$z_1 = 0$

$z_0 = Q_0$

4. Mealy Machine '0110' detector