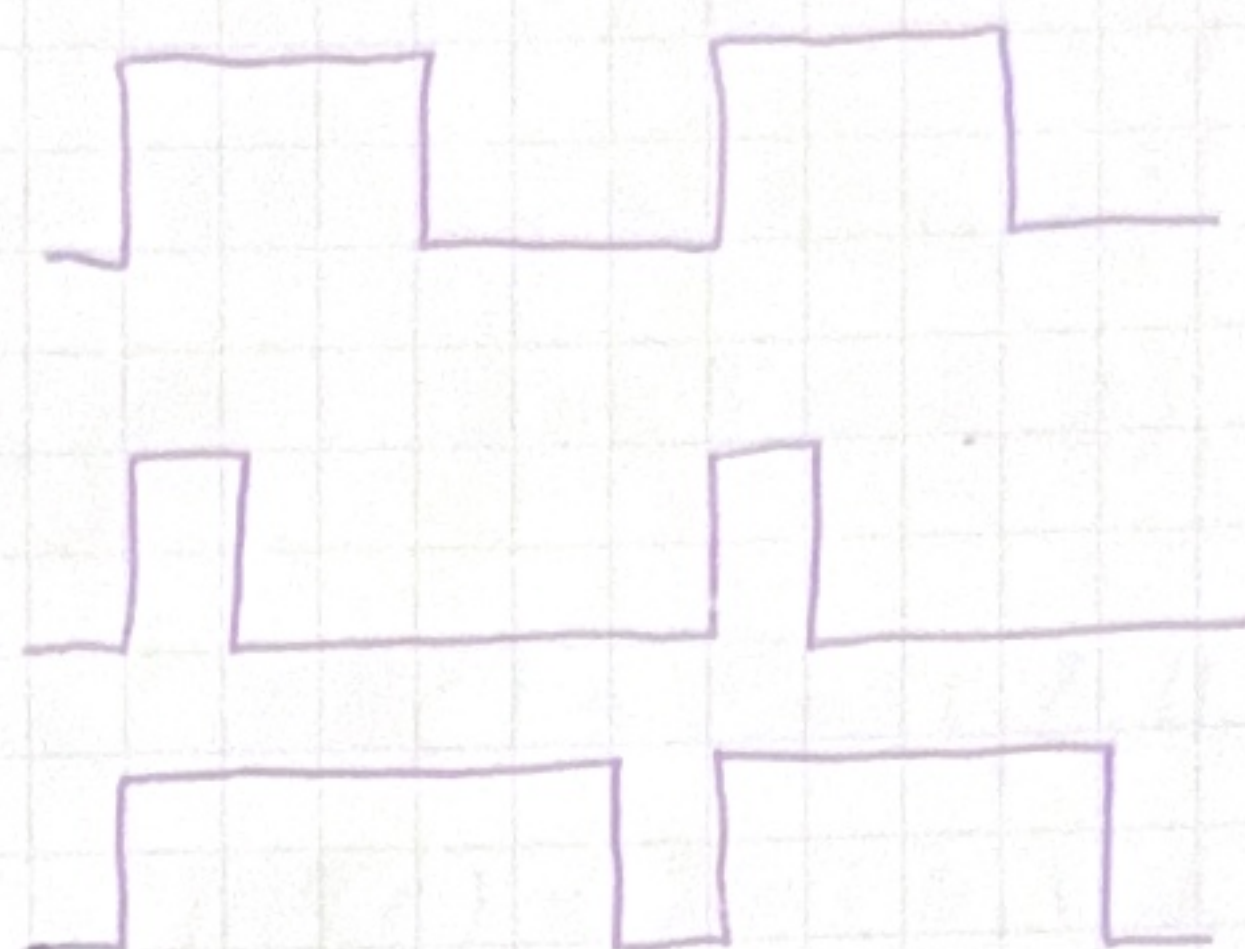


$\begin{matrix} 4 & 2 & 1 \\ x_2 & x_1 & x_0 \\ \cancel{x_2} & \cancel{x_1} & x \end{matrix}$

$2^3 = 8. (0 \rightarrow 7) = 8 \text{ total positions.}$

0	0 0 0
1	0 0 1
2	0 1 0
3	0 1 1
4	1 0 0
5	1 0 1
6	1 1 0
7	1 1 1



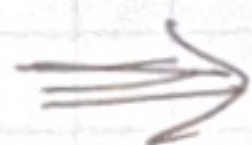
$\begin{matrix} x_2 \\ \uparrow \\ x_1 \\ \uparrow \\ x_0 \end{matrix}$

Mobius Trans form.

Binary Input is Stored as an Address Box

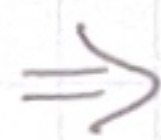
⑤ Binary

	$\begin{matrix} 4 & 2 & 1 \\ x_2 & x_1 & x_0 \end{matrix}$
0	0 0 0
1	0 0 1
2	0 1 0
3	0 1 1
4	1 0 0
5	1 0 1
6	1 1 0
7	1 1 1



$S(x) = y$

	$\begin{matrix} y_2 & y_1 & y_0 \end{matrix}$
<u>7</u>	1 1 1
<u>3</u>	0 1 1
<u>0</u>	0 0 0
<u>5</u>	1 0 1
<u>6</u>	1 1 0
<u>2</u>	0 1 0
<u>4</u>	1 0 0
<u>1</u>	0 0 1



$S^{-1}(S(x)) = x.$

	$\begin{matrix} y_2 & y_1 & y_0 \end{matrix}$
<u>2</u>	0 1 0
<u>7</u>	1 1 1
<u>5</u>	1 0 1
<u>1</u>	0 0 1
<u>6</u>	1 1 0
<u>3</u>	0 1 1
<u>4</u>	1 0 0
<u>0</u>	0 0 0

$$S(x) = y$$

$$y_2(A, B, C) = \sum m(0, 3, 4, 6)$$

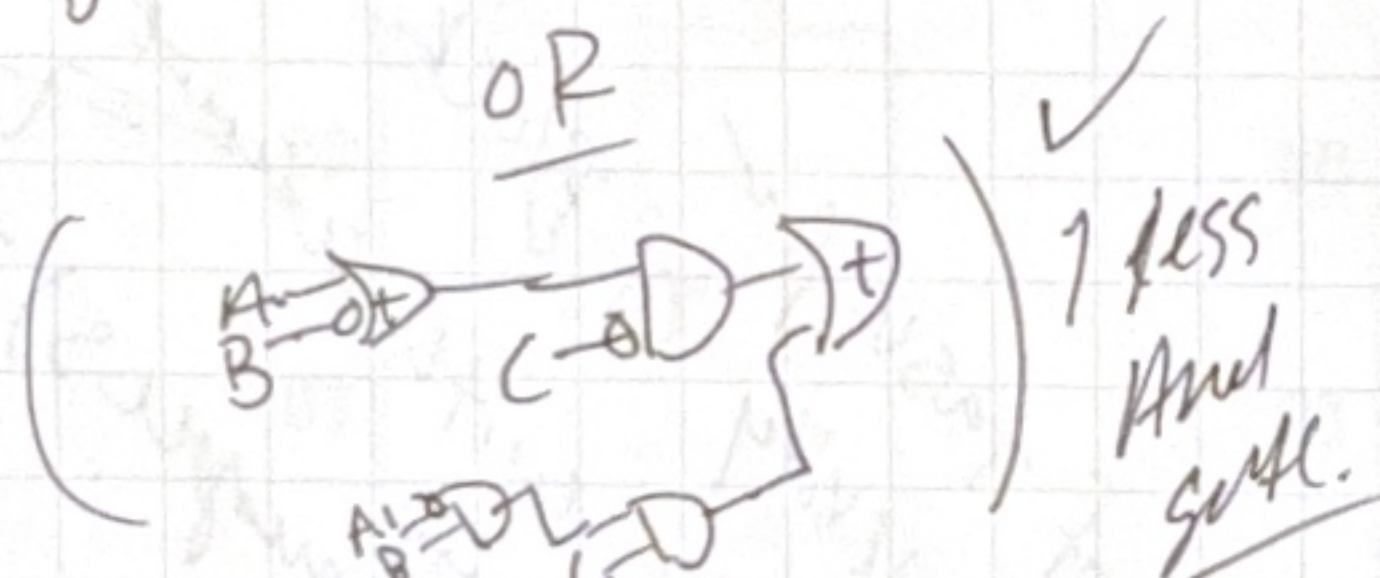
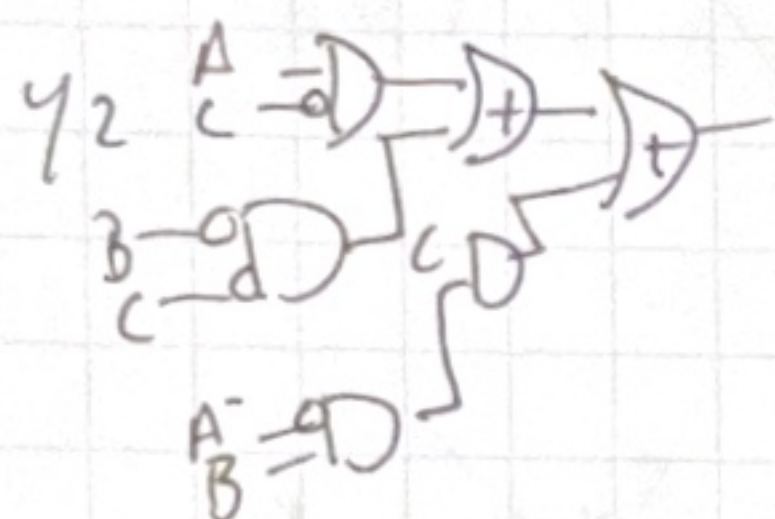
$$y_1(A, B, C) = \sum m(0, 1, 4, 5)$$

$$y_0(A, B, C) = \sum m(0, 1, 3, 7)$$

$$y_2 = AC' + B'C' + A'BC$$

$$y_1 = B'$$

$$y_0 = A'B' + BC$$



$$y_2 = AC' + B'C' + A'BC$$

$$= \underline{C'(A+B')} + A'BC$$

$$y_2 = A \rightarrow z_2$$

$$y_1 = B \rightarrow z_1$$

$$y_0 = C \rightarrow z_0$$

~~$$S^{-1}(S(x)) = x$$~~

~~$$y_2'(A, B, C) = \sum m(3, 0, 6, 4)$$~~

~~$$y_1'(A, B, C) = \sum m(7, 3, 6, 2)$$~~

~~$$y_0'(A, B, C) = \sum m(3, 0, 5, 2)$$~~

~~$$y_2'(A, B, C) = \sum m(1, 2, 4, 6)$$~~

~~$$y_1'(A, B, C) = \sum m(0, 1, 4, 5)$$~~

~~$$y_0'(A, B, C) = \sum m(1, 2, 3, 5)$$~~

$$z_2 y_2 = AC' + BC' + A'BC$$

$$z_1 y_1 = B'$$

$$z_0 y_0 = A'B + BC$$

0 7