Jalen Powell   09/22/2021
Elec 2200
                        Hw 11

1.

x_0 ——
x_1 ——   3 to 8   —— y_0
x_2 ——   —— y_1
                        —— y_2
                        —— y_3
                        —— y_4
                        —— y_5
                        —— y_6
                        —— y_7

2.

x_2	x_1	x_0	y_0	y_1	y_2	y_3	y_4	y_5	y_6	y_7
0	0	0	0	1	1	1	1	1	1	1
0	0	1	1	0	1	1	1	1	1	1
0	1	0	1	1	0	1	1	1	1	1
0	1	1	1	1	1	0	1	1	1	1
1	0	0	1	1	1	1	0	1	1	1
1	0	1	1	1	1	1	1	⓪	1	1
1	1	0	1	1	1	1	1	1	0	1
1	1	1	1	1	1	1	1	1	1	0

$x_2 x_1 x_0$ {

$$(x_2, x_1, x_0) = (1,0,1)$$

3.

x_1	x_0				y_0	y_1	y_2	y_3
0	0			⓪	1	0	⓪	0
0	1				0	1	⓪	0
1	0			⓪	0	0	1	0
1	1			⓪	0	0	⓪	1

$$\text{pin 2}(y_2) = 0 \rightarrow (x_1, x_0) = (0,0), (1,0), (1,1)$$

5.

	y_3	y_2	y_1	y_0	x_0	x_1	
	0	0	0	0			
0	0	0	0 {1	0	0	a.) input = 0101
1	0	0 {1	0	0	1	output = 2 (10)
	0	0 {1	1	↓		
2	0 {1	0	0	1	0	b.) input = 1000
	0	1	0	1		output = 3 (11)
	0	1	1	0		
	0	1	1	1 ↓		c.) input = 1011
3	1	0	0	0	1	1	output = 3 (11)
	1	0	0	1		
	1	0	1	0		d.) input = 0100
	1	0	1	1		output = 2 (10)
	1	1	0	0		
	1	1	0	1		
	1	1	1	0		
	1	1	1	1 ↓		

6.

x_0 —
x_1 —
x_2 —
x_3 —

— y_0
— y_1