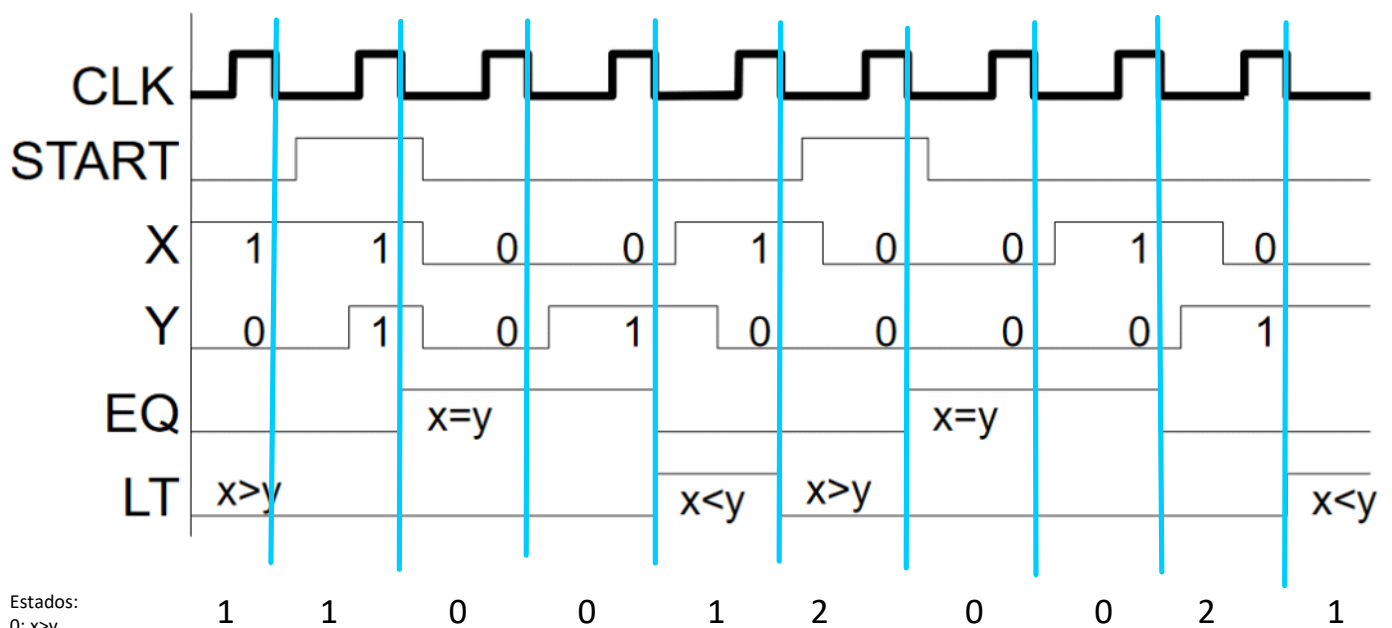
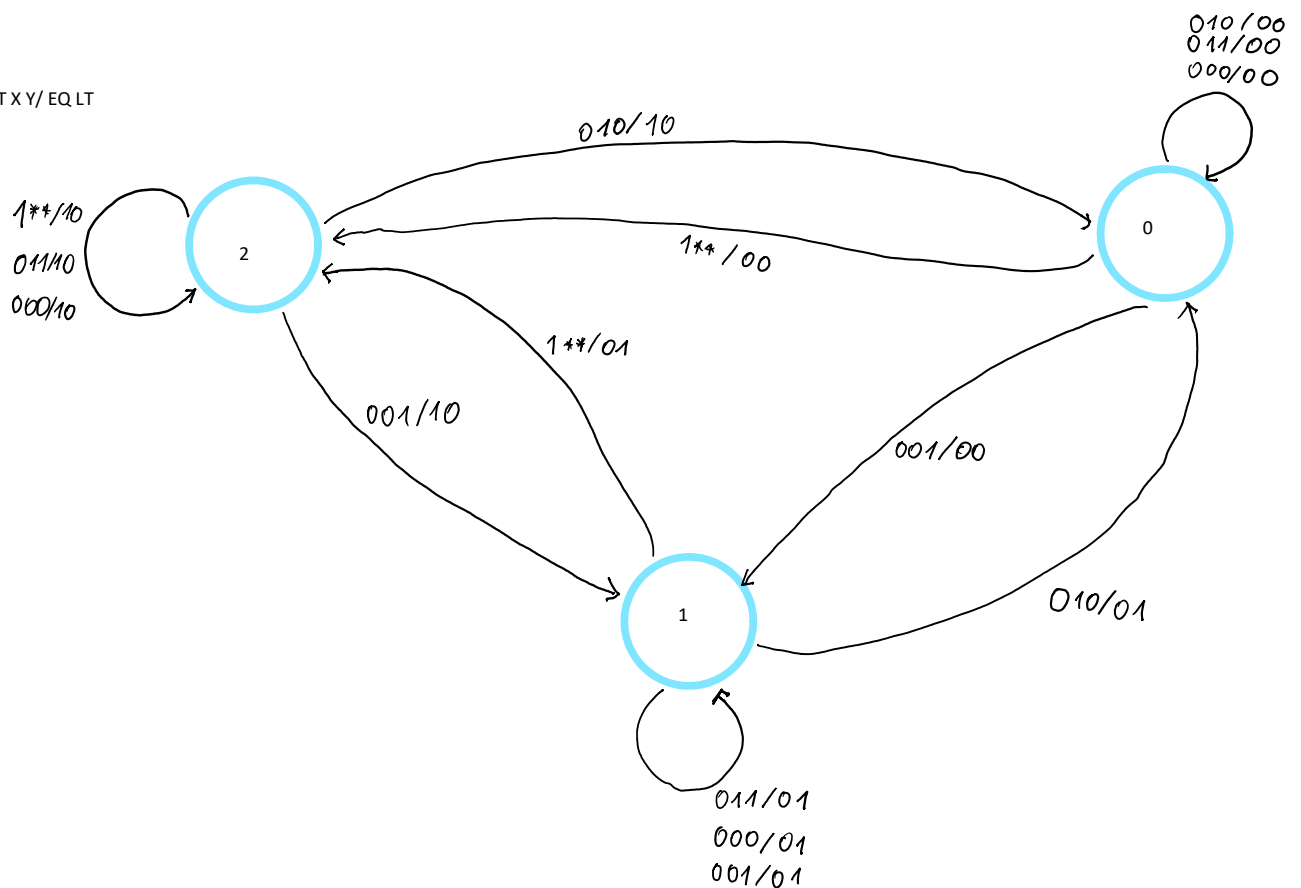


a)



Estados:  
0:  $x > y$   
1:  $x < y$   
2:  $x = y$

START X Y / EQ LT



Codificación de estados:

	Q1	Q0
0	0	0
1	0	1

## Tabla de verdad:

Q1	Q0	start	x	y	d1	d0	EQ	LT
0	0	0	0	0	0	0	0	0
0	0	0	0	1	0	1	0	0
0	0	0	1	0	0	0	0	0
0	0	0	1	1	0	0	0	0
0	0	1	0	0	1	0	0	0
0	0	1	0	1	1	0	0	0
0	0	1	1	0	1	0	0	0
0	0	1	1	1	1	0	0	0
0	1	0	0	0	0	1	0	1
0	1	0	0	1	0	1	0	1
0	1	0	1	0	0	0	0	1
0	1	0	1	1	0	1	0	1
0	1	1	0	0	1	0	0	1
0	1	1	0	1	1	0	0	1
0	1	1	1	0	1	0	0	1
0	1	1	1	1	1	0	0	1
1	0	0	0	0	1	0	1	0
1	0	0	0	1	0	1	1	0
1	0	0	1	0	0	0	1	0
1	0	0	1	1	1	0	1	0
1	0	1	0	0	1	0	1	0
1	0	1	0	1	1	0	1	0
1	0	1	1	0	1	0	1	0
1	0	1	1	1	1	0	1	0
1	1	0	0	0	x	x	x	x
1	1	0	0	1	x	x	x	x
1	1	0	1	0	x	x	x	x
1	1	0	1	1	x	x	x	x
1	1	1	0	0	x	x	x	x
1	1	1	0	1	x	x	x	x
1	1	1	1	0	x	x	x	x
1	1	1	1	1	x	x	x	x

b)

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$$\bar{x}\bar{y}\bar{z}\bar{w} + xyzw + \bar{x}\bar{y}z\bar{w} + x\bar{y}z\bar{w} + \bar{x}\bar{y}\bar{z}w + \bar{x}\bar{y}zw$$

$$= x\bar{y}zw + \bar{x}\bar{y}\bar{z}\bar{w} + \bar{x}\bar{y}z\bar{w} + x\bar{y}z\bar{w} + \bar{x}\bar{y}\bar{z}w + \bar{x}\bar{y}\bar{z}w + \bar{x}\bar{y}zw$$

$$= x\bar{y}zw + \bar{x}\bar{y}\bar{w} + \bar{y}z\bar{w} + \bar{x}\bar{y}\bar{z} + \bar{x}\bar{y}w$$

$$= x\bar{y}zw + \bar{y}z\bar{w} + \bar{x}\bar{y}\bar{z} + \bar{x}\bar{y}$$

$$= x\bar{y}zw + \bar{y}z\bar{w} + \bar{x}\bar{y}\bar{z} + \bar{x}\bar{y}(\bar{z} + z)$$

(ya que  $\bar{z} + z = 1$ )

$$= x\bar{y}zw + \bar{y}z\bar{w} + \bar{x}\bar{y}$$