

Sheet1

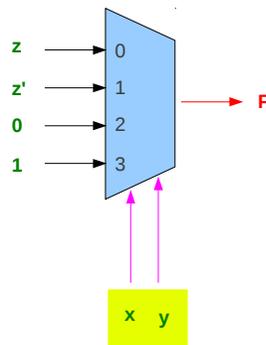
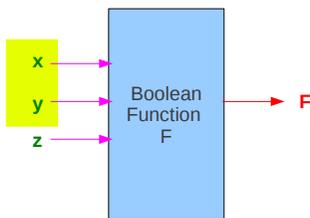
Boolean Function F

x	y	z	F
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	1
1	1	1	1

when xyz=000	▶	F=0
when xyz=001	▶	F=1
when xyz=010	▶	F=1
when xyz=011	▶	F=0
when xyz=100	▶	F=0
when xyz=101	▶	F=0
when xyz=110	▶	F=1
when xyz=111	▶	F=1

when xy=00	▶	F = z
when xy=01	▶	F = z'
when xy=10	▶	F = 0
when xy=11	▶	F = 1

when xy=00	▶	F = z	F selects z
when xy=01	▶	F = z'	F selects z'
when xy=10	▶	F = 0	F selects 0
when xy=11	▶	F = 1	F selects 1



Sheet1

Boolean Function **F2**

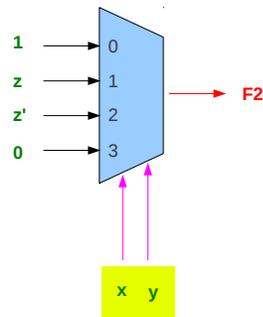
x	y	z	F2
0	0	0	1
0	0	1	1
0	1	0	0
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	0

when xyz=000	▶	F=1
when xyz=001	▶	F=1
when xyz=010	▶	F=0
when xyz=011	▶	F=1
when xyz=100	▶	F=1
when xyz=101	▶	F=0
when xyz=110	▶	F=0
when xyz=111	▶	F=0

when xy=00	▶	F = 1
when xy=01	▶	F = z
when xy=10	▶	F = z'
when xy=11	▶	F = 0

when xy=00	▶	F = 1
when xy=01	▶	F = z
when xy=10	▶	F = z'
when xy=11	▶	F = 0

F selects 1
F selects z
F selects z'
F selects 0



Boolean Function **F3**

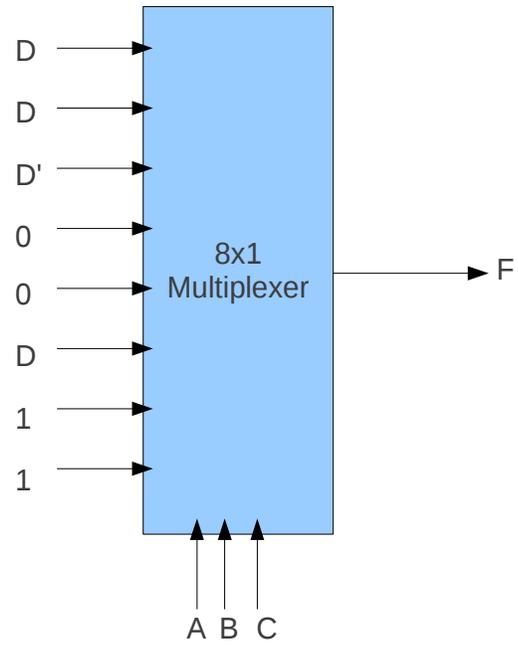
x	y	z	F3
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	0

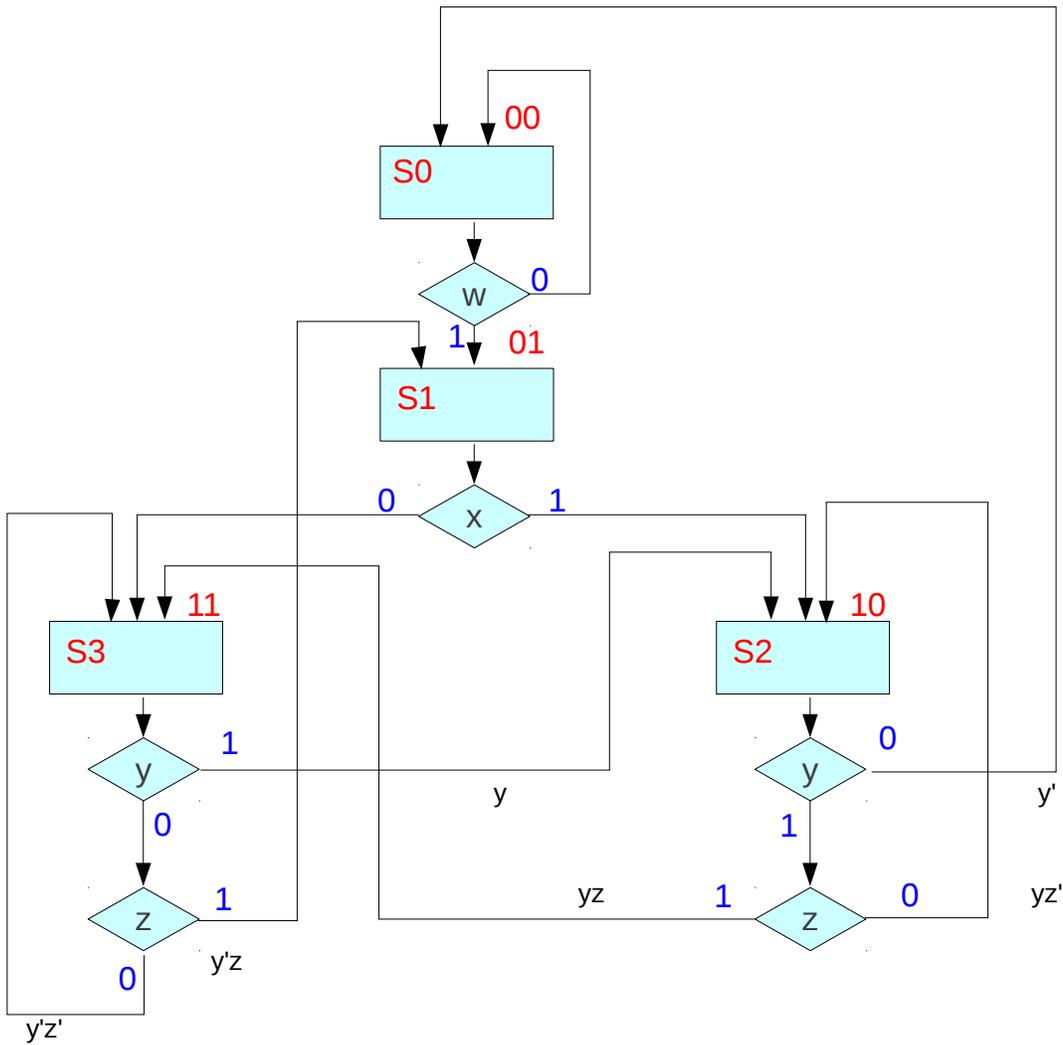
when xyz=000	▶	F3=1
when xyz=001	▶	F3=1
when xyz=010	▶	F3=1
when xyz=011	▶	F3=0
when xyz=100	▶	F3=1
when xyz=101	▶	F3=0
when xyz=110	▶	F3=0
when xyz=111	▶	F3=0

when xy=00	▶	F3= 1
when xy=01	▶	F3 = z'
when xy=10	▶	F3 = z'
when xy=11	▶	F3 = 0

A	B	C	D	F
0	0	0	0	0
0	0	0	1	1
0	0	1	0	0
0	0	1	1	1
0	1	0	0	1
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	0
1	0	0	1	0
1	0	1	0	0
1	0	1	1	1
1	1	0	0	1
1	1	0	1	1
1	1	1	0	1
1	1	1	1	1

D
D
D'
0
0
0
D
1
1





Present State		Next State		Input Condition	MUX1	MUX2
G1	G0	G1	G0			
0	0	0	0	w'		
0	0	0	1	w		
0	1	1	0	x		
0	1	1	1	x'		
1	0	0	0	y'		
1	0	1	0	yz'		
1	0	1	1	yz		
1	1	0	1	y'z		
1	1	1	0	y'		
1	1	1	1	y'z'		