F = Σ(1, 3, 4, 11, 12, 13, 14, 15)

Draw a multiplexer with 4 variables and 1 selector bit

- Truth Table:

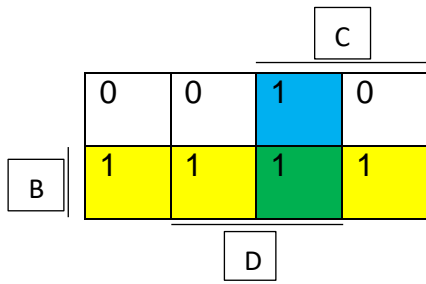| A	B	C	D	F
0	0	0	0	0
0	0	0	1	1
0	0	1	0	0
0	0	1	1	1
0	1	0	0	1
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	0
1	0	0	1	0
1	0	1	0	0
1	0	1	1	1
1	1	0	0	1
1	1	0	1	1
1	1	1	0	1
1	1	1	1	1

- Karnaugh Map F_1

F_1 = B'D + BC'D'

- Karnaugh Map F_2

		$\overline{C}$	
0	0	1	0
1	1	1	1

B

$\overline{D}$

$F_2 = B + CD$

- Multiplexer

B

C

D

B'D + BC'D'

B + CD

A

F