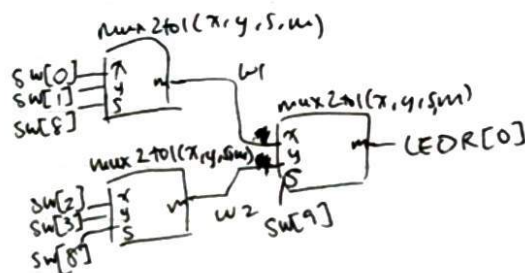
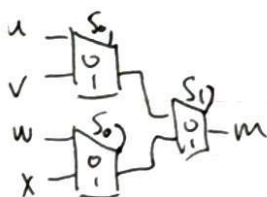


take out ones common  
 $ABC + ACD + BCD$

$$b) \bar{A}\bar{B}\bar{C} + A\bar{B}\bar{C}\bar{D} + \bar{A}B\bar{C}D$$

1.  $u, v, w, x, s_0, s_1 \Rightarrow 6 \text{ inputs} \rightarrow 2^6 = 64 \text{ rows}$

## 1.



T. Sege

Seg0: Max  
 (off) 0000  
Min 0010  
 0011  
 0001  
 0100  
 1011  
 1101  
 ....  
 1000  
 1001  
 1010  
 1100  
 1110  
 1111

Seg1: Max  
 0000  
 0001  
 0010  
~~1111~~  
Min  
 0101  
 0110  
 1011  
 1100  
 1110  
 1111

Seg2: Min  
 0010  
 1100  
 1110  
 1111

Seg3: Min  
 0001  
 0100  
 0111  
 1001  
 1010  
 1111

Seg4: Min  
 0001  
 0011  
 0100  
 0101  
 0111  
 1001

Seg5: Min  
 0001  
 0010  
 0011  
 0111  
 1001

Seg6: Min  
 0000  
 0001  
 0111  
 1100

## 2. Karnaugh Maps

2. Karnaugh Maps

Seg 0

	$\bar{C} \cdot \bar{D}$	$\bar{C} \cdot D$	$C \cdot \bar{D}$	$C \cdot D$
$\bar{A} \cdot \bar{B}$	0	1	0	0
$\bar{A} \cdot B$	1	0	0	0
$A \cdot \bar{B}$	0	1	0	0
$A \cdot B$	0	0	1	0

Seg 2

	$\bar{C} \cdot \bar{D}$	$\bar{C} \cdot D$	$C \cdot \bar{D}$	$C \cdot D$
$\bar{A} \cdot \bar{B}$	0	0	0	1
$\bar{A} \cdot B$	0	0	0	0
$A \cdot \bar{B}$	1	0	1	1
$A \cdot B$	0	0	0	0

Seg 4

	$\bar{C} \cdot \bar{D}$	$\bar{C} \cdot D$	$C \cdot \bar{D}$	$C \cdot D$
$\bar{A} \cdot \bar{B}$	0	1	1	0
$\bar{A} \cdot B$	1	1	1	0
$A \cdot \bar{B}$	0	0	0	0
$A \cdot B$	0	1	0	0

Seg 1

	$\bar{A} \cdot \bar{B}$	$\bar{A} \cdot B$	$A \cdot \bar{B}$	$A \cdot B$
$\bar{C} \cdot \bar{D}$	0	0	1	1
$\bar{C} \cdot D$	0	1	0	0
$C \cdot \bar{D}$	0	0	1	1
$C \cdot D$	0	0	0	1

Seg 3

	$\bar{A} \cdot \bar{B}$	$\bar{A} \cdot B$	$A \cdot \bar{B}$	$A \cdot B$
$\bar{C} \cdot \bar{D}$	0	1	0	0
$\bar{C} \cdot D$	0	0	0	0
$C \cdot \bar{D}$	0	0	1	1
$C \cdot D$	0	0	0	1

Seg 5

	$\bar{A} \cdot \bar{B}$	$\bar{A} \cdot B$	$A \cdot \bar{B}$	$A \cdot B$
$\bar{C} \cdot \bar{D}$	0	0	1	1
$\bar{C} \cdot D$	0	0	0	0
$C \cdot \bar{D}$	0	0	1	1
$C \cdot D$	0	0	0	1

Seg 6

	$\bar{A} \cdot \bar{B}$	$\bar{A} \cdot B$	$A \cdot \bar{B}$	$A \cdot B$
$\bar{C} \cdot \bar{D}$	1	1	0	0
$\bar{C} \cdot D$	0	0	1	0
$C \cdot \bar{D}$	0	0	0	0
$C \cdot D$	0	0	0	0

can also wrap

1 2 4 3  
5 6 8 7  
13 14 16 15  
9 10 12 11

Seg 7

	$\bar{A} \cdot \bar{B}$	$\bar{A} \cdot B$	$A \cdot \bar{B}$	$A \cdot B$
$\bar{C} \cdot \bar{D}$	0	0	1	1
$\bar{C} \cdot D$	0	0	0	0
$C \cdot \bar{D}$	0	0	1	1
$C \cdot D$	0	0	0	1

can also wrap around