2. $f = \pi(3,4,5,6,7,11)$

$= \sum(0,1,2,8,9,10,12,13,14,15)$

$f = \overline{m_0 + m_1 + m_2 + m_8 + m_9 + m_{10} + m_{12} + m_{13} + m_{14} + m_{15}}$

$f = \overline{m_0} \cdot \overline{m_1} \cdot \overline{m_2} \cdot \overline{m_8} \cdot \overline{m_9} \cdot \overline{m_{10}} \cdot \overline{m_{12}} \cdot \overline{m_{13}} \cdot \overline{m_{14}} \cdot \overline{m_{15}}$

Truth table:

inputs				outputs
w	x	y	z	f
0	0	0	0	1
0	0	0	1	1
0	0	1	0	1
0	0	1	1	0
0	1	0	0	0
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	1
1	0	0	1	1
1	0	1	0	1
1	0	1	1	0
1	1	0	0	1
1	1	0	1	1
1	1	1	0	1
1	1	1	1	1

Circuit Diagram