

	truth table	logic function	Karnaugh maps																																																																																										
H(0)	<table><tr><th>sw3</th><th>sw2</th><th>sw1</th><th>sw0</th><th>H(0)</th></tr><tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>0</td><td>1</td><td>0</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>1</td><td>1</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td></tr><tr><td>1</td><td>0</td><td>1</td><td>x</td><td>d</td></tr><tr><td>1</td><td>1</td><td>x</td><td>x</td><td>d</td></tr></table>	sw3	sw2	sw1	sw0	H(0)	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	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	x	d	1	1	x	x	d	$H(0) = \overline{sw_0} \cdot \overline{sw_1} \cdot sw_2 + sw_0 \overline{sw_1} \overline{sw_2} \overline{sw_3}$	<div><div><div>sw<sub>0</sub>sw<sub>1</sub></div><div>sw<sub>2</sub>sw<sub>3</sub></div></div><table><tr><td></td><td>00</td><td>01</td><td>11</td><td>10</td></tr><tr><td>00</td><td></td><td></td><td></td><td>1</td></tr><tr><td>01</td><td></td><td>d</td><td>d</td><td></td></tr><tr><td>11</td><td>d</td><td>d</td><td>d</td><td>d</td></tr><tr><td>10</td><td>1</td><td></td><td></td><td></td></tr></table></div>		00	01	11	10	00				1	01		d	d		11	d	d	d	d	10	1			
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H(1)	<table><tr><th>sw3</th><th>sw2</th><th>sw1</th><th>sw0</th><th>H(1)</th></tr><tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td></tr><tr><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>0</td><td>1</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td><td>1</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td></tr><tr><td>1</td><td>0</td><td>1</td><td>x</td><td>d</td></tr><tr><td>1</td><td>1</td><td>x</td><td>x</td><td>d</td></tr></table>	sw3	sw2	sw1	sw0	H(1)	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	1	0	0	1	0	0	0	0	1	0	1	1	0	1	1	0	1	0	1	1	1	0	1	0	0	0	0	1	0	0	1	0	1	0	1	x	d	1	1	x	x	d	$H(1) = \overline{sw_0} \cdot sw_1 \cdot sw_2 + sw_0 \cdot \overline{sw_1} \cdot sw_2$	<div><div><div>sw<sub>0</sub>sw<sub>1</sub></div><div>sw<sub>2</sub>sw<sub>3</sub></div></div><table><tr><td></td><td>00</td><td>01</td><td>11</td><td>10</td></tr><tr><td>00</td><td></td><td></td><td></td><td></td></tr><tr><td>01</td><td></td><td>d</td><td>d</td><td></td></tr><tr><td>11</td><td>d</td><td>d</td><td>d</td><td>d</td></tr><tr><td>10</td><td></td><td>1</td><td></td><td>1</td></tr></table></div>		00	01	11	10	00					01		d	d		11	d	d	d	d	10		1		1
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H(2)	<table><tr><th>sw3</th><th>sw2</th><th>sw1</th><th>sw0</th><th>H(2)</th></tr><tr><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td></tr><tr><td>0</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>1</td><td>1</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td></tr><tr><td>1</td><td>0</td><td>1</td><td>x</td><td>d</td></tr><tr><td>1</td><td>1</td><td>x</td><td>x</td><td>d</td></tr></table>	sw3	sw2	sw1	sw0	H(2)	0	0	0	0	0	0	0	0	1	0	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	0	1	0	0	1	0	1	0	1	x	d	1	1	x	x	d	$H(2) = \overline{sw_0} \cdot sw_1 \cdot \overline{sw_2}$	<div><div><div>sw<sub>0</sub>sw<sub>1</sub></div><div>sw<sub>2</sub>sw<sub>3</sub></div></div><table><tr><td></td><td>00</td><td>01</td><td>11</td><td>10</td></tr><tr><td>00</td><td></td><td>1</td><td></td><td></td></tr><tr><td>01</td><td></td><td>d</td><td>d</td><td></td></tr><tr><td>11</td><td>d</td><td>d</td><td>d</td><td>d</td></tr><tr><td>10</td><td></td><td></td><td></td><td></td></tr></table></div>		00	01	11	10	00		1			01		d	d		11	d	d	d	d	10				
sw3	sw2	sw1	sw0	H(2)																																																																																									
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H(3)	sw3	sw2	sw1	sw0	H(3)	$H(3) = \overline{SW_0} \cdot \overline{SW_1} \cdot SW_2 + SW_0 \cdot SW_1 \cdot SW_2 + SW_0 \cdot \overline{SW_1} \cdot \overline{SW_2}$	<div><div>SW<sub>0</sub>SW<sub>1</sub></div><div><div>SW<sub>2</sub>SW<sub>3</sub></div><div>0001110</div><div>00</div><div>01</div><div>11</div><div>10</div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div>d</div><div>d</div><div></div></div><div><div>d</div><div>d</div><div>d</div><div>d</div></div><div><div></div><div></div><div></div><div></div></div></div></div></div>
	0	0	0	0	0		
	0	0	0	1	1		
	0	0	1	0	0		
	0	0	1	1	0		
	0	1	0	0	1		
	0	1	0	1	0		
	0	1	1	0	0		
	0	1	1	1	1		
	1	0	0	0	0		
	1	0	0	1	0		
	1	0	1	x	d		
	1	1	x	x	d		

H(4)	sw3	sw2	sw1	sw0	H(4)	$$H(4) = SW_0 + \overline{SW_1} \cdot SW_2$$	SW<sub>0</sub>SW<sub>1</sub>  SW<sub>2</sub>SW<sub>3</sub>  0001110  00  01  11  10    d  d  d  d  d  d
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	1			
0	1	1	0	0			
0	1	1	1	1			
1	0	0	0	0			
1	0	0	1	1			
1	0	1	x	d			
1	1	x	x	d			
H(5)	sw3	sw2	sw1	sw0	H(5)	$$H(5) = SW_0 \cdot SW_1 + SW_1 \cdot \overline{SW_2} + SW_0 \cdot \overline{SW_2} \cdot \overline{SW_3}$$	SW<sub>0</sub>SW<sub>1</sub>  SW<sub>2</sub>SW<sub>3</sub>  0001110  00  01  11  10    d  d  d  d  d  d
0	0	0	0	0			
0	0	0	1	1			
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0	1	1	0	0			
0	1	1	1	1			
1	0	0	0	0			
1	0	0	1	0			
1	0	1	x	d			
1	1	x	x	d			

H(6)	sw3	sw2	sw1	sw0	H(6)
	0	0	0	0	1
	0	0	0	1	1
	0	0	1	0	0
	0	0	1	1	0
	0	1	0	0	0
	0	1	0	1	0
	0	1	1	0	0
	0	1	1	1	1
	1	0	0	0	0
	1	0	0	1	0
	1	0	1	x	d
	1	1	x	x	d

$$H(6) = \overline{sw_1} \cdot \overline{sw_2} \cdot \overline{sw_3} + sw_0 \cdot sw_1 \cdot sw_2$$

		sw <sub>0</sub> sw <sub>1</sub>			
		00	01	11	10
sw <sub>2</sub> sw <sub>3</sub>	00	1			1
	01		d	d	
	11	d	d	1	d
	10			1	