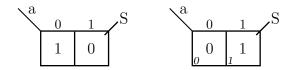
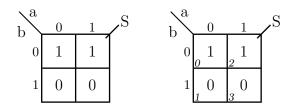
American Style Karnaugh Maps

The Karnaugh maps for one variable



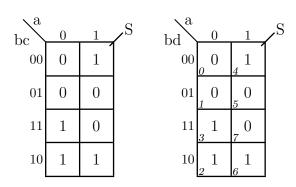
The Karnaugh maps for two variables



The Karnaugh maps for three variables

at	00	01	11	10	S	x^n al	00	01	11	10	S
0	0	1	1	1		0	0	$\frac{1}{2}$ 1	1	1	
1	0	1	0	0		1	0	1 3	₇ 0	0 5	

The Karnaugh maps for three variables (alternate style)



The Karnaugh maps for four variables

cd ab	00	01	11	10	$_{\rm cd}^{\rm S}$	ւb <u>√ 00</u>	01	11	10	/S
00	1	1	1	0	00	$\begin{bmatrix} 0 & 1 \end{bmatrix}$	1	$\frac{1}{12}$	$\begin{bmatrix} 0 \end{bmatrix}$	
01	1	0	1	0	0:	$1 \begin{bmatrix} 1 \\ 1 \end{bmatrix}$	5 0	1	9 0	
11	0	1	1	1	1	1 0	₇ 1	1 15	1	
10	0	0	0	0	10	0 = 0	6	0	0	

The Karnaugh maps for five variables

\ak		001	011	010	110	111	101	100	S
de \	000	001	011	010	110	111	101	100	/ ~
00	0	0 4	1 12	₈ 1	1 24	1 28	0 20	0 16	
01	1	1 5	0	9 0	0	0	1 21	$\frac{1}{17}$	
11	1 3	₇ 1	0	0 11	0	0	1	1 19	
10	0	6	1 14	1	1 26	1 30	0	0 18	

Or you can split the 5-map into two 4-maps with additional information at the bottom...

de	00	01	11	10	S
00	0	0	$\frac{1}{12}$	1 8	
01	1	1	0	₉ 0	
11	1	₇ 1	0	0	
10	0	6	1 14	1 10	
					•

bo	00	01	11	10	S
de \				10	ſ
00	$_{o}^{0}$	$_{4}$ 0	$\frac{1}{12}$	$ \begin{array}{c} 1 \\ 8 \end{array} $	
01	1	1 5	0 13	9 0	
11	₃ 1	1 7	0	0	
10	0	0 6	1 14	$\frac{1}{10}$	
·					-

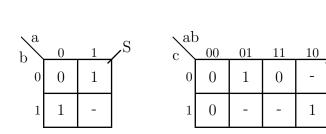
You can also do math things by using the known \$ signs...

a_0	0	1	S_0
0	1	1	
1	0	0	

You can do math thing in roman font...

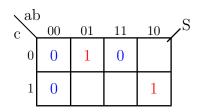
$\backslash M$	$_{2}^{\mathrm{n}}\mathrm{M}_{1}^{\mathrm{n}}$				M_0^{n+1}
M_0^n	00	01	11	10	\angle^{M_0}
0	1	1	1	0	
1	1	0	1	1	

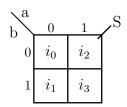
You can do things with don't cares...



cd al	00	01	11	10	S
00	0 1	- 4	1 12	- 8	
01	1	5	- 13	9 0	
11	- 3	₇ 1	1 15	0	
10	0	6	1 14	0	

You can use colors and empty function values and variables as values too...





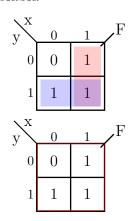
You can set the font to something else \dots and use sans math font \dots

cd	00	01	11	10	_S	$q_1^n q_0^n$	p_0^n	01	11	10	Q_0^{n+1}
00	0	1	0	1		91 90	0	1	0	1	
01	1	1	0	1		01	1	1	0	1	
11	0	0	1	1		11	0	0	1	1	
10	1	1	1	1		10	1	1	1	1	

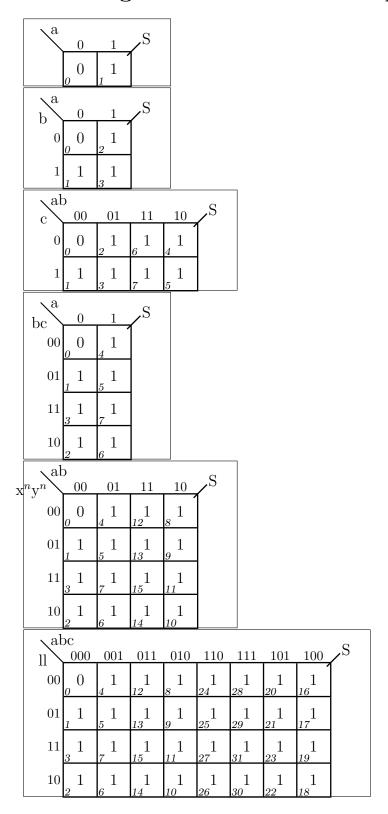
You can use the last parameter to create to your own picture commands...

z Xy	00	01	11	10	F
0	1	1	1	0	
1	1	0	1	1	

blabla



Bounding Boxes around the Maps



x	a^{al}	oc 000	001	011	010	110	111	101	100	$\mathcal{S}_{\mathrm{a,b,}}$	$_{ m c,d}$
4:	00	a 0	e 4	m 12	i 8	y 24	28	u 20	q 16		
	01	b	f	n 13	j	Z 25	3	V 21	r 17		
	11	3 d	, h	p	l 11	1 27	5	X 23	t 19		
	10	с 2	g 6	O 14	k 10	0	$\frac{4}{30}$	W 22	S 18		Text next to Karnau

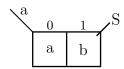
Next shows the use of fbox commands to show frameboxes.

									I nis is text.
$x_0 x_1^n \underbrace{\begin{array}{c} \text{abc} \\ 000 \end{array}}$	001 (011 010) 110	111	101	100	M_1^{n+}	-1	
00 0	0	0 1	0	1	1	0			
01 1	4 12 0	1 0	24 0	1	0	16 1			
11 0	5 13 0	$ \begin{array}{c cccc} 3 & 9 \\ \hline 1 & 1 \end{array} $	25 1	1	0	0			
10 1	7 18 1	$\begin{bmatrix} 5 & 11 \\ 0 & 0 \end{bmatrix}$	27 1	<i>31</i> 1	23 1	19 ()			
2 2	6 14	4 10	26	30	22	18			

Test to see in kvindex macro is working...

$$\begin{bmatrix} a & 0 & 1 \\ a & b \end{bmatrix}$$

Test to see in kvnoindex macro is working...



The unit length of the Karnaugh map squares is 25.03842pt