

# ECS 154A: Computer Architecture

## L<sup>A</sup>T<sub>E</sub>X Examples

Davis Computer Science Club

## 1 Karnaugh Maps

### 1.1 Two-Variable Karnaugh Map

Use environment — `Karnaughquatre`.

		b	
		0	1
a	0		
	1		

### 1.2 Three-Variable Karnaugh Map

Use environment — `Karnaughvuit`.

		$x_1x_0$			
		00	01	11	10
$x_2$	0				
	1				

### 1.3 Four-Variable Karnaugh Map

Use environment — `Karnaugh`.

		$x_1x_0$			
		00	01	11	10
$x_3x_2$	00				
	01				
	11				
	10				

## 1.4 Defining Values in Karnaugh Map

### 1.4.1 Contingut

Use command — `\contingut{}` — to fill in values manually.

		$x_1x_0$			
		00	01	11	10
$x_2$	0	0	1	3	2
	1	d	5	7	X

### 1.4.2 MinTerms

Use command — `\minterms{}` — to specify the 1's.

		$x_1x_0$			
		00	01	11	10
$x_2$	0		1		
	1			1	

### 1.4.3 MaxTerms

Use command — `\maxterms{}` — to specify the 0's.

		$x_1x_0$			
		00	01	11	10
$x_2$	0			0	
	1	0	0		0

### 1.4.4 Indeterminat

Use command — `\indeterminats{}` — to specify the X's.

		$x_1x_0$			
		00	01	11	10
$x_2$	0	X			X
	1				

## 1.5 Sources

The Karnaugh Map environments and commands were not produced by the Davis Computer Science Club. Environments and commands were taken from Ignasi's response to a Tex Stack Exchange question:

<http://tex.stackexchange.com/questions/140567/drawing-karnaugh-maps-in-latex>