

# All the Logical Operations

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$A$	$B$			0 False	$\neg(A \vee B)$ $A$ NOR $B$		$\neg A$ NOT $A$
0	0			0	1	0	1
0	1			0	0	1	1
1	0			0	0	0	0
1	1			0	0	0	0

$A$	$B$				$\neg B$ NOT $B$	$A \oplus B$ $A$ XOR $B$	$\neg(A \wedge B)$ $A$ NAND $B$
0	0			0	1	0	1
0	1			0	0	1	1
1	0			1	1	1	1
1	1			0	0	0	0

$A$	$B$			$A \wedge B$ $A$ AND $B$	$A \Leftrightarrow B$ $A$ if and only if $B$	$B$ $B$	$A \Rightarrow B, B \Leftarrow A$ $A$ implies $B$ , if $A$ then $B$
0	0			0	1	0	1
0	1			0	0	1	1
1	0			0	0	0	0
1	1			1	1	1	1

$A$	$B$			$A$ $A$	$B \Rightarrow A, A \Leftarrow B$ $B$ implies $A$ , if $B$ then $A$	$A \vee B$ $A$ OR $B$	1 True
0	0			0	1	0	1
0	1			0	0	1	1
1	0			1	1	1	1
1	1			1	1	1	1