

# Logical operators full truth table

Input		Output				
$p$	$q$	Conjunction $p \wedge q$	Exclusive or $p \oplus q$	Disjunction $p \vee q$	Conditional $p \rightarrow q$	Biconditional $p \leftrightarrow q$
$T$	$T$	$T$	$F$	$T$	$T$	$T$
$T$	$F$	$F$	$T$	$T$	$F$	$F$
$F$	$T$	$F$	$T$	$T$	$T$	$F$
$F$	$F$	$F$	$F$	$F$	$T$	$T$
		“ $p$ and $q$ ”	“ $p$ xor $q$ ”	“ $p$ or $q$ ”	“if $p$ then $q$ ”	“ $p$ if and only if $q$ ”

# Logical operators truth tables

Truth tables: Input-output tables where we use  $T$  for 1 and  $F$  for 0.

Input		Output		
$p$	$q$	Conjunction $p \wedge q$	Exclusive or $p \oplus q$	Disjunction $p \vee q$
$T$	$T$	$T$	$F$	$T$
$T$	$F$	$F$	$T$	$T$
$F$	$T$	$F$	$T$	$T$
$F$	$F$	$F$	$F$	$F$
				

Input	Output Negation
$p$	$\neg p$
$T$	$F$
$F$	$T$
	