
THE TABLE OF LOGICAL EQUIVALENCES

1.	$P \rightarrow Q \equiv \neg P \vee Q$	Implication Law
2.	$P \leftrightarrow Q \equiv (P \wedge Q) \vee (\neg P \wedge \neg Q)$	Biconditional Laws
3.	$P \leftrightarrow Q \equiv (P \rightarrow Q) \wedge (Q \rightarrow P)$	
4.	$P \vee \neg P \equiv \mathbf{T}$	Negation Laws
5.	$P \wedge \neg P \equiv \mathbf{F}$	
6.	$P \vee \mathbf{F} \equiv P$	Identity Laws
7.	$P \wedge \mathbf{T} \equiv P$	
8.	$P \vee \mathbf{T} \equiv \mathbf{T}$	Domination Laws
9.	$P \wedge \mathbf{F} \equiv \mathbf{F}$	
10.	$P \vee P \equiv P$	Idempotent Laws
11.	$P \wedge P \equiv P$	
12.	$\neg \neg P \equiv P$	Double Negation Law
13.	$P \vee Q \equiv Q \vee P$	Commutative Laws
14.	$P \wedge Q \equiv Q \wedge P$	
15.	$(P \vee Q) \vee R \equiv P \vee (Q \vee R)$	Associative Laws
16.	$(P \wedge Q) \wedge R \equiv P \wedge (Q \wedge R)$	
17.	$P \vee (Q \wedge R) \equiv (P \vee Q) \wedge (P \vee R)$	Distributive Laws
18.	$P \wedge (Q \vee R) \equiv (P \wedge Q) \vee (P \wedge R)$	
19.	$\neg(P \wedge Q) \equiv \neg P \vee \neg Q$	De Morgan's Laws
20.	$\neg(P \vee Q) \equiv \neg P \wedge \neg Q$	