5. Truth tables for basic connectives

Truth tables for: and, or, not.

P	Q	$P \wedge Q$
F	F	F
F	T	F
T	F	F
T	T	T

P	Q	$P \vee Q$
F	F	F
F	T	T
T	F	T
T	T	T

P	$\neg P$
F	T
T	F

Implication.

$P \to Q$ **:** P implies Q; if P then Q; P is sufficient for Q; Q is necessary for P; P only if Q; $P \Rightarrow Q$.

P	Q	$P \to Q$
F	F	T
F	T	T
T	F	F
T	T	T

Equivalence.

$P \leftrightarrow Q$ **:** P is equivalent to Q; P if and only if Q (P iff Q); P is necessary and sufficient for Q; $P \Leftrightarrow Q$.

P	Q	$P \leftrightarrow Q$
F	F	T
F	T	F
T	F	F
T	T	T