Connections, Propositional Logic

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Definition 0.1 (Implication/Condition)**.** $P \implies Q$ is false when P is true and Q is false but true otherwise.

P	Q	$P \implies Q$
1	1	1
1	0	0
0	1	1
0	0	1

Definition 0.2 (Biconditional)**.** $P \iff Q$ is true only if both P and Q is false or both P and Q is true.

Definition 0.3 (Negation)**.** $\neg P$

Definition 0.4 (Conjunction)**.** $P \wedge Q$

Definition 0.5 (Disjunction)**.** $P \vee Q$

Definition 0.6 (Exclusive Disjunction)**.** $(P \oplus Q) = \neg(P \wedge Q) \wedge$

Definition 0.7 (True False)**.** $\top$ or 1 or T defined as true, $\bot$ or 0 or F defined as false