Answer on Question #62566 – Math – Discrete Mathematics

Question

Draw the truth tables of conjunction, disjunction and biconditional statements.

Solution

		p and q	p or q	p iff q
p	q	$p \wedge q$	$p \vee q$	$p \equiv q$
T	T	T	T	T
T	F	F	T	F
F	T	F	T	F
F	F	F	F	T

The conjunction statement $p \wedge q$ ("p and q") is true when both p and q are true, and is false otherwise. The disjunction statement $p \vee q$ ("p or q") is true when either p or q are true, and is false when both p and q are false. The biconditional statement $p \equiv q$ ("p if and only if q") is true if p and q have the same truth value, and is false otherwise.