Quiz 2

CMPSC 360

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Question 1:

$\neg r \vee (p \wedge q)$
$(\neg r \vee p) \wedge (\neg r \vee q)$ Distributive Rules
$(r \to p) \wedge (r \to q)$ Conditional Equivalence

Table 1: $\neg r \vee (p \wedge q) \equiv (r \to p) \wedge (r \to q)$

p	q	r	$\neg r$	$p \wedge q$	$r \to q$	$r \to p$	$\neg r \vee (p \wedge q)$	$(r \to p) \wedge (r \to q)$
T	T	T	F	T	T	T	T	T
T	T	F	T	T	T	T	T	T
T	F	T	F	F	F	T	F	F
F	T	T	F	F	T	F	F	F
T	F	F	T	F	T	T	T	T
F	T	F	T	F	T	T	T	T
F	F	T	F	F	F	F	F	F
F	F	F	T	F	T	T	T	T