

Propositional Logic

Solution 1

(a) $p \wedge q \Rightarrow p$

(b)

p	q	$p \Rightarrow q$
T	T	T
T	F	F
F	T	T
F	F	T

(c) $\neg p \wedge q \Leftrightarrow \neg p \vee \neg q$

Solution 2

(a) $p \vee q \wedge r \Leftrightarrow p \wedge r \vee q \wedge r$

(b)

p	q	$p \Leftrightarrow q$
T	T	T
T	F	F
F	T	F
F	F	T

(c) $p \Rightarrow q \Rightarrow r$