

5/26/2010

Quiz #1

Name: _____

Key

Show all work clearly and in order. Please box your answers. 10 minutes.

1. (a) Fill in the following truth table

p	q	$p \vee q$	$p \wedge q$	$p \rightarrow q$	$p \oplus q$	$\neg(p \oplus q)$	$p \leftrightarrow q$
T	T	T	T	T	F	T	T
T	F	T	F	F	T	F	F
F	T	T	F	T	T	F	F
F	F	F	F	T	F	T	T

- (b) Using part (a) explain why
- $\neg(p \oplus q) \equiv p \leftrightarrow q$
- .

Solution 1: They have the same truth table.Solution 2: $\neg(p \oplus q) \leftrightarrow (p \leftrightarrow q)$ is a tautology.

2. Make a truth table for the statement form
- $p \wedge (\neg q \rightarrow r)$

p	q	r	$\neg q$	$\neg q \rightarrow r$	$p \wedge (\neg q \rightarrow r)$
T	T	T	F	T	T
T	T	F	F	T	T
T	F	T	T	T	T
T	F	F	T	F	F
F	T	T	F	T	F
F	T	F	F	T	F
F	F	T	T	T	F
F	F	F	T	F	F

3. Tell me some interesting facts about yourself that will help me get to know you.
- Examples: What is your favorite book/movie? What is your favorite music genre? What do you like about your major? What is your favorite programming language? Did you do anything interesting over the short break (or will you over the summer)? Another interesting fact about yourself, etc.*