

Quiz 1

D Term, 2013

Show all work needed to reach your answers.

1. (5 points) Which of the following is a statement (**S**), which is a predicate (**P**), and which is neither (**N**) (because it is ambiguous).

- (a) _____ The 10^{47} th digit of π is 3.
 (b) _____ $x = x$
 (c) _____ $y = x$
 (d) _____ All functions are continuous.
 (e) _____ All functions are ugly when written in MS Word.

2. (10 points) Please complete the following truth table.

A	B	C	$A \wedge B$	$\sim C$	$\sim (A \Rightarrow B)$	$(C \vee (\sim A)) \wedge B$	$(A \Rightarrow (B \wedge C)) \Leftrightarrow ((A \vee (\sim B)) \Rightarrow C)$
T	T	F					
F	T	T					

3. (5 points) Please negate the following statements:

- (a) "Some functions are discontinuous."
 (b) "If a positive integer n is even, then n is also divisible by 3."