Math 116: Written Homework Set 9

This assignment is due on Wednesday, February 27th in class. Show all work where possible! Answers magically appearing will receive no credit.

1. Construct truth tables for the following.
   a. $\sim p \land q$
   b. $p \lor \sim q$
   c. $\sim p \rightarrow \sim q$
   d. $(p \land \sim q) \rightarrow (\sim p \land q)$

2. Write the negation of the following statements (note that De Morgan's laws may be helpful).
   a. I like school and I like this class.
   b. I will pass this class or I will quit school.
   c. I do not like math and I do not like history.

Selected Answers

1. a.

$\sim p \wedge q$
F
F
T
F

c.

$\sim p \rightarrow \sim q$
T
T
F
T

2. a. I do not like school or I do not like this class.
   c. I like math or I like history.