**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. $\~p ⋀ q$
 b. $p ⋁ \~q$
 c. $\~p \rightarrow \~q$

 d. $(p ⋀ \~q)\rightarrow (\~p ⋀ q)$

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**

|  |
| --- |
| $$\~p ⋀ q$$ |
| F |
| F |
| T |
| F |

 1. a.

|  |
| --- |
| $$\~p \rightarrow \~q$$ |
| T |
| T |
| F |
| T |

 c.

2. a. I do not like school or I do not like this class.

 c. I like math or I like history.