Mathematics 174

Quiz # 4 Name: Key

You must show your work to get full credit.

1. Show that $p \vee q$ and $\sim p \to q$ are logically equivalent.

You can use truth tables or do the calculation

$$\sim p \to q \equiv (\sim(\sim p)) \vee q$$
$$\equiv p \vee q.$$

2. What is the negation of the statement "If Alice does all her homework, then she will get an A"?

"Alice does all her homework, but does not get an A"

3. What is the negation of the statement "Every Math 174 student is going to get an A"?

"Some Math 174 is not going to get an A"