

Lab #1

August 29, 2012

MATH 166.200

Name: _____

Enter your name at the top of the page in the spreadsheet.

The is due at the start of lab on **September 5, 2012**. You will have to turn in the lab page with the answer as well as mail me a copy of the spreadsheet.

The spreadsheet can be saved in the open office(libre office) format or in the Microsoft Excel format. To save as an excel file: click on **File**, select **Save As**, enter the name, change the type from ODF Spreadsheet to an excel format, and then click on save.

Note: These commands work for the open office spreadsheet. They might have to be adjusted for the Microsoft Excel program. Use a spreadsheet help files for an explanation of the syntax of a command.

Some commands that may be usefull.

and(statement 1, statement 2,) will compute the logical value of a group of logical statements whose values are either TRUE or FALSE.

or(statement 1, statement 2,) will compute the logical value of a group of logical statements whose values are either TRUE or FALSE.

not(statement) will compute the compliment of the logical value of the given statement.

Note: In computers TRUE is given the numerical value 1 and FALSE is given the value 0. Thus you can use the numbers 1 and 0 in place of the words TRUE and FALSE.

An advantages of a spreadsheet is the copy and paste funtion for formulas. Once you have a formula that works, you can copy the fomula to new cells and the spreadsheet will update the formula based on its new location. This means less typing for you.

Name: _____

Lab # 2

August 29, 2012

Enter your name at the top of the page in the spreadsheet.

The is due at the start of lab on **September 5, 2012**. You will have to turn in the lab page with the answer as well as mail me a copy of the spreadsheet.

Problem 1: Construct truth tables for these compound statements.

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

p	q	$\sim (p \vee q)$
T	T	
T	F	
F	T	
F	F	

Notice that both of these compound statements are equivalent. It is important when determining if statements are equivalent that the truth values in the initial columns be in the same order.

Question: What would be the equivalent statement for $\sim (p \wedge q)$?

Problem 2: Construct truth tables for these compound statements. I will grade your work in the spreadsheet so you do not have to write down the truth tables on this paper.

(a) $(\sim p \wedge r) \vee (\sim q \wedge \sim p)$

(b) $(\sim r \vee s) \wedge (\sim p \wedge p)$

(c) $\sim (\sim p \wedge \sim q) \vee (\sim r \vee \sim s)$