

## CSci 1302 Assignment 1

Due Friday, January 28th in class

**Problem 1 (10 points).** Rewrite the following sentences as logical statements. Show the simple (atomic) propositions used to construct the compound ones. In some cases it may not be obvious whether English “or” is used inclusively or exclusively. Explain which one is meant and why. Use symbols  $\sim$ ,  $\wedge$ ,  $\vee$ .

Example: the sentence “Today it will rain or snow” can be written as  $p \vee q$ , where  $p$  = “today it will rain”,  $q$  = “today it will snow”.

1. I live and study in Morris.
2. I go to the library to read or relax.
3. The party will be indoors, unless it's sunny.
4. The bookstore is not open today.
5. The bookstore is closed today.
6. Both Mary and Jane are in this class.
7. Jim is taking Math, and also Computer Science or Biology (or both).
8. Jane either is a Math major or she isn't.
9. Steve is definitely a biology or chemistry major, and not a theater major.
10. Either Mary goes to UMM and her sister doesn't, or the other way around.

**Problem 2 (4 points).** Exercises 15, 17 on p. 16.

**Problem 3 (6 points).** Exercises Exercises 20, 22, 24 on p. 16.