# MATH 428 HOMEWORK 4

DUE MONDAY, 10/18

You are encouraged to work on the homework in groups, but the final write-up should be your own. Make sure your answers are written in grammatical english, using complete sentences. It is a good idea to proofread your work. The word "show" (and other cognates) means "provide a complete proof for". References to "Wilson" refer to the textbook.

(1) Wilson, Problem 9.3
(2) Wilson, Problem 9.5
(3) Wilson, Problem 10.5
(4) How many labeled rooted binary trees are there on 7 vertices? In other words, how many labeled trees are there where one vertex has degree two, and all the others have degree three or one? Can you give a formula for $n$ vertices ($n$ odd) ?