

Combinatorics Homework 3
S Hudson, 9/16/13

Quiz 2: Thursday 9/26/13, will cover Chs. 2, 3 and my 9/19/13 lecture (probably on Chs 5.1-5.2). But most of the problems will resemble HW 2 problems, which only go through approx Ch 3.2. I expect Quiz 2 will be a little harder than Quiz 1.

Practicing problems is the best way to study. But also learn the main formulas (eg Thm 3.2.1 and 2.4.2, etc - or maybe you could figure these out quickly yourself?). Learn any formula that you might need to solve HW problems and you should also be OK for the quiz. Be able to state Ramsey's theorem, and know what $r_t(q_1, q_2, \dots, q_k)$ means.

HW 3: due Thurs, Oct 3. Try to do most of these before Quiz 2, though I will not assume you have mastered them as well as HW 2.

Ch. 3 - 14, 16, 19, 23, 24, 27

Also, choose ONE from this list of harder problems from Ch.3: 2, 7, 8, 13, 21 (almost the Fibonacci's?). For the grader, state at the top of page 1 which one you chose.

Ch. 5 - 3, 5, 7, 9, 13, 15, 19, 23, 24, 25, 28

Misc remarks on these problems:

I may add a few more problems from Ch. 5 on approx Sept 26, depending on how far we have gotten by then. If so, I will announce this in class, but suggest you check back here to be sure.

Give a short proof of your answer (the recursive formula) in 5.3.

Likewise, explain 5.13 (there is a nice combinatorial proof of the answer).

I plan to do 5.20 in class, and 5.19 is similar.