

MATH THOUGHT
DR. GRAHAM-SQUIRE

TEST 1 REVIEW

- The test will be about 8-12 problems, most of which will be proofs. You will have the entire period for the test, though it may not take you the full 90 minutes.
- The test will cover everything that we have studied so far, from section 1.1 to section 3.5. Although all of the material is covered, there is probably heavier weight placed on the later material, since it builds on the earlier material. You should know the basic definitions (e.g. odd, even, divides, congruence modulo n , etc), but beyond those there is not a lot of “memorization”. The main question is can you write an understandable proof, and that is more a process you need to understand than it is something which can be memorized.
- Unless otherwise specified, you can use anything that we have proved in class or in homework as a part of a proof on the test. Some exceptions would be if in the question it specifically says that you have to use the *definitions*, or if the question is exactly the same as one that we proved in class or on homework. For example, if I ask you to prove something involving odds and evens, you can state that an odd times an odd is odd (by previous theorem). However, if I ask you to prove that an odd times an odd is odd, I expect you to prove it using the definitions, not just say “We proved this in class” and end your proof. If you are unsure at any point in the test if you can use something or if you need to prove it, just ask me.
- The best way to study for one of my tests is to do practice problems, especially ones that you have not seen before (since those are the kinds of problems you will see on the test). I recommend you work on the recommended problems from each section (the ones listed on the lecture notes, especially the ones that you did NOT do for homework). You can also read over the textbook, your notes, and rework HW problems and quizzes. It might also be helpful to try to answer the “Preview Activities” listed in the textbook—the answers to all of those are in the Appendix of the textbook. Lastly, at the end of each Chapter is a Review section—it might be useful to look over those to make sure you understand the main concepts that have been covered. In particular, Section 3.6 details all of the proof methods we have seen, and then gives 14 problems that would be good for you to be able to solve.
- We will have some time for review at the end of the class before the test (Wednesday)—you should come prepared with questions. If you have no questions, I will expect you to spend the time in class working on review questions on your own or in small groups.