

Exam 2 will be on Friday 6 March during our regular class time. It will include Chapters 4, 5, 6, 7, 8. So you will have one hour to complete the exam. You may bring a single 3 in by 5 in notecard with writing on both sides.

### Definitions

For all of the terms below, you must be able to formally state the definition from your textbook.

1. odd, even, same parity, opposite parity
2. divides, multiple, divisor
3. prime
4. greatest common divisor, least common multiple
5. congruent modulo  $n$
6. rational number, irrational number

### Proof Techniques

1. direct proof
2. using cases
3. by contrapositive
4. by contradiction
5. if and only if proofs
6. existence proofs
7. proofs involving sets, such as proving  $A \subseteq B$  and  $A = B$ .

### Things to Keep in Mind

1. If a proof technique is not prescribed, you must state the method you are using.
2. You should put in the “boiler-plate” language even if you cannot figure out the whole proof.
3. You should expect to **use** all of the hypotheses.
4. I will **not** ask you to prove something that is false.