Math 201: Preparing for test 3

Chapters 7 - 13 (possibly excluding section 13.4) of Hammack

* Functions: well-defined; domain, range, codomain (or target)
* Functions induced on P(X) by $f:X\rightarrow Y$, image, preimage
* Cardinality: countably infinite sets; uncountable sets; properties
* Cantor’s diagonal argument
* Cantor’s theorem on P(X)
* Fermat’s little theorem and modular arithmetic; Wilson’s theorem
* Surjective, injective, bijective maps;

special case- finite set, combinatorial questions

* Composition of functions; the inverse function
* Reflexive, symmetric, transitive properties of a relation
* equivalence relations, equivalence classes, and partitions
* Closure properties of sets under binary operations.