

MATH 201: PREPARING FOR TEST 2

Chapters II and III (excluding section 8) of Hammack

- direct proofs
- proof by cases
- well-ordering principle
- proof by induction (ordinary or strong)
- proof by contrapositive
- proof by contradiction
- “if and only if” proofs
- counter-examples
- well-ordering principle, division algorithm
- modular arithmetic

Types of problems:

- proofs (direct, cases, induction, contrapositive, contradiction)
- definitions
- fill in the blank
- find a counter-example
- given a proof with a missing part, fill in the missing part
- given a false “proof”, correct it