

## MATH 113: STUDY GUIDE FOR QUIZ 1

The big topic for this quiz is truth functional logic. Here are the things you should know for the quiz.

- **Core concepts.** Know what it means for an argument to be valid or sound. Be able to analyze natural language arguments with these concepts.
- **The language of truth-functional logic.** Be able to translate between natural language and the language of truth-functional logic.
- **Truth tables.** Know how to construct truth tables for sentences of TFL. Know how to use truth tables to check semantic concepts—entailment, tautology, etc.
- **Formal proofs.** Know the deduction rules. Know how to read formal proofs to get information. Know how to write your own formal proofs. Know how to use them to check syntactic concepts.

### NOTE SHEET

For the quiz you are allowed a single sheet of paper (standard 8.5 by 11 size, front and back) for notes to reference during the quiz. Here's some suggestions for what to put on your note sheet.

- Any definitions you don't feel you have confidently memorized.
- The truth tables for the logical connectives.
- The deduction rules for formal proofs.
- Short descriptions of the algorithms/processes used to check different properties.
- A reminder that you've got this and will ace the quiz.