

Review for Math 2300 Quiz 1, Spring 2020

The following is meant to provide guidance about the topics that are likely to appear on Quiz 1, however it is not meant to be an exclusive list.

Bring to Quiz

- Pencils and Eraser (extras are good, pens are discouraged)
- One 3 inch by 5 inch card, with writing on both sides in your handwriting (optional)

Provided at the Quiz

- Quiz
- Scratch paper

How to Study

- Work Problems (using your 3x5 card)
 - Homework
 - Similar problems in the book that were not assigned but have answers in the back
 - Examples in the book (cover up everything by the prompt and work it, then check)
- Review Lecture Notes
- Review Book
 - Look at Chapter Summaries
 - Drill down on concepts you didn't understand the first time
- Come to office hours / form a group to work on problems

Material to Review

Chapter 2, Sections: 1, 2, 3

Chapter 3, Sections 1, 2, 3, 4

2.1

Statements
Statement forms
Tautology and Contradiction
De Morgan's Laws
Logical Equivalence
Truth Tables
Using Theorems

2.2

Conditional statements and statement forms
Contrapositive, Converse, Inverse, Biconditional
Negation
 $p \rightarrow q \equiv \sim p \vee q$
translate, negate, translate

2.3

Valid and Invalid Argument Forms
Argument vs. Argument Form
Test critical rows in truth tables
Use rules of logical inference
Modus Ponens, Modus Tollens, Transitivity
Converse and inverse errors
Truth vs Validity

3.1

Predicates
Quantifiers (Universal and Existential)
Domains
Truth sets
Translate

3.2

Negation of statements with predicates
Universal Conditional
Contrapositive, Converse, Inverse, Bi-conditional
Translate, negate, translate

3.3

Statements with multiple quantifiers
Translate
Negate

3.4

Arguments with quantified statements
Universal Modus Ponens, Tollens
Validity
There will NOT be problems to show validity with diagrams