

Review for Exam 1– MATH 313

1. sentences, atomic sentences, when a sentence is well-formulated
2. predicates, arguments, arity; function symbols; infix versus prefix; translations, tables on pgs 22 & 30
3. FOL of set theory, \in , \subset ; how to define FOL for arithmetic
4. arguments, premises & conclusions (and identifying them), validity, sound; logical consequence, logical validity;
5. Fitch format, formal vs. informal proof; indiscernibility of identicals, identity elimination, =Intro & =Elim & Ana Con (and when you can apply), proof of consequence and non-consequence, counterexamples
6. reflexive, symmetric, transitive and inverse relations
7. Boolean connectives/operators, truth tables (and the correct way!!); disjunction (exclusive and inclusive), conjunction, negation; literals, DeMorgan's Laws, distributive laws
8. words expressing disjunction, conjunction, negation
9. tautology, logical necessity, logical possibility, TW-necessity, TW-possibility, TT-possibility (the way they relate and counterexamples)
10. Tarski's World: what things are allowed, not allowed, which objects, sizes, and how the predicates relate them, columns and rows
11. anything else we have covered in class or in the book and which is not here