The following list of topics may help you in your preparation for the test. It is always a good practice to review previous material:

- Everything covered in Exam 1 (Logic, Proof techniques, Sets)
  Emphasis will be on the following, however: Sections 2.3, 2.4, Chapter 3
- Venn diagrams
- set identities, universal instantiation, universal generalization
- indexed collections
- Functions — definitions, injection, surjections, bijections, composition
- Sequences and Summations — countability, \( \aleph_0 \), diagonalization, computability
- Growth of Functions (\( O, \Omega, \Theta \) – know definitions and meanings; how to apply; how to prove)
- Integers and Division (esp. primality, (pairwise) relatively prime, gcd, lcm, modular arithmetic, congruencies)
- Integers and Algorithms (esp. Euclidean, converting numbers between bases)
- Linear Combinations (Sec. 3.7)