

# **Introduction to Proof and Problem Solving (Math 100)**

Fall 2017, Robert Boltje, UCSC

1. Sets
2. Logic
3. Counting
4. Direct Proof
5. Contrapositive proof
6. Proof by contradiction
7. Proving non-conditional statements
8. Proofs involving sets
9. Disproof
10. Mathematical induction
11. Relations
12. Functions
13. Cardinality of sets