## **Possible Presentation Topics**

**Note:** This list is meant to be a starting point to stimulate your thinking and get you started, not an exhaustive list of all possible acceptable topics. You are expected to meet with me to discuss your presentation topic and you must finalize your presentation topic *at least* 3 weeks before you are scheduled to give your presentation in class.

- The Axiom of Choice
- P vs NP Algorithms
- Hexaflexagons
- Smullyan's Logic Puzzles
- The Art and Mathematics of M. C. Escher
- Ramsey's Theorem and Ramsey Numbers
- Cantor's Proof that the Real Numbers are uncountable
- The Cantor Set
- The Collatz conjecture
- Proofs that there are infinitely many primes
- Proofs that  $\pi$  is irrational
- Shuffling cards using Riffle Shuffles
- Latin Squares
- The 5 color theorem
- The Birthday Problem
- The knapsack problem
- Hat Puzzles
- Penrose Tilings
- The Catalan Numbers
- The Gamma Function
- the Lebesgue Integral
- Fractals
- Rencontres numbers
- The Quaternions